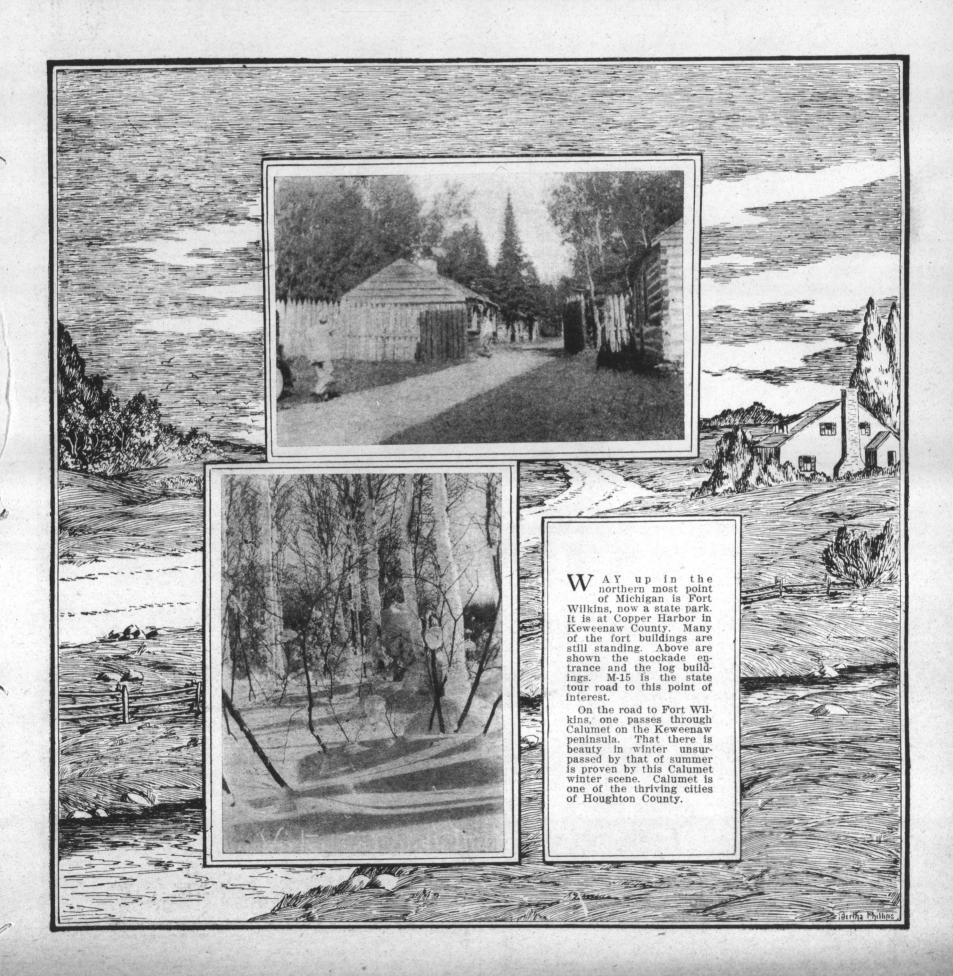


Vol. CLXX No. 12

DETROIT, MICH., SATURDAY, MARCH 24, 1928

Whole No. 4805



Out of werely

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FARMERS

GROUPS of Indiana farmers are voicing their opposition to the proposed \$10,000,000 Federal appropriation for corn borer control, unless a large part of the appropriation is to be used to pay them for clean-up work. This information is brought to Washington by representatives of organizations and individual farmers from different sections of the Corn Belt, who say that many farmers are dissatisfied with the methods of corn borer control which were used by the Federal and State officials in charge of the corn borer control campaign last season.

are being carried over by farmers than last year, according to the Department of Agriculture. Stocks of wheat on farms on March 1, 1928, are estimated to have been 14.9 per cent of last year's wheat crop, or about 130,000,000 bushels, compared with seventeen per cent for the ten-year average. Farm stocks of corn for the United States on March were about ten per cent less than a year ago.

WORLD SUGAR PRODUCTION

THE 1927-28 world sugar production is estimated by the Department of Agriculture at 27,538,000 short tons of raw sugar, an increase of 4.6

per cent over last season's production. The increase in production over last season is accounted for by the beet sugar producing countries which for the 1927-1928 season report a crop of 9,675,652 short tons, which is 15.4 per cent above that of 1926-27. The European beet sugar crop was 1,119,-000 short tons above that of the preceding year. It is the first time since the war that Europe has had a sugar production well above the pre-war av-

PLAN FOR REAPPORTIONMENT IN 1930

THE number of representatives in Congress will be fixed at 435 in the reapportionment which will take place after the 1930 census, if the bill favorably reported by the House committee on the census becomes a law. This apportionment based on estimates of a population of 123,288,000 in 1930 submitted by the Census Bureau, would decrease the number of representatives for sixteen states and increase the number for twelve states. The losses in representation would be in the agricultural sections and the increases in such states as Michigan and North Carolina where the industrial population has increased greatly since the last apportionment.

News of the Week

Captain Walter Hinchliffe. Captain Watter Hinchine, we'll known English aviator, and Hon. Elise MacKay, an English peeress, left England for flight to America. They have not been heard from and hope for them has been given up.

Michigan has made a 30% increase in population since 1920, according to the U.S. Census Bureau. It is the third largest gain, being exceeded by Florida, 48%, and California, 35%.

Augustino Sandino, the Nicaraguan rebel leader, has sent a note to the U. S. Senate that no North American resident in Nicaragua would be safe unless the marines were withdrawn from the territory.

Detour and several other towns in the Upper Peninsula have been iso-lated because of heavy snow fall, the fields being covered with six to ten feet of snow.

The breaking of the St. Francis dam in the Santa Clara valley caused the destruction of \$30,000,000 worth of property. The loss of life will run into the hundreds, 264 being accounted for already. The dam was part of the Los Angeles water supply system.

Nancy Miller, a Seattle girl, has gone through the unusual rites of conversion to the Hindu religion in order that she may become the third wife of the former Mahararah of Indore.

William Germayne was reelected as president of East Lake, a village in Manistee County, because he proposes to make dances pay the expenses of local government.

Mrs. Harry Pearson, of Lake Orion, was elected treasurer of the village, defeating her husband as opposition

Land slides at Santos, Brazil, the world's greatest coffee shipping center, caused the wrecking of the Santa Rosa hospital. The sliding of the earth from Mt. Serrat is responsible for the trouble.

SMALLER STOCKS OF WHEAT ON FARMS

SMALLER stocks of wheat and corn are being carried over by farmore.

The Corete with the trouble.

Rabbi Meier Yechiel, of Warsaw, Russia, who ate only once a week for forty years, on Saturdays, because of religious commandment, died at the age of seventy-four.

coal regions, found housing conditions unbearable, and living far below the standard.

"Kid" Lavigne, one of the world's greatest fighters, and former lightweight champion of the world, died in Detroit at the age of fifty-eight. He was born in Saginaw, and recently worked at Fords.

Mrs. Christine Woodside, of Kansas City, was fined \$100 for unduly spank-ing her daughter for taking out the family car and not telling where she had been.

A gamekeepers school has been established in New Jersey to teach men the raising of wild birds and game restoration work. There is a big demand for men so trained for sportsmen's clubs and private estates, etc.

DEVOTED TO **MICHIGAN** VOLUME CLXX

A Practical Journal for the Rural Family MICHIGAN SECTION THE CAPPER FARM PRESS

QUALITY RELIABILITY SERVICE

NUMBER XII

Quality Fruits Bring Success

Good Fruit Well Marketed is a Munson Maxim

RARMING is a heritage to J. Pomeroy Munson, his father, William K. Munson, well-known as originator of the King Grape, having established himself in agricultural

pursuits in Michigan in 1878. In 1887, the father set out the first commercial vineyard in Michigan which later became known as Vinecroft. It was then a farm of fifty-five acres, quite a ways out from Grand Rapids, but now partly in the city limits. The farm's principle asset in the early days was a good-sized mortgage. It was an asset because it made work and thought necessary to get the mortgage paid.

While Roy, as his friends call him, was going to school, his father divided his time between his nursery, selling the King Grape, and running the commercial vineyard. From the beginning, the Worden grape was a favorite on this farm, as it has good quality and ripens earlier than the wellknown Concord. It is a little tender for shipment, but is ideal for the local market. At times the Worden brought as high as eight cents a pound. It has helped to bring Vinecroft a reputation for quality.

After finishing high school, Roy attended a short course at M. S. C. and took up landscape gardening. For a time he was employed by Simons, the well-known Chicago landscape architect. Later, in his father's declining years, he came home, devoted his summers to helping on the farm and the falls, winters, and springs to landscape work. He has to his credit the planBy Frank A. Wilken

known parks, cemeteries, and homes of wealthy western Michigan people.

Early in his farming career, Roy displayed good sales ability. He had the faculty of getting higher prices for their products than others who Therefore, the selling end of

ning and planting of several well- season as possible. Gooseberries, currants, raspberries, cherries, apples, and grapes make available cash crops throughout the entire growing season, keep the help efficiently employed, and give the pickers a long season of work.

Vinecroft is very fortunately situ-



Vinecroft, the Attractive Home of J. Pomeroy Munson, Master Farmer

it was his regular habit during the selling season to get up at 3:30 or 4:00 A. M., take a load of fruit to the municipal, and bring back a pocketful

After his father's death, Roy bought out the other heirs and has since steadily developed the fruit business. The farm has been enlarged to ninetyfive acres, and various kinds of fruit are grown to make as long a sales

the business was his speciality, and ated regarding help as well as markets. The Munsons never have to worry about pickers. Foreigners with large families of children have kept these children busy at "Roy's farm" for many years. The children are treated very kindly but firmly, and they like to work for "Roy." They are paid by the quart and some of them earn surprisingly good wages during good picking time.

Most all of the Vinecroft fruit is

sold in Grand Rapids direct to consumers or to merchants. This makes it a cash deal with no commission to pay, but instead premium prices are received because of the reputation Vinecroft fruit has established.

The Vinecroft grapes packed in characteristic four-pound baskets, have also established themselves with the merchants in Cadillac and Laning, so a good crop is always readily

As the farm is on a well-traveled road, there is an increasing roadside trade. Some people have been regular customers for years and make their appearances at the farm when their favorite fruit is ripe. Others order by phone for delivery at their homes. In fact during the busy season, the Munson telephone is a busy affair, and Mrs. Munson has nearly as much to do in handling the "office" end of the business as Roy has out-

For a time Roy rented apple orchards in order to lengthen his season, but now he has ten acres of bearing orchard of his own and more coming on. A comparatively young five hundred tree orchard is widely spaced and is interplanted with raspberries to make the land produce an income early. The apples are winter varieties which he stores on his farm and sells throughout the winter. He also makes cider out of the smaller fruit for which he gets a good price.

The apples on the Munson farm are sprayed six times, the cherries are (Continued on page 420)

Benefits From My Soil Program

Improving Soil is a Game Where Crop Yields Tell the Score By R. V. Tanner

Pres. Michigan Soil Improvement Assn.

FOR the past number of years I have studied with a great deal of interest the general trend of the farming situation. It has become very apparent to me that localities of fertile land or farmers with well-kept, fertile soil have been the most prosperous. At least they have grown better crops with a great deal more ease and certainty of profit. I have come to realize the importance of the problem which has confronted me since I started out. As time has passed and I have made some progress the whole problem of soil building has become extremely interesting and has taken on the aspects of a game, with the score showing in each

season's harvest. Our farm, which is located in Jackson County about half way between Jackson and Munith, is typical of that community, both in type of soil, general fertility and in the crops which are grown. Only a limited amount of lime and fertilizer was used from 1913 to 1925. Realizing the possibilities in soil building, I decided that our soil must be built up if we were to do a profitable job of farming.

The Soils Department of the Michigan State College and the Jackson County agricultural agent have been of great assistance in outlining a fertilizing and cropping program for my ture for the crops, and to increase farm. The substance of the program the plant food in the soil. This is has been to sweeten the soil, to in- being done by the use of lime, mancrease the organic matter, or humus, ure, by plowing under green crops and

in order to put the soil in better physiby using commercial fertilizer. It is a

cal condition and increase the mois- process which takes time, but I be-



At Left, Wheat Received Lime, 200 lbs. 4-16-4 fertilizer, and 100 lbs. Nitrate of Soda in Spring. At Right Only Lime Was Added

lieve we have already had experiences by which others may profit.

Soil Program Helped This Field

The story of the performance of each of the twelve fields for the past three years is interesting, but I will tell you of only two of the fields. They are typical of the rest of the farm and have an unlimed and unfertilized strip through them.

The soil in the field which we call No. 2 is mostly a Hillsdale sandy loam as surveyed by the College. gently rolling land with a sandy loam surface and rather sandy clay subsoil. In 1922 a light clover sod was plowed under followed by beans and wheat. seeding failed and corn was planted in 1925. Two hundred pounds per acre of 4-16-4 commercial fertilizer was applied with but little difference showing up.

The field was manured the following winter and after plowing in the spring two tons per acre of limestone were applied. Beans were planted and two hundred pounds of 4-16-4 were used. The latter part of the season was wet and weeds came on decreasing the bean yield. Judging by the growth on the weed-free places the limed and fertilized beans out-yielded those on the check strip. The field as a whole

(Continued to page 417)

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VOLUME CLXX

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DETROIT, MARCH 24, 1928

A Little More Budgeting

I N the lower house of Congress the budget bureau of the United States was the subject last week of a bitter attack. It

was declared that the bureau was developing into a third House of Congress with more power under certain conditions than have the present branches of our national legislature. The director of the budget, it was held, virtually exercises the veto power over a very considerable part of legislation.

This, of course, refers to power over appropriations. And because of this power, we take it, the federal government has been able to make consistent reductions in her expenditures. If this be true, we feel like saying, more power to the budget system; and further, that its beneficient influence might be extended to our state and local governments.

The World Moves on

THE management of the International Fat Stock Show has addressed a request for information as to the where-

abouts of steers such as won high honors at the International fifty years ago, when that great show made its debut. The grand champion of 1878 was a bullock 1,328 days old which weighed 2,185 pounds and stood four feet nine inches at the shoulders. On that occasion eighty-four fat steers were shown, the heaviest weighing 3.155 pounds with a height at the shoulders of five feet five inches.

No one knows where to find such steers today. The International is broadcasting their request hoping that somewhere in the United States there may be located one or more such animals in order to contrast them with the type that now takes honors at the big shows.

This illustrates how an improved type of beef animals has been developed for the public. Similar changes

agriculture despite utterances to the contrary. And it all increases our regard for the progressiveness of live stock.

Gospel of Better Soils

S INCE the first of the year the Michigan Farmer has published over sixty colums of matter dealing with fertile soils.

From the beginning of its existance in 1843 this has been a major subject in its columns; but in these later years the need for thought on the part of the practical farmer as to the plant food available for the growing of crops and the physical condition of the soil, has increased.

On the majority of our farms, the surplus fertility left by nature has been exhausted. Good crops now usually result only from ideal weather, supplemented with the supply of manure from the stables and the plowing under of crop residues. But this combination occurs only occasionally, perhaps once in five years; and the farmer of today is coming to realize that he cannot keep on farming unless he secures good crops more often than that.

In fact, successful farming requires the production of crops well above the average for a majority of the seasons. Instead of its being the rule to occasionally have a good crop, too succeed the farmer can now be burdened with a poor crop only occasionally.

To grow better than the average crops with only fair weather conditions, demands all the advantages of good soil. This comes only when the farmer has a soil program—a procedure that regularly brings back to the land as much or more fertility than is carried away with the crops.

The Soil Department of Michigan State College is now trying to introduce through the extension department this idea of a soil program on every farm. They should be commended and encouraged in this effort by the heartiest cooperation of the farmers themselves.

The New Hired Girl

Housekeeping is an old art but the amount of exact. scientific information available concerning this art is quite

limited. An enormous amount of time is expended in keeping and managing the home, much of which is not directly compensated for. If but a small saving of time and effort on each task could be effected, it would amount to a great saving of time and money in the aggregate.

In this respect perhaps no agency has come to the rescue of the homemaker more purposefully than has electricity. It has been harnessed to wash, iron, sweep, clean, cook with out smoke, eliminate dust, and light homes at the mere pressing of a button. But it accomplishes these services in but a small per cent of homes and why?

Undoubtedly it is due to two reasons; there is bound to be opposition and resistance to new practices and inventions in a field where habit and tradition occupy such an important place, and second, the general idea that electricity as a household servant is expensive. To consider and study these reasons and other relative problems, the committee on the Relation of Electricity to Agriculture was organized. It has been functioning actively and recently, to further its program, it requested the secretary of agriculture to consider the possibility of the department furnishing research specialists "to make a study of the labor in the farm home for the purpose of ascertaining the relation me-

have taken place in other lines of chanical household equipment to the well-being of the farm family."

The well-being of the American farm family is a recognized problem the tiller of the soil and the feeder of of modern agriculture. Research in labor- and time-saving household equipment would be a direct contribution toward more convenient and comfortable farm homes.

The Corn Borer Bill

I N a short time the House committee on agriculture will hold hearings on the Purnell bill which provides for a ten mil-

lion dollar appropriation for corn borer control.

Two schools of thought appear to be developing with respect to this work. Both have farmer followers. The conservatives hold that the control of this insect comes within the routine of good farming, and that outside assistance is not wanted. This group has been mobilized largely by the thought that such an inconsiderable portion of the appropriation made a year ago reached the farmer, and that too much control machinery seemed necessary to secure the ends sought.

The progressives defend this bill on the ground that the corn borer is a real menace to the production of corn and that the time to fight the pest is while it is confined to its present limits of infestation. They do not expect the extermination of the pest, but they do hope for a minimum of damage by retarding its progress until effective control measures may be worked out and adopted.

Now, if some Moses will work out an efficient means of checking up on work done in the control of this pest and of getting the money to the farmers who do their bit for protection of the country against the menace, that person would have the full approbation of both groups. What do you suggest?

Cloverland Farmers Honored

L AST week three Upper Peninsula farmers were honored at a special dinner at Duluth as the owners of dairy herds of spe-

cial merit. These men are Victor Ganin of Crystal Falls; Carl P. Hanson, of Wallace, and C. E. Johnson of Wallace. They were the guests of honor on this occasion, and were awarded silver medals for what they have been able to accomplish with their dairy herds.

We confidentially believe that these dairymen and others are going to demonstrate to the world that the northern peninsula of Michigan is a real dairy country. Enough has been done with dairy cows in that territory to show the climate to be most favorable for the production of quality dairy products. Excellent herds are being introduced, and the farmers are taking a keen interest in all that goes to make for the efficient manufacturing of milk.

The example of the men who have been selected for the above honors is bound to redound to the benefit of the whole peninsula and to the state. May they and their neighbors be inspired to go on and build substantially the dairying business of northern Michigan by growing proper feeds, breeding good cows, and giving them the advantage of the best care. We desire to join in honoring and congratulating each of these men.

Practical Farm Relief

W HEN one makes an analysis of the situation he finds that the requests for farm relief have come from those states

where one crop predominates and where real constructive work in diversified farm crops has been lacking. The urge for farm legislative relief

in Michigan has been weak, but on the

other hand during this time of depression, wonderful work in increasing farm profits has been accomplished. One of these is the alfalfa campaign which has increased the alfalfa acreage in the state from 74,000 to 513,-000 acres in the years between 1919 and 1927 and brought to the state an added income of \$5,000,000 by increased hay production. The increased fertility brought by alfalfa has added millions more.

Other factors in practical farm relief are the development of the seed potato business, the cow testing associations, increased yields from quality tested seeds of all kinds, poultry culling, soil fertility campaigns, and other constructive work.

We should feel fortunate that Michigan is a specialist in diversification which likely has made its greatest agricultural progress during the world's greatest agricultural depression. We have taken advantage of the opportunities to work out a practical farm relief while others were talking about getting one. It is pleasing to know that work now in progress will add still further to the stability and prosperity of Michigan agriculture.

Modernists

You know, we older folkses is liv-ing in what I call a privileged age. Most every one of us is come from the old horse and surrey to tin cans, moustach cups to safety razors, from the time when you'd have to look old to know anything to the time when you gotta look young to make folkses think you know something, and etc. Even some of us has sort of evolved from dippin' candles to pushin' the 'lectric light button, and so forth.

When I was a pup, Diamond Dick and Jesse James was our youthful

heroes, but the other day there was some little four year olds playin' with their dogs and some was Wm. Hart, other Buck Jones, and others Rin Tin Tin. Of course, the dogs

were Rin Tin Tin. You don't even have to be old enough to read to have your heroes nowadays. And it made me think what lots more the young folkses know than when I was wearin' kilt skirts like they used to. But you gotta know more now days to get along, and 'cause they know more ain't no reason that they're goin' to the dogs.

Well, I went to the movies the other day when I was in town. The picture was about the old days when it was immoral fer a woman to show her ankle, and when love was long and lastin', instead of short and fleetin' like now. It took lovers a long time to get started, them days. There was a couple of girls settin' back a' me, and when the old-time girl flirt was makin' the man feel uncomfortable by stickin' her face near his'n and doin' all those things girls know how to do, and the man was tryin' his darnest to be a gentleman, one o' the girls back o' me says, "Ain't he dumb." And while he was still tryin' to exercise self control, she says, "Why he certainly is dumb. In these days they don't even have to be coaxed."

When the show was over I felt like thankin' the girl fer entertainment I got and didn't pay fer. But anyhow, it shows times is different than they used to be. But I don't think they're any worse. I guess the difference is that in our days we could think a lot but dared not to say very much, but nowadays they dare say what they think. In the old days it was suppression, now it's expression. Which is best?

HY SYCKLE.

Ontario and the Corn Borer

Canadian Experience Proves the Worth of Effective Clean-up Regulations

counties of Michigan, lies a the regulations. laboratory—in Southwestern Ontario The administr wherein the European corn borer has demonstrated in a most convincing manner that it is capable of inflicting serious commercial damage to the corn crop, and, in a great many cases, of utterly ruining fields of this basic agricultural commodity.

But while King Corn has tottered in his shoes, and his vassals in untold numbers have forsaken him for other crops, the Canadian Government has been fully aware of the dagger carried by this European pest. From the first, the Government has toiled incessantly to acquaint Canadian farmers with the seriousness of the problem, with measures to combat the pest, and with the aftermath of what would follow if the corn borer were allowed to become established in this great agricultural empire.

In fact, Canadian agricultural leaders did everything in their power to get their farmers to avoid the same experiences which state and federal agencies are now trying to help farmers in the United States to escape. On the other hand, Canadian farmers assumed a passive attitude, until severe losses were suffered in the great corn-growing areas of Essex and Kent counties.

The situation finally culminated in the passage of the Ontario Corn Borer Act in 1926. In an effort to avoid the Canadian experience, a similar law has been passed in Michigan and other states. The operation of the law in Ontario should prove of interest to Michigan farmers.

The act was put into effect in eight counties in the Province of Ontario. This law is very similar to the one passed by Michigan, Ohio, and other states. The clean-up regulations are virtually the same in that all corn debris must be disposed of prior to the time when the corn borer moths are expected to emerge.

Compulsory clean-up may be done property when this operation is necessary. In addition, however, persons who fail to comply with the regulations may be fined a minimum amount of ten dollars and not more than fifty

great productive agricultural and fined until they do comply with

The administration of the corn-borer act is performed by the Ontario Department of Agriculture, which corresponds to our State Department of Agriculture. The work is in the charge of Professor Lawson Caesar, provincial entomologist, with headquarters at Guelph. The provincial entomologist is empowered to appoint one or more supervisors in each county to carry out the provisions of the act.

Clean-up work in cities, however, is done by the cities themselves, as

7 ITHIN a stone's throw of the may be brought into court repeatedly The inspector resumes his work in the 1927. Similar decreases in borer popumence and works through until about ford Counties. June 10. It is his duty to see that the accordance with the law.

Clean-Up Law Effective

The corn borer population was rethe 1927 compulsory clean-up area of Ontario, according to a survey made by Prof. Lawson Caesar, provincial entomologist.

These eight counties, with the exception of Prince Edward and parts of

spring as soon as field operations com- lation were noted in Norfolk and Ox-

Lambton, Middlesex, and Prince act is complied with by everybody and Edward Counties had a slight increase that the clean-up is accomplished in in the number of borers last year. For various reasons, it was very difficult to get a satisfactory clean-up in these counties. In Prince Edward County. duced in five of the eight counties in one of the difficulties was the common practice of using narrow instead of wide plows.

> "A narrow plow will not cover stubble and debris satisfactorily and this gives an opportunity for many borers to survive," states Professor Caesar.

Clean-Up Area Enlarged

Outside of the eight counties which were placed under the corn borer act last year, the pest has multiplied rapidly, thus emphasizing the need of clean-up measures wherever the pest is known to be present. In most districts there were apparently twice as many borers as last year and four times as many in some localities.

Due to the large increase in borer population in those counties where the Corn Borer Act was not in force, eighteen additional counties have been added to the clean-up area for 1928. This action places all of Southwestern Ontario south of a line from Goderich to a point about eight miles north of Toronto under the Act, and also an area about six miles wide along Lake Ontario from Toronto to the east boundary of Hastings County.

As indicated by the report of the provincial entomologist to the Minister of Agriculture, the large increases in borer population in Ontario during 1927 took place in those sections of the Province where the Ontario Corn Borer Act was not in effect and where compulsory clean-up regulations were not prescribed.

To repeat, as Professor Caesar has stated, had the borer multiplied as rapidly as it did in Welland and several other counties not under the Act, almost all of the cornfields would have been ruined, if clean-up measures had not been resorted to in the Canadian Corn Belt last summer.

The experience of Canadian farmers with the corn borer has been costly. It has taken serious commercial damage and ruined cornfields to



How the Chain Is Fastened to the Walking Plow to Turn Under Corn Stalks in Fighting the Corn Borer

cities, or "separated towns," do not Norfolk and Oxford, were so heavily control measures in municipalities is have been ruined." usually done by the police.

taining an estimate of the corn acre-

come under the county council, or infested in 1926, the report states, governing body. Upon notice from the "that had the borer multiplied as provincial entomologist such localities rapidly as it did in Welland and sevare required to appoint an inspector, eral other counties not under the Act, and, as a result, the enforcement of almost all of the cornfields would

Due to the clean-up last spring, in The county corn borer supervisor Kent and Essex Counties, the number and assessed as taxes against the commences work about September 1 of borers was reduced fully fifty per and continues until fall plowing cent in spite of a fifty per cent reducceases. This period is spent in ob- tion in the corn acreage. In Elgin County, there was a reduction in the age to be cleaned up and explaining average infestation from forty-seven the regulations to farmers and advis- and seven-tenths per cent in 1926 to dollars for each offense. Offenders ing them how to meet the regulations. approximately thirty-eight per cent in

An End to Poverty If We End War

NSTEAD of seventy-one new war-House naval committee recommends fifteen new cruisers and one airplane carrier.

This is moderate, as President Coolidge says, and need not alarm any country, nor start another naval race.

Secretary Wilbur, however, continues to urge his 740-million-dollar navy building program. And this is understood to be a "starter" for a larger program for new warships for which an expenditure variously estimated at from two and a half to three billions of dollars would be necessary.

And an airplane can sink a fiftymillion-dollar battleship in three minutes!

Admiral Sims, who commanded our naval forces in the World War, has several times told the country that as an offensive or defensive unit, the biggest warship afloat is now as obsolete as the extinct dodo.

It takes courage for a high naval officer to admit that his trade is not as important as it once was, but Admiral Sims has both this and the other kind of courage.

ships for the American navy, the called to arms within the next ten of all who labor in these countries. years, a battleship would seem to be a poor investment from a preparedness standpoint. However, I do not pose as a military expert myself, and a squadron of fast cruisers might be even more useful in time of peace than in war. In the present state of the world we cannot put down our arms unless others agree to do so.

> This country now spends more than \$600,000,000 a year for military preparedness. Our navy already costs us \$319,000,000 annually and its budget is rapidly increasing. The army's expenditures last year were \$361,000,000. They also are increasing.

> What we are now spending in a year on our army and navy totals more than twice over what all the forty-eight states expend for charities and prisons, and one-half of all we spend for public schools.

> Every year the present naval expenses of France, England, and the United States consume more than one billion dollars' worth of human energy.

Even if this country expected to be This is a tax which rests on the backs

As has been pointed out by another writer, what the nations expend on armament and armed forces, would hospital and a \$10,000,000 university. wipe out every city slum, educate every child in the world, put agriculture and every other industry on their feet, and restore prosperity to man-

When the world abolishes war it of nurses. will abolish poverty.

going. What another world war would sess. cost may be imagined when we learn that latest estimates place the total expense of the last one at thirty million lives and four hundred billions of dollars!

Representative Berger calculates that 400 billion dollars would build a \$2,500 house and fill it with \$1,000 worth of furniture, for every family in the U. S., Canada, Australia, Great Britain, France, Belgium, Germany, and Russia. And this home would be situated on five acres worth \$100 an

There still would be enough money left to present to every city of 2,000 and more in all the countries named, a \$5,000,000 public library, a \$5,000,000

Out of the remainder there would be enough left to set aside a sum at five per cent interest which would pay for all time an annual salary of \$1,000 to 125,000 teachers and an equal number

Even then there would be enough money remaining to buy up all of What world peace will save us when France and Belgium and everything of achieved is indicated by the fore value that France and Belgium pos-

> This is what the world paid for the last war, the United States contributing a large share.

> If we could stop this war foolishness, what a reduction we could make in taxes and in the prices of everything else that costs money!

Therefore it is correct to say that when the world abolishes war, it will abolish po-

verty. It Q 1544 can be done.

Everything Comes to Him

Who Orders Hash-Being a Dissertation on the Activities of a City Farmer

VERY rural community has its city hick—its hay-shaker who has answered the back-to-theland movement from town. He may have done it for reasons of health, or he may have been smitten during the first nice, warm days of spring with a craving to get closer to nature—and how painfully close he got if he ever weeded sugar beets or pulled a field of beans by hand! I can't recall a single crop that can put the "ache" in acres any quicker than either of those. Can you? Anyway, the city guy's efforts, along no matter what line of endeavor, are watched, criticized, and speculated upon by those charter members of the agricultural fraternity who happen to be his neigh-

Our little community was no exception. In fact, we had at least a half dozen who had transferred their affections from town to country, and if I had time I'd like to tell you about all of them. You'd get a big kick out of some of their experiences in the "country school." I know I did. For instance, there was Nathaniel Norton, the last of the smoke eaters to join our grange, and without a doubt the most citified jay I ever met.

This country gentleman was born, raised and lived in Chicago until he was thirty, at which time he took nine counts in a titular bout with old man asthma, and his trainer, in desperation, prescribed the great open spaces of Northern Michigan, where men are Eskimos about eleven months out of the year. Subsequently, Norton purchased an improved forty right on the shore of Lake Charlevoix in the charming resort section of western Michigan, and within one-half mile of Ironton-the last resort.

He always maintained that he was single, and as far as we could see he was unencumbered with a wife. But I know better. I am convinced he was married to Lady Luck, and I think you'll agree with me after you've listened in on some of his episodes.

In appearance, Nat was of the type that called for at least a second backward glance. Picture, if you will, a guy who, according to Bertillon measurements couldn't possibly cast a shadow over five feet two inches long, weighing only one hundred and fifteen pounds soaking wet, black hair and eyes, complexion somewhere between a light maroon and a vivid cerise, his pan always encased in a contagious grin, and you've got the hero of this lullaby. He was actually handsome and would have been a complete knockout if it hadn't been for yardage. But when Mama Nature drafted him she omitted a good twelve inches somewhere between the adenoids and the arches. I'll say this for her, though: she proportioned him right: Lots of runts will run to stomachs or Adam's apples when they begin to crowd thirty; but not this one. Everything about him was symmetrical, even to the part in his hair. In town, he would probably be just another human being, but out here in the sticks he was a wow and as fine a neighbor as you'd want.

I distinctly recall our first meeting. It was in the very early spring a couple years ago and, at the time, I was out in our hotel Barney giving the cows their dairy lunch. My attention was attracted by that familiar mechanical sound which indicated the presence of one of those universal cars in the yard, and as I glanced out the window a man was just in the act of defording. At least it turned out to be a man. He actually looked

small enough to mail. He evidently sensed that I would be doing chores for he headed right By Harv Hess

for the cow house. We met at the I'd left my manners in bed, the way I looked him over. I couldn't help it. He was just a scant eyeful, and that's all. He obviously guessed my thoughts, for as he extended his hand in greeting, he says:

"Never mind the size, Buddie; it ain't what you got below the ears that counts-it's what's between 'em. We've all got our shortcomings and when they picked mine I'm glad they bobbed my stature instead of my brains."

He wasn't peeved, understand-I've never seen him that way since I've known him-but I presume he had been treated so often to such scrutiny that the words, or speech, slipped out easily.

"Yeah," he continues, "take Napoleon, for instance. They tell me that frog could walk under a day-old-chick; yet he was considerably more of a hero than Goliath. But speaking about names, mine's Norton, Nat Norton."

"Do you spell that first name with a 'G' "? I inquired, glancing down at

"You can if you want to. I've been called everything that has a diminutive meaning and I can answer to Gnat. There's nothing sounds more friendly than a good nick ame and I'll say I've had my share. I came down here to get acquainted."

"You struck a good place, brother; come on in the barn and I'll open a case of eggs. There isn't much in the way of chairs around here but try and make yourself comfortable on a piece of that hemlock upholstery," and I indicated an empty potato crate.

"I'm going to let you in on a little secret," says he, shifting his weight to the crate, "or maybe you know it already. I've just bought the Chapman forty and that makes you and me neighbors. Now don't bust out cry-

ing."
"You've bought the Chapman farm?" asked incredulously, "why I had no did you happen to pick that place?"

"It isn't much of a story, so I'll door and I know he must have thought tell you. It seems that ever since our old family physician told father 'it's a boy' I've been afflicted with about every variety of bronchial and cranial disease in the catalog or patent medicine almanac, and after an unusually heavy siege of asthma a month ago, the doctor told me that unless I wanted to give some embalmer a job I'd better move into the fourth zone. In other words, northern Michigan was the place suggested for

> "And have you been relieved?" "Yeah-of about four thousand dollars. That's what this ranch set me back, and I shant begrudge one cent of it if I can just get a good breath once in a while. Honestly, if he had said the word, I would have gone to

> Iceland." "You ain't far from it right here, Norton; there's only about two degrees and six inches of snow difference. But you'll like it."

> "I'll have to; or else get myself in some nice obituary column. So far, so good. I haven't even sneezed since struck this latitude.'

"Are you married?"

"No; and I don't ever expect to be." "I've heard 'em say that before. Take it from me, marriage is a great institution."

"Yes, but who wants to live in an institution all their life. I'm going to buck this agricultural game alone, and from all I hear there's a lot of hard work connected with it. What is your specialty?'

"Oh, nothing in particular," I answered. "I practice what they call 'diversified farming." That's where you raise everything but the mortgage."

"I thought this was the day of specialization."

"Maybe it is, in bootlegging or bobs; but not in agriculture. is, unless you're a good gambler, and I ain't. Take this country around here. It's fine for spuds and beans idea it was even on the market. How but I wouldn't any more think of planting all my eighty to either of

those commodities than I would of planting it to cocoanuts. If I did, I'd be sure to buck up against a drouth, or a wet spell or a frost. Either that, or every one else would be seized with the same grand idea and the market would be flooded. A guy can study up on hogs with the idea of bringing home the bacon. Buys a lot of stock, equipment and fencing, and about the time he starts spending the money he's going to get out of all those shoats, a family of cholera germs decide to start a subdivision on the premises and that long looked for check turns out to be a black one. My advice would be a few good cows, with some attractive side lines for cash."

"I see you keep cows." "No. They keep me. There's a difference."

"I get you," he smiles. "Say, do you suppose I could ever learn to

"Easiest thing in the world. Of course, some cows are nicer to handle than others. Take that one on the end there; you'd probably be all night getting enough out of her to float a toothpick."

"How much does she give?"

"Not an ounce. You have to take it all from her, and the taking ain't so easy, what I mean."

"What's a cow like that next one there worth?"

"I wouldn't take a dime less than three hundred dollars for her. She-." "My gosh! is she giving oil?"

"No; but animals like her don't grow on trees. She's all cow."

"Speaking about trees reminds me that I guess I'll have to leave; there's a couple of bankers down town who need my advice. But I'll drop in, maybe tomorrow;" and, grinning, he headed for his car.

Well, that's about all for today's lesson; but the wurst is yet to come, as the weiner casually remarked.

CEMENT BARN FOUNDATION

I plan to remodel my barn and would like to make a concrete foundation but am afraid it would be too damp. Is this true? Would the stock keep well in a barn like that? I have a lot of stones but they are round. That would make it quite hard for the mason to use, but I can use all stones mixed with concrete for I want stones mixed with concrete for I want stones mixed with concrete for I want to have a 12-inch wall. How can I put air spaces in if they are necessary? Would we need air spaces if we had good ventilation?—V. P.

It is common practice to use concrete for the foundation of barns. So far as strength is concerned, this type of wall is ideal, but because concrete is a good conductor of heat, there will be condensation of moisture on the inside of the wall during cold weather, and it will be more difficult to keep the barn warm. If you care to go to the expense it will be desirable to place two by fours flatwise against the concrete wall and cover them with sheathing and one-half inch insulating lumber. There is no reason why stones should not be used in making concrete wall Only perfectly clean stones should be used since cement cannot adhere to a dirty stone.

In regard to air spaces in the wall will say that you could have a very desirable wall by building two six inch walls of concrete about four inches apart and fill this space with dry gravel. Such a wall would be warm and you would have very little condensation on the inside. The two walls would need to be tied together with No. 9 wire.—F. E. Fogle, M. S. C.

Albinos are found among almost every species of bird and animal,

The famous Blarney Castle in Ireland was built in the fifteenth century.

Another Farm Tragedy



Feeding Small Grains

Nitrogen May Still Help Wheat

By G. R. Schlubatis Soils Dept., M. S. C.

PROFITABLE production largely which manures or green manures are money-making crops are put usually on our best soils, and we do all phate) alone. Some potash may be we can to maintain and improve the fertility of such soils. Natural differences in soils and variations in the plant food requirements of crops raise many practical questions.

About 1,600,000 acres of oats and 140,000 acres of barley are grown annually in Michigan. Much of this acreage is raised on light or run-down soils reducing the average ten year yields of oats to only thirty-two and four-tenths bushels and barley to twenty-four and seven-tenths bushels. The high yields produced on many

depends upon soil fertility. Our plowed under during the rotation, will respond to superphosphate (acid phosincluded where legumes are to be seeded. On the heavier loams and silt loams the amount of nitrogen and potash may be reduced or eliminated because of the natural supply of these elements in the soil. Here superphosphates alone are usually adequate.

Phosphorus is generally lacking in our soils. The light sandy loams are also usually low in nitrogen, unless supplied by manures or the growing of legumes. Hay crops following the grain respond to the application of potash. The amount of these fertilizfertile soils makes evident the great ers to be applied, depends on the ex-



This Farmer Complained of Poor Yields While Neglecting to Give These Old Stack Bottoms a Chance to Do Their Bit

which these small grains are grown.

A definite plan or system of soil building extending over a period of all the crops in the rotation. Michigan soils, especially the more sandy types, are likely to be acid, a condition which can be corrected by the use of ground limestone. The successful production of many crops depend, first of all, on the correction of this soil acidity. Experiments show increased yields of oats, barley, and wheat through the use of lime. For best results, lime should have been sown on acid wheat ground last fall, but, if a legume is to be seeded with the oats or barley this spring, or later on in the rotation, lime should be applied as soon as possible.

The composition of a fertilizer for oats and barley depends on the type of soil, its previous treatment, and whether or not the following crop is to benefit by the residual effects of the fertilizer. Barnyard manure should be applied to the cultivated crop preceding the grain crop. The cultivated crop can readily use the nitrogen in the manure but, if applied on the grain crop, this nitrogen may produce a tall, rank, growth of straw, which usually lodges and is difficult to harvest. But these grain crops benefit markedly from manure or legumes plowed down for some preceding crop. When clover or alfalfa follow small grains, increased yields result if a fertilizer mixture, especially one containing some potash, is sown with the grain.

While the best yields of oats and barley are generally obtained on the heavier soils, good crops are grown on light sandy loams if a complete fertilizer is used. When legumes are grown in the rotation or manure is applied, the amount of nitrogen and potash in the fertilizer may be somewhat reduced. On soil, low in fertility, a 2-16-2 fertilizer should give profitable returns. If legumes are to be seeded in the grain, a 2-16-8 should give enough more hay to more than pay for the fertilizer. A light soil, on

possibilities for improving the soils on tent to which the soils have been cropped and on the system of soil management being practiced. For soils of ordinary fertility, the fertilizyears will produce increased yields for ers recommended give excellent results when applied at the rate of about 250 pounds per acre.

The Winter Grains

At this time of the year we begin to think about the condition of our fall sown grains and to speculate as to what we can do to increase growth and yield, if the crops do not look good. Light soils of medium to low productivity usually respond well to spring applications of nitrogenous fertilizer or manures. In the early spring when the young plants are starting to grow, a good supply of nitrates is necessary for the maximum development of the plants. On these soils of medium to low productivity, the growth of the plants are stunted by an insufficient amount of nitrates during early development. This handicap they never quite overcome. In case of severe winter and spring weather, the wheat and rye plants are forced not only to start growth in a weakened condition, but to withstand undernourishment at a critical stage of development.

Dry weather delayed the seeding of wheat and rye a little last fall. This with some winter injury justifies a special effort to overcome these handi-

Applications of fertilizers should be made about the time the plans start growth in the spring. If machinery is used to make the application, the ground should be firm, or the material should be applied during a time of the day when the ground is frozen.

Barnyard manure applied at the rate of four to eight loads to the acre should give good returns. On the Cass County experimental field, located on a sandy loam soil of low productivity, applications of manure, top-dressed at the rate of eight tons per acre, have given as an average for four years sixty-five per cent increase in yield of the small grains over a similar piece of land receiving no manure. This

(Continued on page 415)



GIVE YOUR FARM a chance

CROPS WERE 50% BETTER... Mr. Arthur Lane of Marietta, Washington County, Ohio says: "I used 'AA, w ALITY' Fertilizers on my corn and potatoes last Spring. I never had any fertilizer do my crops so much good, and the drilling condition was fine. I think my crops were fully 50% better than any I have ever grown with any other fertilizers." October 7 1927.

1400% PROFIT... Mr.

October 7 1927.

1400% PROFIT . . . Mr. Clarence Priser, of Claypool, Kosciusko Co., Ind., says: "This season 'AA QUALITY' Fertilizers paid me a profit of 1400% on onions, or gave me a return at the current price of onions of 15 times the price of the fertilizer, which certainly should convince anyone that it is very profitable to use 'AA QUALITY' goods. The onions were of good quality, and the crop ripened somewhat ahead of those where fertilizer was not applied." September 24, 1927.

EXCEPTIONAL CROP

fertilizer was not applied."
September 24, 1927.

EXCEPTIONAL CROP
RESULTS... Mr. A. A.
Schultz, Superintendent of
the Detroit Creamery Co.
Farms, Mt. Clemens, Macomb Co., Mich., says:
"This year our 40-acre
wheat field averaged 50
bushels per acre, and our
356-acre oat field averaged
86 bushels per acre; our
153 acres of alfalfa produced 380 tons first cutting, 316 tons second cutting, 316 tons second cutting and 100 tons third
cutting—all this notwithstanding the fact that
weather conditions were
not the most satisfactory.
The foregoing I believe is
ample reason why I prefer
"AAQUALITY! Fertilizers
and recommend them to
others." September 30,
1927.

Do you need a new tractor, a cultivator or other farm machinery? Does the barn need rebuilding? Is the old car worn out? Or perhaps there is a son or daughter to send to college.

Here is a way to make the necessary added income from your farm. Use "AA QUALITY" Fertilizers and get extra yields, better quality, and earlier maturity-crops that provide the added income necessary for the comforts and advantages to which

you and your family are entitled.

"AA QUALITY" Fertilizers will give your farm a chance to prove what it really can do. Increase your profits by using these Fertilizers, just as scores of other farmers near you are doing. Read the letters at the left for instance. ters at the left, for instance.

Actual crop results prove that there is a vast difference in fertilizers of the same chemical analysis. Chemical analysis does not fully disclose the sources from which the plant-food elements are derived, neither does it indicate the mechanical condition—two very important factors affecting crop-producing power.

"AA QUALITY" Fertilizers produce more profit for every dollar invested in fertilizer because of the infinite care used in selecting the materials from which the plant-food elements are derived; because these famous formulas are based on a thorough knowledge of crop and soil conditions, and are backed by over 60 years of successful crop production.

Plan to increase your profits in 1928; insist on getting "AA QUALITY" Fertilizers for this season's crops, Give your farm a chance.

Our "Agricultural Service Bureau," under the direction of Dr. H. J. Wheeler, will be glad to answer inquiries about crops, soils or fertilizers. Send for our Booklets. Please state the crops in



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THE GRAND DETOUR Corn Borer Special Plow is built with extra wide bottoms—it plows with a well-turned furrow slice that insures the complete covering of trash—conceded by government experts to be an effective means of controlling this devastating pest.

This plow can be used either as a 2-bottom plow with 12, 14, or 16 inch bottoms or as a 1-bottom plow with a 12, 14, 16 or 18 inch bottom. All bottoms are easily interchangeable on any beam—an unusual feature that's a money saver when extra wide plowing is essential, because only the bottom need be bought—not a complete new plow. Bottoms are specially designed for perfect covering. Beams are guaranteed not to bend or break.

The Grand Detour Corn Borer Special is of exceptionally light draft, easy to operate and has the long life built right into every part of it that



The Corn Borer Special completely covers all trash.

is typical of all Grand Detour Tractor and Horse Drawn Tillage Tools. It's not only the ideal plow for fighting the Corn Borer—it's a great general purpose plow, too.

Find out more about it by mailing the coupon; you'll get an interesting, instructive booklet by early mail—free.



HAY ROPE GAVE TROUBLE

I have to buy a new hay rope: My old rope is %-inch three-ply, and has given lots of trouble from kinking between traveling pulley to carrier and is very hard to pull back. Would a cable-laid four-ply rope work better? Have been told that a %-inch rope is heavy enough and will handle better than the %-inch. What is your opinion?—R. M.

The standard hay fork equipment is made to take either ¾, 13-16, or %-inch rope, but the preference in size seems to be for the 13-16-inch size, although %-inch is still sold to a large extent. The ¾-inch is considered a little light for the rate at which farmers want to take up their hay.

Opinion is divided as to whether the four-strand is any better than threestrand, but several authorities recommend the four-strand as being more flexible and more nearly round and hence not so likely to twist in running over the pulley. Most of the trouble from twisting can be prevented by using a ball-bearing swivel where the rope fastens on to the movable carrier. These are now on the market at a small cost, or they can sometimes be made by running the end of the rope through the hole in the carrier, then through a small ball bearing off an old car, then tying a knot on the end of the rope.-I. W. D.

OLD HOUSE IS COLD

We have a large old farm house built without sheating under the siding and consequently it is very cold in winter. We live near a planing mill and can get lots of shavings. Would it be possible to dampen some of these shavings with something that would render them fire resistant and use them to pack in the wall space by taking off a few of the siding boards here and there? What would be the best to use that would be reasonably cheap?—Subscriber.

We do not know of any method of treating shavings which will effectively resist fire. Shavings are a good insulating material provided they are kept dry, and the house would be very much warmer with shavings in the studding space. Another method for making a house warmer would be to cover it with stucco or with creosote stained shingles. Either one of these materials can be put on over the present siding. While not so durable the shingles would be better insulators. That is, they would let less heat out from the house and will cost somewhat less.—F. E. Fogle, M. S. C.

GENERATORS FOR LIGHTING

I have two six-volt generators. Can I take one generator and a battery and use it as a motor to drive another generator to make lights for a house? Will one generator make enough voltage for three rooms? What size bulbs would I need and what size wire? Please advise.—C. W.

The purpose of a generator is to produce electricity. A storage battery in a charged condition is likewise a generator. Inasmuch as you already have this electricity available in your storage battery, it will be only necessary to wire from your battery through necessary switches to your lamp sockets in parallel. Any large electric supply house can furnish you with 6-volt light bulbs with adapters to fit the standard light socket. Your six-volt generators in this plan do not come into use at all, and of course are unnecessary. However, your storage battery must be charged as you consume electricity in the form of lights. Your six-volt generator would be useful in charging your battery. This would necessitate some form of mechanical power such as is produced by wind, water, or gas engine. A small gas engine would, no doubt,

supply this energy most satisfactorily.

I would suggest securing the ordinary headlight bulbs, six to eight volts and about stxteen to twenty-one watt rating. This will take about three amperes for each light bulb. To give a light equivalent to a sixty watt lamp, it will be necessary to connect three of these sixteen to twenty-one watt, six-volt bulbs in a cluster. An eighty ampere hour battery fully charged and in good condition will operate three such lights for about ten hours before recharging. The average car generator will operate about five of these lights without serious overload.-E. C. Sauve, M. S. C.

SAWDUST FOR INSULATION

We have a home constructed meat cooler or refrigerator. Walls are sheeted with matched lumber inside and out with four inches of sawdust between walls. Would other material such as cement or lime, cement and sawdust be better? If so, please give formula of mixture, or any other substance.—L. L. L.

The refrigerator wall of matched lumber inside and with four inches of sawdust would be very satisfactory and much better than cement or cement and sawdust mixture. A comparison of the insulating value will, no doubt, be of interest to you. An inch of sawdust if kept dry would be equal to approximately two inches of wood or three-fourths of an inch of insulating board, six inches of plaster, eighteen inches of brick, or twenty-four inches of concrete.—F. E. Fogle, M. S. C.

FARM HOME PLANS

I am thinking of building this spring. Would like plan of house, bungalow type, with five rooms and a bath. Will build of tile.—W. C. T.

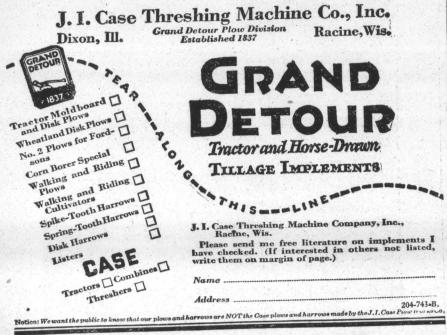
We do not have plans for a five room house. We do have plans for a one-story six room house. The first floor plan consists of living room, dining room, kitchen, bedroom, and bath. The building is really only one story high with the two rooms and toilet under the roof on the second floor with three dormers to the front. We are selling the complete blue print plans for this house for two dollars. Or we will send them out on approval but they may be returned if they are not what you want.—F. E. Fogle, M. S. C.

PROTECTING BUILDINGS AGAINST LIGHTNING

As a protection from lightning, should a galvanized corrugated steel roof have a wire connection with the ground?—J. B. R.

A metallic roof should be grounded at two or four corners and not from the peak under any consideration. The ground wire, if of copper, should weigh at least three ounces per foot. If of steel four and a half ounces per foot or a three-eighths inch rod. Any shape that will give durability and convenience may be used. The ground wires should not be insulated from the building. The ground wire should go into the ground to perpetual moisture. This will be at least eight feet deep.

Points should be used on the ridge and other prominences. Points should be twenty to thirty feet apart. The ones on the end should be not over five feet from the ends. The points should be four or five feet in height except in cupolas and ventilators when they would need to extend only about eighteen inches. Care should be taken that all connections between the rods and metallic roof are carefully made and that the rods be well grounded.—F. E. Fogle, M. S. C.



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The one grade in which SHELL Kerosene is made meets every farm need # and best of all, it costs no more than ordinary kinds. Avoid the expense and trouble of buying and keeping two grades of kerosene # 4 "Change to Shell" # that is the only grade you need.

SHELL 400 "Extra Dry" Gasoline

SHELL Gasoline is unusually free from greasy, carbon-bearing elements. Vaporizes completely, ignites instantly, burns cleanly, leaving no unburned residue to dilute the oil in the crankcase. More expensive to produce, but costs you no more than the ordinary kind.

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SHELL Tractor Oils "stand up." w They provide a constant cushion of protection for all moving parts. Select the correct grade for your tractor from the booklet, "The Lubrication of Farm Machinery." The Shell driver will gladly give you a copy.

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incubators and placed immediately in storage products. Fight in the same temperature; no set back; broaded under scientific methods; fed right; 24-hour-a-day attention.

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Hints on Turkey Raising

Some Essentials of Success By Mrs. L. H. Funk

H EALTHFUL vigorous birds are essential for successful turkey should have a full bright eye, broad head, a healthy red in color. It should head. have a good depth to its body and no defects. A long breast is good, as this is where the bird carries the greater part of its weight, and it is the best for meat production also. The legs should stand apart between the straight shanks, and not be too long. And here too, one should remember to select a good tom, for he is indeed half the flock. Late hatched birds should never be kept for breeders, as the offsprings are never as strong as they would be otherwise.

Breeding turkeys should be in medium flesh, never too fat. I always keep them provided with plenty of grit and oyster shell. Charcoal is always before them, they eat freely of it. It is a great help in keeping them healthy. Great care should be taken to keep their feeding places clean.

Free range gives the most satisfactory results through the laying season. But if you have many turkeys, however, this will make extra work for

The birds should be well fed during the winter months, especially at night. Grain feeding of equal parts of corn, oats, and wheat are good. Vegetables such as cabbage and sugar beets, may be used as a substitute for green feed. Alfalfa range is excellent for turkeys, the young poults thrive faster on it than any other green range.

Opinions vary as to the number of hens to be kept with one tom. To be sure of your hatch ten or twelve hens to one vigorous tom is best in my judgment. If there are more than a dozen birds use two toms. If the toms do not agree, it will be necessary to shut one up for a couple of days, and then let him out, putting the other one in for the same length of time.

When turkeys run on free range one should be careful to gather the eggs before they become chilled.

I have found it quite practical to use the incubator for hatching turkey eggs, and the young poults can successfully be brooded in brooders. Preventing the birds from becoming broody keeps them laying much longer, and too, when the eggs are hatched in the incubator and the poults are raised in the brooder, one saves himself the trouble of hunting all over the country for an old turkey that has hid out with her brood. I spent a good many of my childhood hours helping mother hunt for turkey nests, and helping her locate the old turkey with her young.

Any incubator that satisfactorily hatches hens' eggs will hatch turkey eggs. The hatching requirements of turkey eggs are similar to those of hen eggs, except that the temperature for the turkey eggs should be about one-half to one degree lower than for hens' eggs. The hatching period for turkey eggs is twenty-eight days.

young chickens. They are fed a dry mash mixture which is made as follows: 60 pounds yellow cornmeal, 40 pounds shorts, 20 pounds bran, 30 pounds meatmeal, 6 pounds bone meal, and 11/2 pounds of finely pulverized salt. I also keep sour milk or buttermilk before them. They are provided with green range from the start.

Great care should be used in the feeding and watering so that it is done in a strictly clean manner. The blackhead disease which is common among turkeys, is caused by a parasite that enters the blood stream of the bird when it picks up feed that has been eggs in April, then falls again.

EALTHFUL vigorous birds are contaminated with droppings. A little care used in providing covered feed raising. A good breeding bird troughs and water pans is far more economical than trying to cure black-

Another important thing to be remembered is that the blackhead parasite is also carried by chickens, and although they do not succumb to the disease, they serve as distributors of this infection. It is a good plan to keep the flock of chickens away from the turkeys.

ALL-MASH FOR LAYERS

Would you please send me a copy of some good all mash mixture for egg production? What feeds would you advise a farmer to raise to make a good egg producing ration for next winter?—J. P. S.

A good all-mash mixture for layers can be made of 400 lbs. yellow corn meal, 200 lbs. wheat bran, 200 lbs. middlings, 100 lbs. ground oats, 100 lbs. high grade meat scrap and 100 lbs. alfalfa leaf meal. This ration is improved by adding 50 lbs. of dried skim milk or by feeding semi-solid buttermilk.

An all-mash ration which has been successfully used in raising pullets, especially in Ohio, consists of 70 lbs. ground yellow corn, 20 lbs. winter wheat middlings, 5 lbs. meat scrap containing 50 per cent protein, 4 lbs. poultry bone meal and 1 lb. fine salt. Green feed, oyster shells, and plenty of water are also required.

A farmer who raises corn, wheat, and oats can work them into a good laying mash. It can consist of 100 lbs. ground corn, 100 lbs. ground oats, 200 lbs. ground wheat and 100 lbs. meat scrap. The addition of two per cent bone meal, two per cent ground limestone and one per cent fine salt will furnish minerals. Alfalfa hay can be fed in racks. Adding 50 lbs. of bran to the 500 lbs. of mash helps to give it more bulk, when ground wheat is used in place of bran and middlings.

A SMALL FLOCK

A BUSINESS man of Reed City, Michigan, Mr. C. Remenap, has as a hobby the raising of a small flock of chickens. They provide him outside work and his family with fresh eggs. His hens are Rhode Island Reds. He has a flock of twentyeight hens and during the month of January, 1928, they laid 415 eggs. The feed cost him \$4.38 and on eggs used and sold he made a profit of \$8.10. He fed them a commercial feed at the rate of fifty pounds of mash and 100 pounds of scratch feed.

This record for the month shows what can be done with a small flock of hens if carefully fed and taken care of. Aside from the advantage of always having fresh eggs, the cash in hand from strictly fresh eggs is something to be taken into consideration.

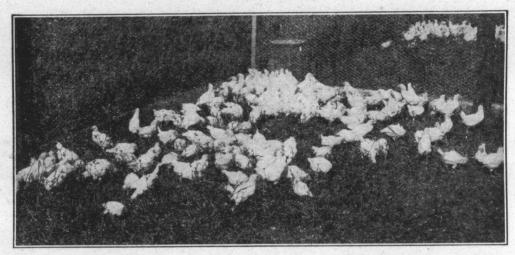
GOOD AVERAGE PRODUCTION

I feed and take care of the young AS a matter of fact, there is no repoults in the same manner as I do AS a matter of fact, there is no repoults in the same manner as I do day for a full year. The standard as laid down by the poultry department of Ohio State University is 160 eggs in 365 days. The state average is about seventy eggs. Of course, some high grade hens do better. More than one hen on the records of the Ohio Poultry Improvement Association has beaten the 300-egg mark in 365 days. But they are not common hens.

Egg production for the average hen is at the lowest point in November, when five eggs for the month is the standard requirement. This standard rises month by month to twenty-one

Raising chicks with only ¼ the usual losses

BELOW are given the plain facts of a practical test of the value of Dr. Hess Poultry Pan-a-ce-a in chick raising. This test was conducted on the Research Farm of Dr. Hess & Clark, Inc., Ashland, Ohio.



1000 day-old White Leghorn chicks were purchased from a commercial hatchery. These chicks were divided into four pens—500 chicks in two pens called Pan-a-ce-a pens, and 500 chicks in two pens called non-Pan-a-ce-a pens. All were raised in houses and pens of modern construction and had exactly the same care and attention.

Two of the pens were fed a dry mash, to which was added two pounds of Dr. Hess Poultry Pan-a-ce-a to each 100 pounds of mash. The other two pens were fed the same dry mash, but given no Pan-a-ce-a. The test began when chicks were one week old and continued seven weeks through the period of usual deadly losses until they were eight weeks old.

Statement of losses week by week

				Pan-a-ce-a Chicks	Non-Pan-a-ce-a Chicks	
First week of test	-	-	-	7 deaths	9 deaths	Pan-a-ce-a chic
Second week of test -	-	-	-	1 death	5 deaths	
Third week of test -	-	-	-	2 deaths	5 deaths	losses, $2^{1/3}$
Fourth week of test -	-	-	-	1 death	5 deaths	
Fifth week of test	-	-	-	0 deaths	4 deaths	Non-Pan-a-ce-
Sixth week of test -	-	-	-	1 death	5 deaths	
Seventh week of test -	-	-	-	0 deaths	14 deaths	chick losses, 9
Total		-		12 deaths	47 deaths	

At the end of seven weeks only 12 of the Pan-a-ce-a chicks had died, while 47 of the non-Pan-a-ce-a chicks had died. The losses among the Pan-a-ce-a chicks were just about one-fourth of those of the non-Pan-a-ce-a chicks.

Note also that seven of the Pan-a-ce-a chicks died the first week of the test — before Pan-a-ce-a could be effective.

During the last six weeks of the test only five of the Pan-a-ce-a chicks died, while 38 of the non-Pan-a-ce-a chicks died.

The loss among the non-Pan-a-ce-a chicks during the

last six weeks of the test was more than 7½ times that of the Pan-a-ce-a chicks.

The Department of Agriculture estimates that chick mortality in the United States averages about 50% of all chicks hatched. Poultry specialists consider a 20% mortality reasonably good, and a 10% loss up to eight weeks under favorable conditions exceptionally good.

In this test the losses among the Pan-a-ce-a chicks were only 2½% for the entire seven weeks, and only 1% for the last six weeks, when Pan-a-ce-a had an opportunity to function.

PAN-A-CE-A

gets chicks safely past the little-chick ailments

Remember—Pan-a-ce-a does not take the place of feed, and no feed or mash can take the place of Pan-a-ce-a. Feed no other minerals with Pan-a-ce-a—because Pan-a-ce-a contains Calcium Carbonate, Calcium Phosphate and other minerals in all-sufficient quantities.

Costs little to use Pan-a-ce-a. One 2-lb. broiler will pay

for all the Pan-a-ce-a 200 chicks will require for 60 days.

If your chicks are not getting Pan-a-ce-a, start them now. Every dollar invested in Pan-a-ce-a will return ten times its value in more and better chicks.

See your local Dr. Hess dealer.



points to question

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News and Views

From INGLESIDE FARM—By Stanley Powell

say, "There isn't anything that I can do but chores this dark and gloomy weather." I don't disagree with them openly, but in my heart I can't help doubting their statements. couldn't see plenty that might be done to advantage no matter what the weather.

Aren't there some doors, windows, mangers, or stalls to repair? Isn't there some shed or corner full of useless junk that might be cleaned out and disposed of? Have you any cattle

that should be dehorned before fly season arrives? Are the harnesses all cleaned and oiled for another season? What about doping the cattle or poultry for lice? Aren't there some business or family letters that should be written? Would

wife like to have you clean the cellar? Have you run your seed oats and seed barley through the fanning mill and selected and tested your seed corn? Is every tool that you are going to use this coming season repaired and adjusted ready for use? Are your farm accounts and pedigrees of purebred live stock in good shape?

I fervently wish that I might answer all of these searching and embarrassing questions satisfactorily. If you can, I'll agree that there "isn't much that you can do but chores thiskind of weather."

How About Your Side Roads?

Did you attend the recent party caucus in your township? For some reason or other our local caucus was the most largely attended and probably the most interesting which we have held in many years. The meeting developed into a general discussion of the best methods of improving and repairing township roads and supervising this work. Someone suggested that we devote an entire evening to the consideration of these matters. He urged that we set a date, arrange with some suitable local organization to serve a supper and then sell tickets at fifty cents each to all citizens of the township who were sufficiently interested in local roads to be willing to devote an evening and a half dollar to such a cause.

My friend who proposed this side road supper meeting asked for a show of hands as to how many would be willing to buy tickets at fifty cents each. Hands went up by the dozens. In fact, I believe that well over fifty per cent of the larger number attending the caucus indicated their desire to be present at the proposed supper. It remains to be seen whether anything will be done along this line. We haven't any copyright or patent on the idea, so you are at perfect liberty to try it out in your township.

This ought to be a good time of year to get folks interested in side roads if your conditions are like ours. During these spring days even the state and county roads are rough and choppy, but township roads are well nigh impassible.

A Most Interesting Letter

When I get to thinking about the financing of township highways, my mind goes back to a very interesting letter which I received some time ago from D. E. Williams of Bronson, who is master of his local grange and secretary of the Branch County Pomoma Grange. Commenting on my

AM continually hearing farmers statement in one of these article that forty-one per cent of our general property tax was for highawys purposes, Mr. Williams wrote in part:

"I have compared supervisor's warrants of Gilead and Bethel townships I never yet was on a farm that I and find the road tax is thirty-three and one-third per cent of the total, while the per acre tax of average farm land is \$2.00 to \$2.50 per acre and these same farms are renting cash rental at three dollars per acre if worked.

> "High taxes are confiscating the rural homes at a terrible rate and something must be done. We are suggesting a four cent gas tax '50-50 or bust' which in plain English is two cents for the state, one cent for the county and one for the townships within the county-this for construction and maintenance of grade A gravel roads only. The two cents to counties and townships must be apportioned on a mileage basis, including all established roads exclusive of state trunk lines and roads within incorporated cities. Counties with average mileage of roads would receive about \$120,000 or \$60,000 for the county and \$60,000 for the townships. This would reduce our road taxes five dollars per thousand and build every mile of dirt road into a grade A standard road in twenty years and furnish \$100 per mile for future maintenance without one cent of direct tax on real estate.

"The benefits would be too many to number. It would stabilize values of reality, profitably employ country labor and the unemployed of the cities, place Detroit and other industrial centers at the door of every farm in Michigan, solve the maintenance of the highways without direct tax on real estate, city or rural, open the door of opportunity for rural-minded young men and women to stay on the farms, increase value of farm mortgages, check closing of banks because of frozen assets in farm paper, and increase the business of every merchant in every town and city in the

Township Officers Stretch Dollars

"We insist on a division of townships because highway commissioners under county survey and supervision employ local labor and build an average mile of road about \$500 cheaper than professional road contractors and occasionally \$1,000 cheaper."

I haven't checked over all these figures, but it is evident that Mr. Williams has given the matter careful study and his ideas are certainly very interesting.

Mr. G. Gaskill of Albion, R. 5, writes that he thinks I spend too much time watering and grooming the Ingleside horses and am feeding them too many valuable oats.

Answering Mr. Gaskill's letter, I wrote in part, "While it may be all right to water horses but once a day this time of year, it seems to us that two or three times would be better especially if the water is not heated. We can hardly imagine a horse drink ing a day's supply of cold water at one time.

"As to the grain and grooming, we must admit that we have had some idea of changing horses this spring and hence wanted ours to look a little more attractive than the average.

"One of the best horsemen in this territory was at Ingleside recently and he stated that with chunky horses he preferred to start the spring work with them a little below normal weight, but with those of rangy and a somewhat nervous temperament, he preferred to start the season with them in quite good flesh."



FARMERS STUDY SOIL PROB-LEMS

I NSPIRED by the state and county extension service over three hundred Cass County farmers are studying soils this winter. The method followed is the relay or local leader plan whereby thirty-six leaders representing eighteen local groups receive monthly instruction from a soils specialist and then relay the information at meetings of their local groups.

At a recent session the point was made by specialist John Sims that, in the past, much money had been wasted due to the non-adaptation of commercial fertilizers to the different types of soils and varying require-

ments of crops.

This had been the experience of one of the group leaders present. Farming a prairie type of soil, he had in the fall of 1926 fertilized part of his wheat with twenty per cent superphosphate, part with a completed fertilizer analizing 2-12-2, while part of the field was left unfertilized.

As harvest time approached in 1927 the apparent advantage was with the 2-12-2. However, in cooperation with the county agricultural agent, equal and representative areas of the three treatments were cut and, when cured, threshed in a small machine used by the College in experimental work.

The apparent superiority of the 2-12-2 showed in the weights of straw, as the bundle weighed twenty-one pounds and two ounces as compared to eighteen pounds and two ounces, the weight of the bundle from the straight superphosphate area.

But after threshing, the story was reversed. Reduced to an acre basis the superphosphated part of the field yielded twenty-five and a half bushels per acre while that getting 2-12-2 yielded twenty-three and one-third bushels, showing that the phosphate had furthered the development of kernel even though the straw was not quite so rank.

This farmer realizes that conclusions should not be too hastily drawn and is repeating the same experiment, but his first trial indicates that, for his soil, the superphosphate is the more economical. On a different type of soil the situation might be reversed.

It is interesting to note that the part of the field receiving no fertilizer yielded only sixteen and one-third bushels per acre.

FEEDING SMALL GRAINS

(Continued from page 409) large increase, which was obtained, is probably due to the residual effects of the manures. Over a number of different types of the lighter soils, it is doubtful if this large percentage of increase could be maintained.

Nitrate of soda at the rate of sixty to one hundred pounds per acre, or sulphate of ammonia at the rate of forty to seventy-five pounds per acre, used as a top dressing, has proved profitable on a number of the experimental fields. Sulphate of ammonia should be applied only to land which is not sour. A number of trials of nitrate of soda and sulphate of ammonia on several different types of soil, ranging from sandy loam sands gave a twenty-nine per cent increase in yield of small grain over tests on similar pieces of land not receiving these fertilizers.

The application of nitrate of soda and sulphate of ammonia presents a rather difficult problem in securing an even distribution of such a small amount. Sulphate of ammonia may be spread with the combination fertilizer and grain drill and the nitrate of soda may be spread with an Endgate broadcaster. Either of these materials may be spread by hand. As much as fifteen to twenty acres a day can be covered in this way.



Value the reason of course

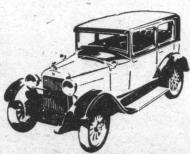
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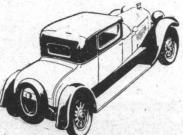
Everywhere dealers are reporting more than 100% greater sales than for the same period last year which was the previous record.

It is easily the greatest Essex Super-Six in history. It offers \$200 to \$300 more visible value than its great predecessor which outsold any other "Six" at or near the price by overwhelming margins.

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IT MULCHES. Rear wheels split ridges made by front wheels, plowing and replowing the field to form a loose mulch, saves moisture.

Plowing often leaves air spaces between the furrow slices and the furrow bottoms.

These spaces should be closed and the loose soil firmed by the Culti-Packer. If this is not done, the subsoil moisture cannot rise past these cracks and reach the roots which grow later in the soil above.

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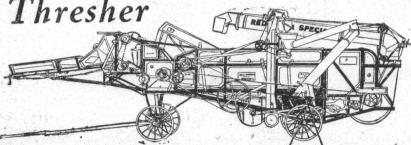
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Our Readers' Corner

Facts and Opinions by Michigan Farm Folks

SPORTSMEN AND SPORTSMEN

I HAVE read with much interest the complaints and grievances in regard to the so-called sportsmen, but I haven't found any writer who had any remedy. What I call good sportsmen are no more nor less than plain law abiding citizens. What becomes of the money that is paid for hunters' license? Why not set it aside to pay damage from marauders? Why not save some to prosecute them the same as in any similar crime?

We pay a license on our dogs and the money is saved to pay the farmers for the depredations they commit on the sheep. The dogs have to do a lot of running and don't know about the law. What can a farmer do when he hears shooting among his stock and when he finds the sportsmen to be strangers? "Nothing."

Here is my remedy. When a farmer hears shooting on his premises, phone the game warden to come with his car—with a John Doe warrant, take them to the justice, fine them aplenty so the justice and the game warden will get ample pay. If they are hunting out of season or without a license, take them to the calaboose.—C. H. Snow, Sr.

THE ADVENTURE OF FARMING

H AVE just been reading News and Views from Ingleside Farm by Stanley Powell. There is a man after my own heart. Farming is truly a great adventure. I have heard people say, and have read articles on the same subject; farming is so monotonous.

What is more monotonous pray tell me, than the life of a poor man in the city. He must rise early to start work by the whistle or the clock, works steadily at the one thing until the whistle or the clock announces dinner time, hurries home to dinner, eats as quickly as possible, hurries back to his same work until the whistle or clock relieves him at night. Then he hurries home to his evening meal too tired usually to do more than eat his supper and go to bed, to be ready for the next day's work at the The sameness of the same thing. days is the killing thing. True there are many places he could go if he were not so tired but he must rest or he cannot work the next day and most of the places he could attend for recreation cost; and if he has a family he cannot afford to spend the money.

On a farm, it seems to me, no two days are alike. There is such a variety of things to be done. I remember one time my husband was in the hospital with a lame knee, had been there for three weeks, during which time I had had no visitors, but had been very busy taking care of things. We had about an acre of wheat to cut, and I had hired a man to cut it and was in the field helping to set it up, when my sister came to stay all night with We had not seen each other for some time so I left the work in the field and went to the house to talk with her. This was at three o'clock in the afternoon. We talked until supper time, then I did the chores, while she cleared up the supper work, then we talked until about two o'clock in the morning before we finally decided to go to bed. She stayed until after dinner the next day, when I hitched up a horse and took her ten miles to her train, staying in town for my supper, drove the ten miles home, milked my four cows, fed my pigs, calves, and horses, took care of the milk and was in bed by midnight, with a feeling of well-being, except for my

sick husband. Farming is certainly anything but monotonous and the unexpected is waiting just around the corner.—E. P. C.

COMING OR GOING?

THE question is often asked whether prohibition is coming or going. Well, in 1920, California voted wet by 65,062, and swung dry by 63,-617 in 1926; in 1920 the Missourians voted dry by 61,299, and by 275,543 in 1926, more than quadrupling the 1920 majority; in 1922 Massachusetts voted wet by 103,876 and two years later the bean eaters switched dry by 4,247; in 1914, Ohio voted wet by 83,000 but changed to prohibition in 1920 by 290,194; and Illinois went wet by 553,-131 under an "advisory" referendum in 1922, but in 1926 that majority had dwindled to half, or exactly 284,03C. The majority in Chicago dropped 129,-

Mathematically, prohibition is coming, as one blind in both eyes can see.

As soon as Coolidge penned "I do not choose," lightning rods appeared over a score of political air castles. Among the Barkises were President Butler, of Columbia University, Speaker Longworth and former U. S. Senator Wadsworth of New York, all able, outstanding men, and wet. Now, all that is left of their air castles is the lighning rods! "Dry, and proud of it" would describe every Republican presidential probability.

The Democracy also! Al. Smith, Governor of New York, formerly the plumed knight of the anti's, is yelling himself hoarse in behalf of prohibition enforcement. Senator Reed, long the congressional big noise of the boozocracy has become as silent as a suckling oyster on the question, and Jimmie Walker, Mayor of New York, has mounted the water wagon.

Politically, prohibition is neither going nor coming—it is here to stay.—W. G. Calderwood.

THE RELICTED LAND SITUATION

RECENTLY read a statement that the conservation department would take no action-no advantage of the latest supreme court decision affecting frontage of improved relicted land owned by the state. This ruling may seem neighborly until we refer to memories calendar and review some other rulings where a lover of the wild waded a creek and cut stock fence in quest of game against the protest of the owner of the land. The farming farmers wonder if this relicted land was regularly planted to staples of agriculture if the same courtesy would be lasting with the conservation department.

The writer would never favor a nuisance to be spitefully kept in front of a lake cottage, yet I never would consent to forever allowing the free use of land caused by the actions of people of Illinois lowering the water and exposing same. A fair plan would be to determine from the tax rolls the acreage the present owners had title to during the last fourteen years, notify said owners of the fact and proceed to lease the state land annually to the highest bidder giving the frontage owners of improved property the prior right to protect their frontage from vandalism and allow free action to lease all other frontage. So much for tenting privilege for a single season. A lease for a team of years for a wooden building. A lease for a longer term for a more permanent structure and a lease for fifty years for a structure of concrete and steel, E. Richardson.

BENEFITS FROM MY SOIL PROGRAM

(Continued from page 405)

did not have a fair chance, however, and the value of the fertilizer was not returned. This, of course, keeps the fact in mind that while fertilizers are of benefit, failures sometimes occur. Weeds surely respond to fertilization also and cultivated crops must be well cared for.

Last spring the land was again plowed and fitted and sown to barley and seeded to white sweet clover. Two hundred pounds per acre of a 2-16-2 fertilizer was drilled in when the barley was sown, the unfertilized strip being left as before. The check strip gave a yield of 16.2 bushels of barley per acre against 31.6 bushels per acre on the fertilized soil. The fertilizer cost \$3.92 per acre and gave us an



Bundle on Left Received No Fertilizer. The Other One Did.

increased yield of 15.4 bushels of good quality barley with the same amount of labor. The sweet clover came on fine except on the unlimed check strip. I feel satisfied that we are increasing the productivity on this field. Field No. 12 Was The Poorest on the Farm

Field No. 12 is sandy loam soil and was the poorest field on the farm. In 1925 a light red top sod was turned under and two tons per acre of ground limestone and two hundred pounds per acre of 4-16-4 fertilizer were applied and beans were planted. The check strip yielded nine bushels per acre while the rest of the field gave us thirteen bushels per acre, an increase of four bushels. This was a worthwhile increase and the fertilized beans ripened up better than those which were not fertilized. We drilled wheat after the beans, but, due to rainy weather, it was sown rather late. Two hundred pounds per acre of 4-16-4 were applied, while the same check strip was left unfertilized. The wheat barely showed above the ground when winter set it. In the spring one hundred pounds per acre of nitrate of soda were sown on the wheat. The check strip only produced two bushels per acre of poor quality wheat while the fertilized soil gave twelve bushels. Grimm alfalfa was sown in the wheat in the spring. The alfalfa was cut for hay in 1927, the limed and fertilized portion yielding two tons per acre of hay while the check strip has no alfalfa at all.

I would say that in this field with the lime and fertilizer, the three years' soils men. Fertilizer used on sour been no lime or fertilzer applied most sults as where lime had first been of the labor would have been lost. At supplied. Liming has made it possible the present time the condition of the to produce all the alfalfa that I can field is such that for producing crops possibly use for feed. Now I can sow on the limed and fertilized portion it alfalfa seed in the small grain in the is easily worth three times its value in 1924. On the other hand, the value where before I could get only a few of the check strip is just three crops less than it was in 1924.

Increased yields have been secured ly started and I look for better results on other fields by using lime and fer- in the next few years. If any readers tilizers. Oats, tomatoes, and potatoes should be in my neighborhood, stop were also fertilized and the yields and look over the fields and draw a compared to an unfertilized strip. The few conclusions for yourself. results surely show the benefits of a well planned soil building program and I attribute much of our success to the Great do?" use of well chosen fertilizers and lim-

THE MICHIGAN FARMER



How Big Is Your Farm?

Not the number of acres owned, but the actual productive acreage of your farm is the measure of its size and value.

Partly cleared acres mean less bushels or tons per acre—a reduction in your income and an increased cost of cultivation. Read what a U.S. Department of Agriculture Bulletin reports on the expense of dodging

stumps on a Mississippi farm: "A light-wood stump was blasted at a cost of 30 cents. Fourteen plow points were found around the roots. The ground covered by the stump would yield a bushel of potatoes." Here's proof that the stump is the costliest "tenant" on your farm-why not make him move?

You can move these oldtime stumps easily, quickly and cheaply by using

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-the new explosive succeed-

ing Pyrotol which has been so widely used by farmers during the past few years.

Your County Agricultural Agent is ready to help you get more money per acre from your farm. Talk with him about your farming problems and their solution. Do some house-cleaning in those fields where a few stumps are a menace to imple-

> ments, a home for cropdestroying vermin, and occupants of fertile, valuable ground. The cleared acre is the profit-maker.

For your guidance in the use of explosives, we have pre-pared the "Farmers' Hand-book of Explosives." It tells how to load explosives to blast stumps, boulders, treeholes and to shatter hardpan and to blast drainage ditches. Send the coupon for this helpful, practical handbook. Start NOW to make every acre a profit-maker.

U.S. Government Announces Supply of Pyrotol Exhausted AGRITOL

The new Land-Clearing Explosive

- 1. More economical— about 172 sticks to the 50-pound case;
- Much less inflammable than Pyrotol;
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AGRITOL

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Boy: "He died."

Your County Agricultural Agent will help you make More Money out of your farm

county agent and the State College



E. I. DU PONT DE NEMOURS & CO. Explosives Department, Wilmington, Del. MF3-A Gentlemen: Please send me a copy of the "Farmers' Handbook of Explosives."

Street or R. F. D....

ing materials as recommended by the RY a Michigan Farmer Liner to sell Your Poultry, Real 1 Estate, Seeds and Nursery Stock and Miscellaneous work was very profitable. Had there soil did not seem to give as good re- Articles. See Page 441 for Rates.

The Only Good Corn Borer Is a Dead One

Here's the way to fix the corn borer.

Plow him deep by plowing corn stubble deep—that's the first step.

Then kill him with an Acme Coulter Harrow—the only harrow that can really do the job effectively.

For the sharp, double curved Acme Coulters penetrate to the full depth of the furrow and slice, crush, and completely pulverize every stalk, every bit of trash, every clod and lump. And the downward slope of the coulters prevent the stalks and other valuable organic matter from being pulled up to the surface.

The corn borer stays down and dies.



Acme Coulter Harrows have behind them 50 years of practical farming experience and the endorsement of farmers and agricultural colleges everywhere. They're built for horse and tractor use—3 to 17½ ft. Clip coupon for the FREE Acme-Catalog which includes "Better Crops from Better Tiplage" and interesting experiences of Acme Harrow Farmers.

RUSSELL & BECK SUPPLY HOUSE, 17 Anson Street, Columbus, Ohio. Send me free Acms catalog described above.

Address.....

spring and get an excellent stand spears of clover to grow. Our soil building program is just getting nice-Teacher: "What did Alexander the



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Your Cost Sheet tells an interesting story of profits or losses.

Many Michigan Farmers have found in Farm Bureau Seeds, Feeds and Fertilizer the answer to the perplexing problem of how to make bigger profits.

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WRITE TODAY FOR MY FREE BOOK

Protective Service

What it Covers

Michigan Farmer Protective Service
By E. A. Shearer, Manager

THE continuous and substantial expressions of confidence in the Michigan Farmer Protective Service is most gratifying. Letters and memberships roll in with every mail. This cooperation of the readers justifies the recent expansion in a type of service that was undertaken by the Michigan Farmer over three-quarters of a century ago.

So this week, I wish to give a sort of bird's eye view of the whole scheme of Michigan Farmer Protective Service. As suggested above this service program is a sort of evolution. It has been decades in developing. For instance, over eighty years ago a veterinary service was undertaken by the Michigan Farmer. This service is still popular with live stock farmers.

Back in 1849 the Michigan Farmer was conducting a household service. The pioneer women had limited wants compared with the modern standards of living, but they appreciated this effort on the part of the Michigan Farmer to give them information on matters of interest to homemakers.

The issues of this publication of a quarter of a century ago contained answers to legal queries presented by readers. This branch of the service department is increasingly active in extending help to those who have questions of a legal character.

For the past several years family health problems have had personal attention of our health doctor and through him a popular branch of the Michigan Farmer service has developed. Today thousands of anxious folks consult our physician with questions pertaining to their own bodily ailments or the troubles of loved ones.

From the very beginning in 1843 the Michigan Farmer has been a sort of Mecca for letters concerning the production of crops, the fertilization of soil, the feeding and breeding of live stock, the marketing of farm products, the construction of farm buildings, the growing of vegetables and fruit, and the making of homes. Progress in agriculture has not diminished, but increased the demand for such service, and our staff of capable men and women are kept busy supplying inquiring readers with the latest available information.

Another class of questions has to do with the supplying of information on the investment of surplus funds, securing satisfactory insurance, the handling of claims against transportation companies, commission houses, and other concerns doing business generally with farm people. Through

HE continuous and substantial this service the experience and the expressions of confidence in the business contracts of the Michigan Michigan Farmer Protective Series most gratifying. Letters and its well-meaning patrons.

Although regrettable, it is nevertheless true that, during recent years there has been a never-ending line of swindlers, crooks, confidence men taking from farm people their hardearned capital and giving nothing in return. The Michigan Farmer is out to get these fellows. Besides going after them directly, we hope to give the farmers something with which to protect themselves as, for instance, such information as contained in the article published last week on oil leases.

Then closely related to these are the thieves. Apparently one of the most thriving businesses in rural communities these past few years has been the organized stealing of farm property-live stock, poultry, grain, fruit, implements, and scores of other items. It is our purpose to solicit the cooperation of every agency against thieving and encourage the capturing of thieves by posting fifty dollars cash rewards to those furnishing information leading to the capture, conviction, and penal servitude of those who steal from premises of members of the Michigan Farmer Protective Service where signs are posted.

This fifty dollar reward will be paid to any person or persons whether subscribers or not, who are primarily responsible for furnishing evidence leading to the capture and conviction of a thief or thieves guilty of stealing from a member of the Michigan Farmer Protective Service having Protective signs posted. The application of such rewards must be attested by the county sheriff and made within two weeks after the thief or thieves are captured. Rewards will be paid after the thief is convicted and sentenced. If two or more persons are equally responsible, the reward will be divided. In case of dispute, the Michigan Farmer Protective Service reserves the right to be the sole judge in deciding such disputes. A fifty dollar reward in also posted for the capture and conviction of the violators of the Horton Trespass Act.

The registered key tag described last week is also a feature of this service.

This covers in a brief way the general features of the Protective Service offered to readers of the Michigan Farmer. The following coupon will aid those not yet members who may wish to join in this work.

E. A. Shearer, Manager, Michigan Farmer Protective Service, 1632 Lafayette Blvd., Detroit.

Dear Mr. Shearer:

Enclosed find twenty-five cents for which enroll me as a member of the Michigan Farmer Protective Service and send me the weather-proof, steel Protective Service Sign, the Registered Tag and Key Chain with proper registration in your Detroit offices, a signed Membership Certificate, and a Warning Sign carrying the announcement of awards for capturing thieves and trespassers. I am enclosing the stencil of my address from the Michigan Farmer showing that I am a boni fida subscriber to that publication.

Name	 	 	 	 R. D	
D 0				State	

FARMERS HAUL MARL FOR USE ON FIELDS

M ANY farmers of Osceola County are taking advantage of the opening of a marl bed just across the Mecosta County line. This bed, owned by a farmer named Andrew Lassen, is supplying marl at the cost of one dollar per yard. He has sold hundreds of yards. It is a good substitute for lime, farmers are finding. They haul the supply several miles. The bed is open and the marl lies to the weather. Many people believe that it should be allowed to stand for a season before applying to soil.-F. B.

MOORESTOWN STUDIES COMMUN-ITY PROBLEMS

THE idea of broadcasting information about soils by relay methods has been the means of starting another study movement of Moorestown, Missaukee County, where the farmers who gathered for the local soil schools are now holding regular meetings every two weeks for the consideration of other community problems.

The relay soils schools, as conducted by Mr. John Sims, soils extension specialist from Michigan State College, are really leader training classes. Harry Remington and Harold Blake, the chosen Moorestown leaders, relayed the first two soils lessons to their interested neighbors and then conceived the idea of holding similar meetings every other Saturday afternoon in the schoolhouse to consider other matters of local interest. For the first meeting the prospective users of marl were called in and plans were made to handle the excavating at the nearby dry bed so as to avoid unnecessary waste. An overseer was appointed and the marl users agreed to contribute a few cents a load to pay for his time.

The subjects discussed at these meetings are determined by what the leaders think are the main sources of farm income for the community, that is, dairying, potatoes, poultry, etc. The local leaders, who are also members of one of the cow testing associations, discussed herd improvement methods at one of the meetings. By showing their herd books and explaining the benefits they had received, they were able to sign up several new members. At another meeting, poultry management was discussed by John Baker, agricultural teacher at the Lake City high school.

At future meetings it is proposed to study potato growing, small grains and forage crops. The discussions center around methods for improving the profits from each source of income. Limiting factors are noted and needed improvements pointed out. The result is a real revival of interest in better farming.—B.

WIDE SLEIGHS AND AUTO ROADS the county Board of Supervisors made

ONE of the results of the recent revival of lumbering operation in one took advantage of the offer.-B. Missaukee County is to prove that wide runner sleighs help greatly in keeping country roads open for auto traffic in winter. This winter the few remaining sections of virgin timber A GRICULTURAL exports for the near Stittsville are being cut and the Seven months ended January, sawed lumber is being hauled over a 1928, were valued at at Mynnings, on wide sleighs. This same period the preceding year. Imroad is not included in the county's snow removal program, and it would be impassible for wheel traffic if the the same period as compared with wide sleighs were not in use. So far, \$1,370,489,000 a year ago. however, it has been possible to drive cars freely wherever the wide sleighs have made a track. The use of wide sleighs as a means of keeping side roads open for cars is so convincingly shown that it is expected another effort will be made to induce all farmers in the county to widen their sleighs. A few years ago, before snow removal on the trunk lines was tried,

John is All Set for the CORN B

Route 1, Kingsbury, Indiana,

John Buck is a real "for sure" dirt farmer who lives near Kingsbury, Indiana. Read John's letter and then study the picture above. It is easy to see why Mr. Buck is all set for the Corn Borer.

A wonderful story is told in the illustration above. Note the height and size of the stalks. It's a two-bottom gang;

The Oliver No. 218 Ad-justable Gang Plow cuts 18" per base.

each bottom is cutting 18 inches. Examine the finished job of plowing. Not a single piece of trash is left on top of the plowed ground. This kind of plowing gets the Corn Borer. It also builds up fertility, for all of the stalks are returned to the

The Oliver No. 218 is not just a Corn Borer Plow. It is also the most practical plow ever built for ordinary plowing. When desired the frame can be narrowed down; the usual 14" bases can be used. The Oliver No. 218 is the greatest improvement in plow desire for several decades.

Oliver Chilled Plow Works, South Bend, Indiana. Gentlemen:

My Oliver No. 218 Gang can't be beat. Has the necessary clearance for covering my heaviest growth of stalks, weeds and thrash. Would not be afraid to try to plow any heavy growth of trash or stalks.

The No. 218 is the best plow I've ever owned.

If the Corn Borer Gets over this far, I'm all set to do an absolutely clean job of plowing.

The No. 218 is the all-purpose plow. I use it for every job and find it can't be beat. It does good work when the ground is hard or plowing conditions are good. For marsh plowing its clearance makes it an outstanding success.

(Signed) JOHN BUCK



design for several decades. Oliver builds horse-drawn plows and plows for all makes of tractors that can be equipped with the Oliver 18" Big Base. With the new interchangeable mouldboard the Big Base is now easily adapted for use in stubble or sod.

Get This Booklet on The European Corn Borer Control Let us send you our free booklet which tells about the Corn Borer and its control. Write for your copy today.



OLIVER CHILLED PLOW WORKS

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an offer to pay part of the cost of making the necessary change, but no

FOREIGN TRADE IN FARM PRO-DUCTS

county road, nine miles to the railroad compared with \$1,162,575,000 for the ports of agricultural products to the United States totaled \$1,298,389,000 for

A fireless cooker was patented in England in 1857.

The United States produces 95 per cent of the world's automobiles.

Italian volcanoes produce boric acid, ammonia, and other com-mercial materials in sufficient quanti-ties, so that factories using them are built near the craters.

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Plows, Seeds, Cultivates, Mows Lawns & Hay
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Sate... Effective... Economical

NITROPHOSKA, the new air-nitrogen complete, concentrated fertilizer, contains sixty pounds plant food in every hundredpound bag. It saves bags, storage, freight, handling and labor.

Most Plant Food in Least Bulk Guaranteed to contain 15% nitrogen = 18.2% ammonia, 30% available phosphoric acid, 15% potash. A total of 60 lbs. plant food in every bag.

Adapted for potatoes, corn and most vegetables. Safe. Effective. Economical. Nitrogen and potash materials may be added to change proportions as desired.

Use one-fourth to one-third as much NITROPHOSKA as you would of 6-10-5, 5-8-4, 5-8-5, 4-8-4, or 3-8-4. Save handling, hauling and labor in applying.

Introductory Price, \$5.50 per 100-lb. bag.

If your dealer cannot supply NITROPHOSKA we will ship, freight paid, to any railroad station in New England, New York, Delaware, Pennsylvania, Ohio, Indiana or Michigan, on receipt of P. O. Money Order at \$5.50 per 100 lbs. Lower price on carlots. Fill out form below and mail at once to—

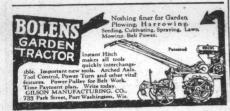
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Date ORDER COUPON Ship me bags of Nitrophoska. Ship to (give full name, plainly written). Name P. O. Address State My freight station is on the railroad. Enclosed is P. O. Money Order for \$ to pay cost at \$5.50 per bag.

"It's Nitrogen from the Air"

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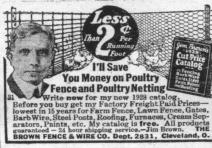
that has proven amazingly effective in conquering very bad ruptures. Entirely different from trusses. Nostraps, buckles or springs attached. Easy to apply—inexpensive. Plapao Co., 693 Stuart Bldg., St. Louis, Mo. is sending FREE Plapao to all who write now.



DON'T WEAR A TRUSS

BE COMFORTABLE-







S.M. ISBELL & CO., Seed Growers 126 Mechanic St., Jackson, Mich. 17

given the dormant spray and one after the blossoms chucks are off, and the gooseberries and currants receive the necessary applications to keep them free from aphids, mildew, and worms. But in the care of his vineyard, Roy is strictly unorthodox-he does not spray but gets excellent results by

(Continued from page 405)

using the "sanitary method." He keeps the vineyard in good tilth and every little while during the time when disease is likely to develop the men go through the vineyard and pick off any fruit which may show signs of infection. The vineyard is on rolling clay loam with good air drainage which makes conditions favorable to

Those who know Mr. Munson realize that he typifies the business farmer for he runs his farm in a businesslike way. Roy himself is full of energy and a very hard worker. He expects his men to earn their money, and figures to get the most out of his investment in equipment by keeping it busy as much as possible.

the production of good fruit.

But behind this cold business efficiency, there is a humanness shown by the three fine homes nestling in surroundings made beautiful by Munson's knowledge of landscaping. One house is occupied by a man who has been with him thirty years, the other by one who has worked at Vinecroft for eighteen years, the third is Munson's home. The same day help also comes back year after year because they like to, and the young pickers greet Roy pleasantly at all times. This shows that the Munsons believe in the efficiency of kindness.

The various kinds of fruit are practically the only crops on the place, although about four acres of potatoes are grown each year. These potatoes sell very well to the apple consumers in the winter.

There is no live stock on this farm except two horses for the farm work the tractor will not do. Sometimes a cow is kept for the home milk supply, but usually milk is bought. Sixty chickens in a Michigan type house, furnish eggs for sale right at the farm. The chickens are kept in accordance with the latest methods, including the use of lights during the winter time.

J. Pomeroy Munson, as his name usually appears in publication, is a thorough believer in the use of machinery on the farm. His equipment includes a tractor, three gasoline engines, three electric motors, two automobiles, two trucks, three wagons, two sprayers, etc.

For many years the Munson home has had modern conveniences such as light, water, furnace, and bath room. At first, the lights were acetylene, then a farm electric light plant, but now come from the city lighting system. Water is furnished by a large windmill which provides water for all three houses, a gasoline engine furnishes water when the wind fails. The employees' houses contain all modern

The farm is of a picturesque, gentle. rolling type with soil of clay loam. The homes overlook a broad expanse of low land country, giving a distant view. The land needs no artificial drainage and is naturally quite fertile. However, additional plant food is continually added to maintain fertility. The barnyard manure is spread immediately if possible to do so without interfering with cultivation. Cover crops are plowed under each year in the orchard and vineyards. Sulphate of ammonia is also added to the bearing fruit lands as needed. During the winter manure is hauled from the city.

The operation of the Munson farm involves considerable detail, sufficient to keep one busy. However, both Mr. and Mrs. Munson are very active in public affairs. Roy is an outstanding Michigan horticulturist because of his fruit growing success and his activi-

QUALITY FRUITS BRING SUCCESS ties in behalf of the Michigan State Horticultural Society. One can hardly remember when he was not an officer of that society. At present he is treasurer. As the society frequently meets in Grand Rapids, he has additional duties in preparing for the meetings. He has been a member of the local school board for fifteen years and has been an active officer in the county farm bureau since its start.

The family attends church regularly and takes an active part in most all of the church doings. Roy is also an active member of the local community club. That he is well-known by the business men in Grand Rapids is shown by the number of times he is greeted when in town.

The home is well supplied with modern reading, both books and magazines. It has a radio and piano. The family frequently goes to theatres in town and are fond of week end auto trips and vacations when time permits. Automobile trips have extended as far as Florida and New York.

There is one son, Austin, eleven years old, who is gaining business experience by tending the roadside stand during the summer. From it he sells fruit, cut flowers, and even ornamental shrubbery.

Munson's success, his public spiritedness, and his family life assured his appointment, after nomination, to the honor of Master Farmer in the 1927

ONION GROWERS WANT HIGHER TARIFF

VIDENCE presented by the Na-E tional Onion Growers' Association in a brief filed with the United States Tariff Commission by W. R. Ogg of the American Farm Bureau Federation, shows convincingly that the vast quantities of onions coming from Egypt and Spain into this country enter into direct competition with the onions grown in New York, Ohio, and other Northern states.

It is also shown that there is no need for fear that the increased duties if granted would result in a shortage of onions which would place an undue burden on consumers. Ample evidence is given to warrant the belief that if foreign importations were excluded entirely domestic producers could supply the domestic market.

MARCH GARDEN NOTES

MARCH will usher in the first outdoor work in many Michigan gardens. Even if the weather will not permit planting in the open ground, frames may be used to start the cold-weather plants. If all gardeners realized how useful cold frames were at both the beginning and end of the garden season, every garden would have as many as circumstances permit. Two three by six foot sashes and the material needed for the frame will cost less than ten dollars and even that small an area will produce a lot of plants. If you will make the start in frame gardening, I am sure you will never be without that gardening accessory again.

The problem of construction is very simple. The first consideration is to select a well-drained site with a southern exposure and one protect from the north and west winds if possible. It must be remembered that frame gardening is a most intensive operation, so, if the soil is not naturally very fertile, the top soil should be removed where the frame is to rest and replaced with eight or ten inches of the most fertile soil obtainable. A compost of equal parts of wellrotted manure, sand, and leaf mold makes a very good combination for this purpose. Make the frame six feet wide and as long as desired but, in any case, a multiple of three such as twelve feet long for four sashes, etc. The back of the frame should be about fifteen inches high and the front

about ten, thus giving a southern slope to the sash to catch all possible sunlight and to drain away all moisture. If very cold weather is expected after the frames are in use, they should be banked up with soil and heavy mats or burlaps used over the sash to exclude frost.

Weeks may be gained in maturing many of our hardy vegetables by the use of frames.

Early Root Crops

For an extra early crop of beets or carrots, seed in the cold frames three or four weeks before the normal date for planting outdoors and transplant to the open when the weather permits. Early maturing varieties should be used for this purpose. Although you cannot hope to get plants for an extra early cabbage crop from spring sown seed in the frame, it is possible to advance that crop several weeks by starting seed as early as work in the frames can commence. A better way is to start the seed in the hotbed about three weeks before it is safe to use cold frames, harden the plants off in frames and transplant to the open ground when safe. Cauliflower may be handled in the same manner but will not stand as much frost as the former.

The only way in our climate to grow the large sweet onions variously known as Spanish, Bermuda, Texas, etc., is by starting the plants in a frame or hotbed a month or six weeks before outdoor planting would be safe. When the weather is settled, transplant them to a well enriched place in the garden where it will be handy to keep irrigated. Onions of a surprisingly large size and of superb quality may be grown in this manner.

Lettuce in Frame

Lettuce is an ideal crop for frame gardening. It may either be matured in the frames or the plants may be started there and later transferred to the garden. An extra early crop may be grown like this: Plant the seeds in a flat in the house, if a hotbed is not available, harden off the plants gradually and transplant to the frames about ten inches apart just as soon as safe. For a later crop, plant the seed in rows about a foot apart in the frame and thin to stand about the same distance apart in the row. The plants that are thinned out of the frame may be transplanted to the garden if the weather permits. Big Boston is a good variety for frame culture.

A quick maturing crop like radishes need not take up any particular space in the frames but may be intercropped between the rows of slower growing plants. Select a forcing variety that produces slight leaf growth.

Start Long Season Plants

In addition to these hardy crops, tomatoes, egg plants, and peppers may be given a start in the cold frame. Of course, a better way to handle these long season crops is to start them in February in a hotbed but where this is not available the cold frame will give you a start of two or three weeks. A few of these tender plants may be started in flats in the house and later, when they are hardened off, they may be grown in the frames until it is safe to put them

After a little practice in frame gardening, you will see many combinations that will exactly suit your conditions. Nearly every garden crop may be advanced by the use of frames. Upturned sods with a few seeds of the melons, cucumbers, squash, etc., may be started in the frame and the whole thing transplanted to the garden, thereby gaining two or three weeks. By the use of paper pots, a few hills of beans or corn may be advanced the same period. Truly, the frame is a useful accessory for the garden. If you are not using this convenience, you are missing much of the fun and great amount of the profit in garden-



TAVE you heard about the remarkable new cream separator announced by International Harvester? Perhaps you have seen it, or read the carload-delivery pages being run in the newspapers by the McCormick-Deering dealers. No wonder the New McCormick-Deering is going in shipments of a hundred and more into communities everywhere. It is a long jump ahead of the times; it has everything!

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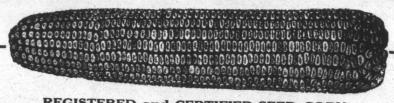
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Under the 4-H Flag

By John Francis Case

RIENDS," began President Barton, and the eyes of Father and Mother Barton were warm with pride and effection as they looked up at him, "it is a great privilege to be enrolled under the banner of the 4-H. We are only boys and girls today, but tomorrow we will be carrying the burdens of our elders, helping with the world's work. It is to train us for better work, for better citizenship, that we follow the club flag. Let us be loyal followers, inspired leaders. Let us put our very best into our work at home as we put our best into work and play here. Again I pledge loyalty and the

best that is in me." "Thanks to you, Bobbie Barton, thanks to you," sang Bob's mates as dads and mothers cheered, "we'll do the best we can; we'll stand by you like a man. Thanks to you, Bobbie

Barton, thanks to you."

"Top dog here, all right," growled Carson to himself, "but wait till he lines up against Warford High." Carson had not joined in the club yells, songs, or pledge. Ross Burton made a mental note of that as Bob called for club reports. It was not difficult to see that the girls under the inspiring leadership of Miss Edwards and with the stimulus of Katie O'Neal's example were setting the boys a hot pace to follow. "Gee," confided Ted Baldwin to Bob as the meeting broke up, "I'm glad I don't have to compete against a member of that garment club. Some pep, some pep!"

As the club officers met together for a moment Katie O'Neal found opportunity for a sly, "Sorry you didn't miss this meeting, Bob? I never really

thought you would."

"I'm not going to miss any meetings," declared the club president. There's the soon-to-be-substitute-firstbaseman waiting for you. We are going to play his team in two weeks. We fight it out for the club team then. Wish me luck, Kate?" Bob's tones were light, but there was an under-

current of feeling.
"Four-H luck, Bob," replied Katie. "As Mr. Burton says, 'May the best man win'." With only a nod to Carson she joined her parents and was

off for home.

"Kate saw that Hal didn't join in on the club pledge," remarked the assistant secretary. "She hates dis-That was a fine speech, Bob. You talk like a man."

"Come on, thou learned friend," interjected Ted Baldwin. "Time to go home. Maybe your friends will give you a lift." In solitary state Carson was driving off in his high-powered car while derisive yells of "Come again, Warford, come again," uttered by small boys followed him. Young Carson was too "high and mighty" for that gathering. Moreover, they had sensed the rivalry between one who now was their acknowledged leader and an alien. Bob was to have the solid backing of his community in the coming fight. Of that he felt assured with one possible exception. Again, with O'Neal's friendly help, he redoubled effort to perfect play. And

gave counsel and cheer.

"I thought you were just kidding when you talked about playing Warford," Ted remarked as he worked out with Bob at the O'Neal home. "Never supposed we'd really go up against

"I had a hunch that Carson would want to show me up," said Bob. "He did it the other time, all right, but he didn't have a crowd to look on. Next time it may be different."

Torrid days and abundant rainfall not only made the corn grow until

Ted Baldwin, now an open partisan, when I were a boy. It was a ghosty bar and his marster. Them Perkins's and Harkins's had done somethin' to plague 'em. They won't trouble you-

"Let's hope so, Uncle Lem," said Bob, and then in sudden decision, "I'm going to tell you something that I haven't told the folks. You wouldn't want anything to happen to drive us away, would you?"

"I'd fight for you," said Uncle Lem. "But not agin speerits."

"Spirits don't use guns," replied Bob. "Now listen to what happened

can foller a trail wherever that trail goes.

Despite the old man's timidity, Bob felt that he had won a strong ally. The time was soon coming when he must penetrate deeply into the woods for needed posts and the winter's supply of fuel. The old hunter's woodcraft might be helpful. Never for a moment had Bob lost thought of ever-present danger. Yet as the weeks merged into months and the Jones farm continued in peaceful quietude, there were times when the print of a giant foot and the whine of a bullet seemed but illusions.

Squire Jones had made good his promise to visit the farm frequently. Won by the cordiality of his welcome, the superior intelligence of his tenants and the industry of the lad who was accomplishing far more than any other tenant of recent years, the farm owner astonished neighbors by his liberality. The house had been painted and re-roofed, the barn repaired, the fencing ordered for extensive improvements in fall and winter. But, above all, the old man exhibited interest in Bob's hogs. A lover of blooded stock he could recall the days when, as a pioneer with pure-breds, pedigreed porkers had been sold on the farm. To Bob's amazement the old Squire reeled off pedigrees glibly when first they discussed the breeding of Lady Mary and her family.

"That's a fine pig, sah," the Squire had observed when first he viewed Bob's promising pet. "He should be a winner, sah. What do you call him?"

Bob was in a quandary. Would the old man feel insulted to find a mere hog bearing the name of a distinguished advocate of the "lost cause." But it was not like Bob Barton to evade. He decided to tell the truth.

"The night the pigs were born," Bob informed, "I sat up with Lady Mary. I got to thinking about you, Squire, and wondering if ever, as a boy, you'd had to do the same thing. This pig was such a lusty fellow and had so much more pep than the rest that I called him Stonewall Jackson. Hepe you will take no offense. I meant it as an honor to a great man."

"God bless my soul!" exclaimed the old Squire, "why should I feel that you had done wrong? From a man it might be an insult, sah. But a boy thinks with his heart as well as his brain.

"I am honored, sah," went on the old man, and now his eyes were misty, "that you should think of me. No, there were no fine hogs such as yours here when I was a boy. But once I comb that bluff from top to bottom. bred hogs of quality here, sah, as you do now. I was a pioneer. I have never lost interest. My own son persons who drove the other tenants loved them as you do yours. I can see him now, standing and looking down with pride in his eyes.'

A tear rolled down the old man's withered cheek. His voice was husky with emotion as he went on: "Robert Lee was his name, lad. He was a human or animile, but I caint fight fine boy. He died here in the room you have when he was just a bit

They's Been Folks That I've Liked Better! By S. D. McDowell

They's been folks that I've liked better Fer a man 'ill make mistakes, An' pass by solid merit While he grabs fer glitterin' fakes; But ez sure ez death an' taxes They is bound to come a day When the weeds an' chaff don't pay him Fer the wheat he's throwed away.

They's been folks that I've liked better Fer a man is apt ter try Ter pick up shinin' baubles Right when truth is goin' by; But the jewels he gethers tarnish An' their value's mighty small When compared ter honest friendship That he longs fer most of all.

They's been folks that I've liked better As the years went hurryin' by But now I find 'em shaller As a restaurant apple pie; Fer I'm older now an' wiser So I'm tryin' to make amends An' my hand is reachin' toward you Shake!! Let's me an' you be friends!!

you could "hear the jints pop," accord- to Ted and me this spring." ing to Uncle Lem Peters, but put vigor into the temporary pasture whereon Bob's fast-growing, thrifty pigs held forth. Uncle Lem, ancient hunter and trapper, who had plied his profession until rheumatism made it impossible to follow the trap line, still roved the woods. He had taken a great fancy to the Bartons and came often from his cabin in the hills. A believer in "hants" and "speerits," the old woodsman had insisted from the beginning that some supernatural being had afflicted folks of the farm. As he stood leaning against a post one day watching the playful pigs, Bob questioned him anew about the trouble which now seemed merely a shadow of the past.

"You caint ever make me believe it was man," solemnly pronounced Uncle Lem. "Nary a bar ever lived in this kentry, and yet there were bar tracks just as I seed 'em in the moutings

"God Amighty," cried Uncle Lem when the recital closed. "An' I been thinkin' of huntin' right thar' again'. Keep away, Bobbie, keep away."

"I'm going to let 'sleeping bears lie," just as Mr. Burton told me to do," said Bob. "But there's still a mystery on this farm. We can't afford to take a chance of losing stock as the Perkins's did, but when these pigs are sold and my note paid I'm going to We like the folks here; it looks as if we'll do well on this farm. The same away may attack us. We must solve the mystery. I'm going to depend upon you, Uncle Lem, to help keep

"Hants," quavered the old man. "Speerits. I ain't afeered of anythin' somethin' that disappears. Howsomeever, I'll keep watch. An Uncle Lem older than you are now. It has been

Frank R. Leet Activities of Al Acres-We'll Bet He Doesn't Work as Hard as Tin Henry THAT'S TIN HENRY, MY HE MUST BE JUST MECHANICAL HIRED MAN, LIKE MY HIRED MAN WHAT'S THAT HE HAS EVERY THING AL! CONTRAPTION, BUT BRAINS! AL? 1 10 LEETS

friends. Moreover, the old Squire bethe club project.

One by one they have passed away. Their dear mother, sah, a Southern gentlewoman, has been dead these him before the game began. many years. All alone, Robert, there home. It is hard, sah, hard." Now and Bob choked as he tried to speak words of comfort.

long had been in his heart. "This is your home," he said, "you must love by one run." it as you love no other place. Why not live here with us? Mother and dad would welcome you, I know."

Into the eyes of the old man came a light which had not been seen there in many years. "God bless you, son," he replied, "Squire Jones is not welcomed in many homes. But I could not trouble your good mother. I shall visit you often, sah. It seems that you-all are kin to me." Solemnly they shook hands; the old man bent and frail, the youth a virile remembrance of one who had stood with a fond father upon that self-same spot.

"They tell me you have a fight on your hands, sah," remarked the old Squire irrelevantly. "What is it all

Briefly Bob recounted the story of rivalry and his determination to win over young Carson.

A gleam came into the old man's "Fight him, sah," he faded eyes. cried, "fight him! I shall be there, sah, to see you win." To the amazement of those who knew Squire Jones and his eccentricities, the old man began to haunt the Warford school grounds where Hal Carson was daily "prepping" his team for the expected easy victory. The town team, with its hours of practice, had distinct advantage. Even the most optimistic Pleasant Ridge rooster could hardly vision a win under such handicaps.

"He's a dirty player, sah," confided the Old Squire to Bob as again they stood watching the lad's porcine "Cut one boy with his spikes just to show off. Watch him close, sah. He's none to good to cripple you."

Bob had smiled and thanked his aged friend. He could not know that even now the once grim owner of the home which sheltered them was seeing in his wholesome, likeable young friend the son of days gone by nor that his fierce partisanship was the welling of long dried springs of parental affection. With neither child nor grandchild to care for, the gods of greed had claimed the old man for almost a quarter century. Even in the short weeks of contact he had become a changed man, and those who knew him best marveled at the change that had come and could not solve the mystery.

CHAPTER XII Warford Vs. The Club

T might have been a holiday for both Pleasant Ridge and Warford so far as work was concerned. Through all the consolidated school community an undercurrent of feeling ran that the game between the

long years, but to me still he is a club team and Warford High was for bigger stakes than a mere victory. Bob's eyes, too, were wet in sym- Bob Barton's gruelling toil at practice pathy. They could call the old man even when days of work had left him cold and hard, but hidden springs had slow and sluggish lost nothing in the been revealed. "Thank you for tell- retelling for now it was an open ing me, Squire," said Bob. "I shall secret. Bob Barton was out to beat try to do honor to the name of Robert his rival and Pleasant Ridge, with all Lee. And I am glad that you feel its clannish consciousness aroused, that in naming 'Stony' I felt no dis- was on hand to see the scrap. Warrespect." From that day Bob Barton ford citizens were proud of their and Thomas Jefferson Jones were firm team which had gone through the county high school league season with gan to take a surprising interest in but one game lost and now proudly flaunted its championship banner. "If we had had such things," he Rumors were affoat that the 4-H Club would often say, "when my boys team was not lacking in strong matewere young, how much happier they rial. Warford would pull for the team would have been. Only Robert took against Harmon County, but now its interest, and he was taken young. The youth and age crowded the stands to older boys left me to carry on alone, cheer Hal Carson and his showy comrades. Ross Burton, cool as the proverbial cucumber, called his lads about

"Horton can hold Warford," Burton is none of my blood to inherit the old announced, "and it's up to you to get some runs for him. If you have had the tears were streaming unashamed any idea that this bunch is unbeatable get that out of your heads. Warford has a few stars," Burton went on, "It is hard, Squire," said Bob, "and "but man for man we are their equals. we all feel sorry for you." Then with On your toes now and fight to the last boyish impulsiveness Bob spoke what ditch. My guess is that this will be a hard, close game, perhaps decided

Digging his spikes into the dirt at first base as the club team took its preliminary workout, Bob Barton saw his old friend the Squire perched high in the stands. He waved a greeting and the Squire waved back. Massed in one section the 4-H Club partisans, with Pleasant Ridge largely in the majority, shouted and sang under the leadership of Miss Edwards. Well down in front Bob could see Katie O'Neal, her curls wind-blown, blue eyes shining. Disdaining a seat, Big John O'Neal lounged on the ground near the club team's bench. The farm boys seemed slow and uncertain in fielding, while Warford's infield flashed the ball around with a precision that seemed uncanny. There was many an inward groan from club well-wishers as the umpire called "Play ball!" Here was a seasoned team against raw material. But as Ted Baldwin, leading off for his team, went to bat, the "Fight Club, Fight!" of the 4-H friends matched the men-ace of Warford's "Smash 'Em Warriors!" Baldwin smashed hard to the shortstop and was thrown out. The game was on.

Before two innings had passed it was evident that Ross Burton knew whereof he spoke. Vance Horton, big and powerful, held hard-hitting Warford at bay, while the fast-fielding

school team threw a defense around their pitcher which seemed impregnable. As the innings passed with but two scores each, Carson unleased the batteries of wrath upon his mates. "Going to let a team of rubes whip you?" he shouted so that all could hear. "At 'em this inning. Get on; no matter how, get on." Putnam, the shortstop, responded with a clean single and Warford cheered madly Up came Carson to smash a terrific drive at Ted Baldwin who knocked down the ball, then threw wildly to first base. As Bob Barton stretched far and gloved the ball he felt a tremendous shock. Carson with spikes high had slid into the bag. Bob felt a trickle of blood as he lay, the sphere still clutched.

"Out!" snapped the umpire, who had run over for the play. As Carson rose with a yell of protest, Bob saw Putnam break from second to third base. Still prone he lined the ball across in a throw which caught the sliding runner and brought all Pleasant Ridge to its feet.

"Time out," yelled Captain Baldwin, rushing over to first, where Carson stood berating the umpire.

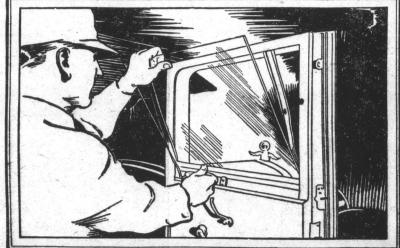
"I said you were out," announced the umpire, "and that stands! By rights I should put you out of the (Continued on page 425)

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WORLD EVENTS IN PICTURES



\$1,000,000 blaze in Lockport, N. Y., destroyed a large section of the business district.



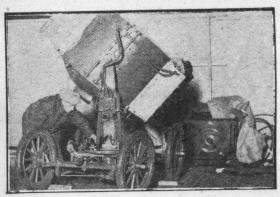
John D. Rockefeller presents shiny new dimes to friends as seed for future fortunes.



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Twelve-year-old grandson of late peer inherits title of Earl of Oxford and Asquith.



The giant Sperry searchlight in Brooklyn, New York has 500,000,000 candle power and can be seen for 200 miles by airmen.



Edward Delafield, President of Bank of America, is likely to head new \$850,000,000 bank.



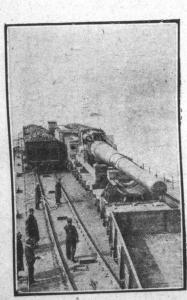
Zane Grey (right), the famous novelist and R. C. Grey in Long Key, Florida, where they are fishing for material for a new book.



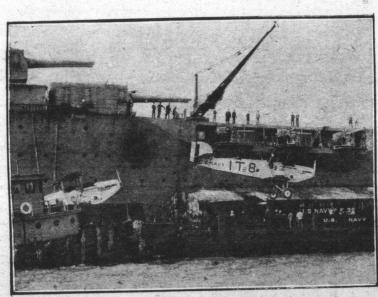
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Candis Hall crosses continent to visit grandmother via air parcel post.

Under the 4-H Flag

(Continued from page 423)

sliding into a baseman as you did just

the Warford captain, "when I go into a base the baseman must look out for himself."

now, as Ross Burton came hurrying up, Bob faced his opponent with blazing eyes. "That's a lie, Carson," said Bob, and although his voice was low it carried clear to his gathering mates and those of the Warford team who had come to the scene. "That's a lie," Bob repeated, "for I was back of the bag."

Carson lunged forward, to be caught in a grip of steel. "Enough of this," said Ross Burton, "we are here to play, not to fight. Go back to the bench, Hal. Here, Bob, let's have a look at that leg. We'll see if you can

Muttering, Carson retreated, his mates a storm cloud of wrath. Coach Burton stripped down the sock, disclosing an ugly gash. "Better call it a day, Bob," he advised, "We'll put in a substitute."

"Not on your life," answered Barton. "I'll play if I have to run on one leg. Tie it up, please. I've played with a worse hurt than that."

There was a gleam of admiration in Ross Burton's eyes. "Game anyway," he said, "if you can't play ball. All right old man, it's up to you." Skilfully Burton bandaged the cut and play was resumed. Randall, next Warford batter, lined to the outfield. In came the 4-H boys fighting mad.

"Here's where we put it over on these big bums," announced Ted Baldwin. "It's the lucky seventh; let's go." But despite their desperate efforts, there was no score. In their half Warford, by solid hitting, put over two runs. Gloom enveloped the club followers, for it seemed evident that a two-run lead was enough to win. Carson had driven out a long two-base hit which scoring two runners had put his team in the lead. Cocky and confident he cheered his mates.

Quickly the first club boy was thrown out. Hope revived as Ted Baldwin scratched a single down the third-base line, but when Curtis struck out, even Ross Burton groaned. A moment later, however, the club contingent was shattering the atmosphere with "Fight, Club, Fight!" for Mooney had lined a long single to center and by daring running had stretched it into a two-base hit. On third base Captain Baldwin danced and howled. Up came Bob Barton, batting in the clean-up position vacated by the switch when Carson shifted to his own team. Strive as he might before Bob had been unable to get the ball safe. There was grim determination in his eyes as he faced the Warford pitcher. Gone was the pain in his injured limb; cooly he let the first ball pass for a strike, then heard the umpire call, "Ball one!"

Up from his place on the grass rose big John O'Neal. The fire of old college days was in his veins. Turning to the shricking club crowd, O'Neal megaphoned through cupped hands. "Yea, Barton!" yelled O'Neal, and the club folks took up the cry, "Yea, Barton! Fight! Fight! Fight!" Out of one corner of his eye Bob caught a glimpse of Kate O'Neal, her face aflame with enthusiasm, her clear voice calling his name. Up came the ball waist high and Bob put all his sturdy strength into the swing. Like a bullet the ball passed through the infield, sped past the center-fielder, who madly pursued. Around the base lines tore Bob, his mates ahead, twin streaks of eagerness to score. Rounding third base he saw the recovered

That's dirty work, Carson, ball coming straight and true to the waiting shortstop.

"Come on!" howled John O'Neal. "He tried to block me off," snapped "Come on!" But now the pain of his wound had slowed Bob so that although he strove desperately it seemed as if the winning run was Slow to anger, Bob Barton had surely lost. For a second Bob faltaken no part in the argument. But tered, then high and keen above the pandemonium of friends and enemies he heard the fighting yell of old Squire Jones. A flashing glimpse showed him the old man, hat off, gray hair windblown shouting the battle cry of death or victory. In came the ball to the waiting catcher. "Slide!" howled O'Neal. "Slide!"

> Only long hours of practice, of patient instruction, could have made possible the thing that happened. Smack came the ball into waiting hands, and the Warford catcher dove at his enemy. Almost on top of the plate the umpire waited tense and watchful. A split second before the touch could be made Bob slid, hooking the toe of one spiked shoe into the plate, falling away from that outstretched eager hand. "Safe!" cried the umpire.

In a mob of frenzied players who pounded his back or strove to shake his hand, Bob Barton found his shoulder grasped in the clasp that always thrilled. "Atta boy!" said Ross Burton, but there was far more than the conventional words of encouragement in his voice. "Atta boy! I'm proud of you. It took gameness to do that." Among the club folks Bob could see his father and mother, his small sisters, their faces aglow with pride. The old Squire whose challenge had inspired him to final effort waved a battered hat and shouted defiance at Warford partisans who had turned batteries of wrath upon him for desertion to the enemy. "He's my boy!" shrilled the old man. "By gad, sah, I have a right to cheer for him."

(Continued next week)

FLOOD ON THE WAY

W HEN we complain, it's human to blame the other fellow. This time, I think we will have to pick on the postmaster over in Africa. But whether or not he is to blame, the next installment of Flood's travel articles failed to arrive in time for this issue. We hope for better luck next week .- Eds.

Strawberries in Danger

Need Care from Now On

be as plentiful this coming season grain or weed seed, and place it over are summed up, it looks as though the plants will then be kept more dorshould be, but what prospects are ahead of us are in danger, moreso if the ground were soft and wet. from now until the end of the fruiting season, than they were at any time.

How Plants Are Injured

thawing is over, strawberry plants are two inches on the rows to help keep subject to a great amount of injury. From now until in April, depending and keep the berries off the soil durupon locality, is "heaving time" in ing wet weather or after rains, at strawberry fields. The alternate freezing and thawing can do a lot of damage to strawberry plants, especially if the soil is subject to heaving, by heaving the plants out-that is lifting them out of the soil, thus disturbing their root systems as much if not more than if we were to run under the rows with a plow, lifting the plants up and letting them fall back in the row. Not only does heaving lift the plants out of the soil, but it breaks the roots off at the ends when they are still in frozen ground and the top layers of the soil has been thawed out and then freezes again. Thus "heaving" breaks, strips off, and disturbs the root systems of strawberry plants, consequently materially affecting the yield, because anything that disturbs the root systems of a strawberry bed, (or patch as we farmers call it) affects the feeding system of the plants, and therefore they cannot absorb all the plant food and water necessary to develop their full crop of marketable berries.

the plants, not exactly as it person's ear, but this might be mentioned to impress upon the strawberry grower's mind that there is some bad effects anyway, and he should prevent it when and where possible.

How Danger Is Prevented

The danger that strawberries are in can be headed off by mulching. Of course, if the rows are already mulched, no further attention is necessary at present, unless the mulch has been blown off the rows. It would be well to look over the rows with this in mind.

For mulching use straw, marsh hay,

TRAWBERRIES are not going to or any course material free from as expected. There were more the rows about four or five inches acres planted last spring, but the deep. It would be best to do this stand is poor, and when all angles when the ground is frozen as the crop is going to be below what it mant, and it will be found more convenient in getting over the field than

Leave the mulch on the rows until after the dangers of repeated freezing and thawing are over, then re-From now on until freezing and move only part of it, leaving about down the weeds, conserve moisture which times, the ripe berries would be sandy and soiled if not for the mulch under them. Leave just enough mulch on the rows so the blossom stalks and leaves can push up through it. Place the mulch that is removed in between the rows where it will conserve the moisture, keep down weeds, and help keep the berries clean that form along the outer edges of

Spring Mulching Beneficial

Even though strawberry rows are not mulched at this time, it will be found very beneficial to place a straw mulch between the rows in early spring. Growers that practice mulching between their strawberry rows after the ground warms up in the spring find it a very paying practice. The mulch will help keep the berries clean along the edges of the rows, but the greatest benefit comes from conserving moisture. As the pickers go up and down between the strawberry rows, they pack the soil and before the season is over it becomes a beaten patch and from it tons of water es-Repeated freezing and thawing will cape from the berry field which, if also affect the physical condition of held in the soil, or prevented from esplants to assist them in developing their maximum yield of berries. The lack of moisture (water) is one reason why strawberries "run small and buttony" toward the end of the season. A mulch placed between the rows in the spring also helps keep the soil cool and open, just what strawberries

> Strawberry growers who wish to produce more better berries this spring from their present fields should consider the benefits derived from a mulch applied now or one applied later in the spring.-B. W. Keith.

Farmers know CHAMPION Dependability



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Pep Up With Nature's Spring Tonics

Serve Fruits and Vegetables When Vitality is at Low Ebb

By Martha Mae Hunter

Nutrition Specialist, Michigan State College

BOUT this time of the year, when the home supply of fruits and vegetables is exhausted, and we begin to get that "all gone" feeling, our minds revert to the oldfashioned tonics mother used to give. But, in this modern age, even the style of spring tonics has changed, and the "wise men and women of today" urge that we go to Nature's storehouse for our spring tonics rather than to the drug store.

Nature provides these tonics in the form of fresh spinach, endive, cabbage, Brussels sprouts, Chinese cabbage, Swiss chard, celery, green onions, beet and turnip tops, and tender alfalfa leaves (which are good for man as well as beast). Practically every type of green vegetable may be found on the market or should be found in the home canned food supply, even through the winter months, if the farmwife, as well as the grocer, "knows their greens."

Many wild greens are delicious when properly prepared, but few people take advantage of these greens. At the present time, watercress is abundant in many localities and where can we find a more delicious salad green? Within a short time, the tender cowslip and poke weed

Health Specialists Prescribe an Assortment of Vegetables for Spring Tonics

eyes, but he has been selling fresh seasoning; serve with the cheese spinach and other fresh vegetables all winter long, as well as more whole grain products and more fresh fruits.

The following recipes have helped many of the nutrition group members and their families to like green vege-

Vegetable Salad Combinations Vitamin Salad

cups shredded cabbage cup chopped, raw, tender green leaves lettuce, spinach, water-cress, dandelion greens 14 Carrot Salad

cup raw grated carrot cup diced celery cup chopped, raw, tender green leaves (spinach, watercress, or dandellon greens)

Garden's First Offering ½ cup sliced radishes 1 cup chopped, raw, ½ cup chopped green tender green leaves

Golden Glow Salad

1/2 cup egg yolk (put through ricer) 1 cup celery 1 cup raw chopped green leaves 1/4 cup chopped onion Something Different

Cooked asparagus tips, (cowslip, or poke weed Sliced radishes

Sea Salad

1 cup shrimp, tuna fish or salmon ½ cup cabbage 1 cup pimento ½ cup chopped, raw, Cream Soups

Cream Sauce for Soup 1 cup milk 14 teaspoon salt tablespoon fat tablespoon flour

Scald the milk; cream the butter and flour and add to the hot milk. Cook in a double boiler until of a

creamy consistency. Cream of Spinach Soup cup vegetable pulp cup cream sauce teaspoon chopped onion 1-8 teaspoon celery salt

Any cooked, leafy vegetable may be used. Steam the spinach (do not add water; the moisture left on the spinach from the washing will suffice), put through a sieve or ricer. Add the vegetable pulp to the cream sauce, season, and reheat.

Spinach, Carrot, and Celery Soup cup vegetable pulp. 1 cup cream sauce equal parts spinach, 1 teaspoon onion juice carrots, and celery pulp)

half tablespoons butter to one cup of

milk. Remove the cream sauce from

the fire and add the grated cheese.

The heat of the sauce will melt the

Special Spinach Recipes Spinach With Cheese Sauce cup cream sauce 2 cups cooked spinach to ½ cup grated cheese 1-8 cup chopped onion Any cooked green leaf may be used. Prepare a cream sauce as for making cream of vegetable soup, but using of peace which is known as leisure. two tablespoons flour and one and one-

"What is leisure in the home?" Miss Van Rensselaer asked. "Is it mending, entertaining, writing letters, talking on the telephone, reading, or lis-

tening to the radio? Is it driving out in the car at a fast rate, hurrying, bustling, and not getting anywhere? Is it similar to idleness? No, idleness is more stereotyped play-making ourselves play cards every afternoon is idleness, for it is not spontaneous play, and spontaneousness is the earmark of leisure.

Why Women Marry

"Women do not marry to keep house, but they do marry to have a home. And to have our homes successful we must make them democratic. If the housewife tries to do all the multifarious tasks alone she is cheating the other members of the household. Every member of the home, by learning one more task, will grow in the enjoyment of increasing his ability that much.

"Interruptions are the worst enemy to leisure in the home. A visitor, the telephone, an agent, the children running in and out, upset our day's schedule; but in doing so they only emphasize the necessity of finding how to use our time to do things in the easiest way, in a way which will thrill us, give us enjoyment, and the feeling of a sense of growth-all of which help make up that state of leisure which is essential in our lives."

LET UNCLE SAM HELP YOU

OFTEN wonder why everybody doesn't use Government Service as much as possible. Occasionally our congressman sends us a list of bulletins that are available to us by sending for them. We read the list over, mark ones we want and send for them. Once he sent a few along with the list. They contain valuable information, and one can never get too many of them. We have over forty of them and keep on adding new ones right along. Bulletins can be procured on almost any subject imaginable so there is enough of a variety to choose from to help us all.-Mrs. C. H. F.

ANSWERS ROLL CALL

A S I read, "Calling the Roll," in the March 3 issue, I recognized many names which appeared in the Household department a generation ago, My acquaintance with these old-time correspondents dates back to the little four-page supplement to which Mrs. M. S. R. refers. "Beatrix"-Mrs. Johnstone, was its presiding genius for many years.

As for the little poem, "Snowflakes," the author recognizes it, but is greatly surprised to learn that anybody cared enough for it to treasure it all these years.

I shall be interested in watching to see how many of the old-timers respond to Martha Cole's cordial invitation. Here is one who proudly answers, "Present," at roll call.-Ella E. Rockwood.

SAVES FOR CHILDREN'S FUTURE

ONE ingenious mother, who signs herself "Mother of Three," uses considerable judgment in clothing them. She has ample means to go out and buy what she may wish, but she feels that possible supplies on hand might as well be used, and the outlay that would be necessary otherwise is saved toward their education

Just Girls!



Loose Jacket of French Flannel with Charming Basket-Pockets of Felt Flowers Tops This Smartly Demure Sports Model.

shoots (which are used like asparagus tips) will add other delicious tonics to our list. A little later, dandelion greens, lambs' quarter (pig weed), purslene (pussley), mustard, and dock may be gathered.

Through the nutrition project, carried on in fourteen counties in Michthis year, many families have learned the value of green vegetables, and have learned to eat many vegetables which they formerly never even thought of eating.

Many grocers have been selling green vegetables all winter long, since a demand has been created for these commodities. One grocer, when asked by a nutrition project leader, why he didn't keep fresh vegetables, replied, "Huh, I'd keep 'em all right; can't sell that fodder around here." The leader only smiled and handed him a long list of names from her nutrition groups, each promising to buy a certain amount of spinach each week, if the grocer would only order a supply.

This grocer could hardy believe his cheese. Steam the spinach, add the

sauce. Spinach With Cream pounds spinach 1/4 to 1/2 teaspoon salt tablespoons butter 1 cup cream

creamy.

Wash the spinach thoroughly in running water until free from grit. Press the spinach into a saucepan, add a very small quantity of water or cover the pan and cook the spinach in the water which clings to the leaves. Cook for ten or twelve minutes or until well wilted, and stir the spinach occasionally so that it cooks evenly. Chop the spinach very fine. Melt the butter in a saucepan, add the cream and salt, and when hot, add the chopped spinach, but no liquid, and simmer until fairly dry and

Spinach Loaf

4 cups cooked spinach
4 tablespoons butter
2 cups bread crumbs
2 tablespoons minced

onion
2 tablespoons vinegar or
lemon fuice
1 teaspoon salt

Wash and clean the spinach and steam until tender (no water other than the moisture on the leaves is necessary). Melt the butter and add the bread crumbs. Add the cooked spinach and seasoning. While the mixture is hot, place in hot serving dish, garnish with slices of hard cooked egg and slices of crisp bacon.

Swiss chard, turnip, or beet greens, endive or any edible, wild greens may be used.

Spinach With Egg Sauce 1 hard cooked egg Few grains salt and pepper 1 cup cooked greens ½ cup cream sauce

Chop the egg white and add to the cream sauce. Pour the sauce over the greens and sprinkle on top the egg yolk which has been put through a sieve.

HOUSEKEEPER NEEDS PLEASANT LEISURE

THE best quality of a housekeeper is the quality of her leisure" is the opinion of Martha Van Rensselaer, director of the New York state college of home economics. "We must make judicious use of means to accomplish our ends in order to attain that quality of satisfaction, of enjoyment, and or extensive travel trips when they

From a good, woolen plaid skirt, she made two very attractive little mackinaws or lumber jackets, with knitted bands at the wrists and about the waist. She finds it takes very little more effort to make two sets of bloomers to a suit than one. In place of doing, or having done, a backbreaking wash once a week, a few articles as may be needed are washed out quickly each morning, dried, and pressed out ready for immediate use when there is a spare moment. She declares that she would rather wash ten slightly mussed handkerchiefs than one terribly grimy and much soiled article of this kind. The result is that a modest-sized laundry basket is sent out once a week, and she estimates that the bill is less than a third what it would be otherwise if she did not put her plan into action. Then she has the convenience of having ready for use what she needs at any time, and fewer supplies are necessary.

BRINGS SODA TO HER RESCUE

IT was always a bugaboo to me to wash the milk dishes for the water became so slippery until I added a heaping teaspoon of soda to the water in place of soap or powder. Soda is also good to use in the water when washing varnished woodwork or other surfaces that require washing. It removes the dirt and does not harm the gloss.-Mrs. J. S.

Household Service

Use this department to help solve your household problems. Address your letters to Martha Cole, Michigan Farmer, Detroit, Michigan.

TINTING DRAPERIES SUNFAST

I would very much like to know how to color curtains a dark cream or beige or even an eeru that would be sunfast and tubfast. My mother used to dye with barks but I don't know how she did it.—Mrs. R. M.

When dyeing or tinting with chemicals or bark one must use great care to get the right shade. After preparing the dye bath, put a sample of the material through the bath, and press to be sure you have the tint you want.

For brown on cotton or woolen fabric, dissolve two ounces of alum and one pound of catechu in enough hot water to wet the goods. Put this solution into a tin boiler or a brass kettle on the stove and put in the goods when it is boiling hot and remove from the fire. You should have ready four ounces of bi-chromate of potash dissolved in hot water in a wooden pail. Drain the goods from the catechu and then dip them alternately into the bi-chromate of potash frocks match or harmonize with the and catechu until of the desired shade. This formula is for coloring five pounds of goods.

Yellow-For five pounds of goods dissolve one pound of sugar of lead in enough water to thoroughly wet the goods and in the same quantity of water in another vessel dissolve onehalf pound of bi-chromate of potash. Dip the goods well and drain in each alternately until of the desired shade, then rinse and hang up to dry.

Red-Put two-thirds teacupful of muriate of tin into enough water to cover the goods well, bring to a boil, put in the goods and leave for an hour, stirring often, then remove them and empty the kettle. Put one pound of nicwood into the kettle with clean water and steep for half an hour at hand heat, then put in the goods and slowly increase the heat for an hour but do not boil. Air the goods and dip an hour as before. Wash without

If your curtains are of a silk texture, I would not advise using any of these

boiling hot, but would advise that you use the tinting soaps that are adaptable to silk.

MORE ABOUT BREAD TROUBLES

HAT there is a number of farm THAT there is a number their housewives who yet treat their housewives who yet treat their families to delicious home-made bread was evinced by the number of letters that were received in response to Mrs. F. C. G.'s request for help with her bread troubles. I want to thank each and every one for their kind help and I hope we hear from Mrs. F. C. G. about the method she has adopted.

Here are more suggestions a bit different than those printed last week that have merit.

Says Mrs. S. W. of Gogebic County, "I believe Mrs. F. C. G. allows her bread sponge to stand too long. The first thing in the morning, I soak a

sugar and a small half cup of lard. This is worked in well with the hands. The night before I boil one mediumsized potato and mash it in the water in which it was boiled. This is added to the flour when lukewarm. Mix the soaked yeast with a half sifter of flour and add enough lukewarm water to make a medium batter. Cover and set in a warm place for an hour or until light.

"Next mix this and the potato water with the flour mixture and add enough warm water to form a solid mass. Cover in a warm place and let rise until double the original size. Knead down and when it rises the second time put in pans. Let rise for twenty minutes, knead again and when light, bake for one hour."

"Our family is fond of coffee cake and I make it every time I bake yeast cake in a cup of lukewarm bread. To four cups of bread sponge, water for about twenty minutes. To I add one-half cup sugar, one-half cup four and one-half sifters of flour, I add butter, two eggs, and one-half cup

Build Your Own Ensemble

ter may leave us at most any minute, we are eager for something new in the way of clothessomething fresh and rejuvenating in the spirit of the season just around Madame Fashion has been most kind to the feminine for she has made for us styles that are particularly pleasing. She has planned a decided change from the mannish and boyish patterned prints in relative color. sport lines that dominated last season. In spring's new mode, the frock is straight and slim, fitting snugly at the hip line and then breaking into a dashing, silhouette of flaunting lines by pleated apron fronts, ruffled tiers, shaped tiers, and every known development of the flare line with the fullness approved in both front and allaround hanging. Sometimes, we find these flares and drapes for afternoon wear fluttering below the hem line.

When on the straight, skirts are a bit longer than previously, but only a bit. Variety holds sway with the neck line for it may be square, Vshaped, or the diagonal lines are still favored.

Spring fashion this season must 'know its geometry," for geometrical lines and designs add the note of chic to the costume. These lines are developed by means of pleats, tucks, inverted tucks, and applied bands of contrasting material.

One of the most important roles in spring styles is played by the ensemble which means that every detail of the costume, coat, frock, hat, and shoes must "belong" together. This does not mean that every frock has its own coat, but rather that all

HEN we begin to feel that win- type of coat. A tweed, twill, or cash mere coat, lined with light weight wool or silk may have a crepe frock, the color of the coat or lining, and a skirt of the coat or lining material to be topped by a smart blouse of conthe corner. For spring, we believe, trasting print. For afternoon wear, one may have the more formal type of dress with tiers, flares, and fullness pushed to one side. The material may be of crepe, satin, or one of the small

> Color is always important in dress but especially so in the spring. Beige is one of the favorites for its many shades make it complimentary to a great many people. All the shades of blue, gray, gray green, dark red, nutmeg brown, ashes-of-roses, grege, will be seen in the spring promenade.

> Perhaps some of these patterns will help you to decide the lines for your spring ensemble.

> No. 735 is simple and chic for afternoon wear. Pattern comes in sizes 16, 18 years, 36, 38, 40, and 42 inch bust measure. The 36-inch size requires 2% yards of 40-inch material.

> No. 708 is smart in its tailored lines. Pattern comes in sizes 16, 18 years, 36, 38, 40, 42, and 44 inches bust measure. The 36-inch size requires 3% yards of 40-inch material with 1/2 yard contrasting.

> No. 848 is a smart ensemble coat adaptable for sport and general wear. Pattern comes in sizes 16, 18, and 20 years, 36, 38, 40, 42, and 44 inches bust measure. Size 36 requires 2% yards of 54-inch material and 31/8 yards of 40-inch lining.

> The price of each pattern is 13c. Address your orders for these patterns to the Pattern Department, Michigan Farmer, Detroit, Michigan.

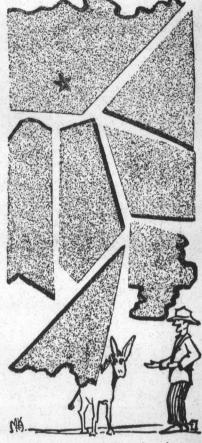


dyes because the water needs to be two tablespoonsful salt, the same of raisins. Beat well, let rise in a warm place. Divide, put in three layer cake tins. Let rise, sprinkle with sugar and cinnamon, and bake in a hot oven one-half hour."-Mrs. J. R. R.

Our Little Folks

STATE SECRETS

This State is famous for its mules, Red apples, mud, and Ozark pools; From Kansas City to St. Lou, The finest' folks you ever knew!



The pieces of this puzzle when correctly put together, make a map of the state which this verse describes. The star indicates the capitol. When you have solved the secret of which state this is, write me all you can about the state and its capitol.-Aunt Martha.

The answer to last week's secret was Delaware and its capitol is Dover.

WHO AM 1?

You know me well for you look for me every spring. I am more sociable than my cousin the bluebird and also bigger than he, in fact, I measure ten inches from the tip of my yellow bill to the end of my tail, which has two white "thumb marks" on it. You can see these only when I fly.

My breast is not red, as many of you think but orange, or reddish brown. The top of my head and tail is black, but my coat is grayish

I sing "trill-a-ree, trill-a-rah" to you from the tree while I am building my nest of grass and rootlets. I stick them together with mud and line my nest with soft grass.

I am a very busy bird, for I raise two families of little birds every year. The farmer often scolds me for eating his cherries and strawberries, but I don't like to eat insects and cutworms all the time.

Who am I?

(The answer to last week's bird guessing contest was the chickadee. Did you guess rightly? Write a letter and tell me some of the things you know about our feathered friends .-Aunt Martha.)

Mamma: "Where have you been, Johnnie?"

Small Boy: "Playing ball."

Mamma (severely): "But I told you to beat the rug, didn't I?"

Small Boy: "No, mamma, you told me to hang the rug and then beat it."



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Michigan Farmer Pattern Service



No. 3,023—Smartly Simple. Designed in sizes 18 years, 36, 38, 40, 42, 44, and 46 inches bust measure. Size 36 requires 2% yards of 40-inch material with 1¼ yards of 27-inch contrasting.



For Classroom. Designed in sizes 6, 8, 10, 12, and 14 years.

contrasting.

No. 911—Tailored Lines. Designed in sizes 8, 10, 12, and 14 years. Size 8 requires 1% yards of 40-inch material.

No. 978—Striking One-Piece Type. Designed in sizes 16, 18, 20 years, 36, 38, 40, and 42 inches bust measure. Size 36 requires 35% yards of 40-inch material with ½ yard of 36-inch contrasting



No. 704 — Sportive-Practical. Designed in sizes 16, 18, 20 years, 36, 38, 40, 42, and 44 inches bust measure. Size 36 requires 3¼ yards of 40-inch material.

The price of each pattern is 13c. Send an extra 13c with your order and a copy of our Spring and Summer Catalog will be sent. Address your orders to the Pattern Department Michigan Farmer, Detroit, Michigan.

News From the Air

distinctly heard. The waves came parents place in them. through the ether a distance of 8,200 Radios are splendi

straggling script, covering a whole tried to develop love, faith, and copage, carry a message of thanks from this sightless man in Dorchester, Mass. Much of the writing is not decipherable but the words that can be read tell the story of a shut-in who finds that radio programs lighten the tedium of endless days.

Justin Laurie, tenor of NBC musical group, carves wood, makes furniture, and draws caricatures of friends in his spare time.

"Chanson," a composition that is said by many musical critics to be the best of the works of Rudolph Friml, had its origin in an extremely accidental fashion. One day he visited the Ampico recording studio, but with no intention of paying more than a friendly visit. In an odd moment he sat down to the piano and began to improvise, growing more and more interested as he played.

Musicians in the next room, which housed the actual recording apparatus, were entranced with Friml's playing and, unknown to him, turned on the apparatus. In a short while the pianist No. 3,209—Simple Styling. Designed in sizes 16, 18 years, 36, 38, 40, and 42 inches bust measure. Size 36 requires 2% yards of 40-inch material with 1¾ yards of binding.

No. 3,209—Simple Styling. Designed in sizes 16, 18 years, 36, 38, 40, and 42 inches bust measure. Size 36 requires 2 yards of binding.

No. 3,209—Simple Styling. Designed in sizes 2 yards of 40-inch material played. He was so pleased with it that, in a few moments, he wrote the conclusion to the song. had just played. He was so

The mouthpiece of a saxophone is way to eliminate static. Have heard the most important part, according to that if the antenna be coiled and put underground it will eliminate all static. If this is true, please tell us how it is done.—R. L. W. The mouthpiece of a saxophone is cently in obtaining a mouthpiece that is most nearly perfect.

HELPS SOLVE PROBLEMS

W E have always had home econyear, at which time it was voted down, grams from WKAR. One is never too step forward in radio. old to learn and we often hear something that helps us solve the problems over which we are puzzling.

I also enjoy hearing the sacred never grow old. Musical programs of which I like best of all.-Mrs. decide W. J. R.

KEEPS BOYS AND GIRLS INTER-ESTED IN FARM

FROM my own experience and also whene'er I think of you; My heart gets quite ec-static My headband goes askew. several observations, we should thing else on the farm. Of course, parents would answer immediately, 'Why we do." But do you tell them so or show them so that they are really impressed with the fact?

Next we must have faith in our children. They must be allowed certain reasonable liberties. If they are

THE chief officer of the Steamship, old enough to drive the family car, Sirsa, writes that while his ship they should be permitted to do so was nearing India, the program from under their own responsibility. In WGY, especially the aria from "Pag- such cases they will make a greater liacci" as sung by Titta Ruffo was effort to live up to the faith that their

Radios are splendid to keep the children interested in the home. They can have their own entertainment While in Russia during the World right at home and entertain their War, Henry Horlick, leader of the A. friends there also. The farm home and P. Gypsies, was captured by the should be equipped with modern con-Bolsheviks. After several thrilling veniences, and furnished attractively adventures he escaped and was able so that the child will have no opporto return to his parents in the United tunity to see the contrast between his home and that of his school friends.

Parents should be willing to con-A letter from a blind man is one of sider suggestions made by their chilthe most cherished possessions of dren for often much labor can be "Roxy' of radio fame. Six lines of saved by the new methods. We have

WHAT'S WRONG WITH YOUR RADIO?

PERHAPS, first, we should ask what's right with your radio? But with any invention as comparatively new as the radio, there is bound to be some trouble in getting it installed, operating satisfactorily, and keeping it in good running order. The amateur who builds his own set has many problems to solve and many interferences to overcome.

Write us and explain your special problem with your radio, and if you have solved it, tell us how you did it so we can pass it on to our readers. If it is still unsolved, we will try to help you.

For any of the letters we are able to use we will award a special prize. Address your letters to the Radio Editor, Michigan Farmer, Detroit.

stopped playing and was called into operation in our children by this plan the recording room to listen to what and apparently they have no desire to leave the farm.-Mother of Five.

NO CURE YET FOR STATIC

Would like to know if there is any

There have been various unofficial announcements that different people have found methods of eliminating static, but these all seem to have been false rumors, and so far as I know there is, as yet, no practicable way of omics in our county until last eliminating static. Possibly some scientist will work it out. Such a so I enjoy listening to the radio pro- thing would naturally be a wonderful

So far as the underground antenna is concerned, most people have not found it very satisfactory and hardly worth the trouble and expense. It music at any time for those melodies probably does decrease static to some extent, but it also cuts down the sigany description, I like, for I am a nal strength a great deal and so great lover of music. This spring we doesn't seem to help much. At prehave heard many good speeches that sent I do not believe it will pay to will help us when we go to the polls bother with it, and when something is to vote. In fact, we get so many fine found which works satisfactorily we programs from the air that I cannot will explain it through this depart--I. W. Dickerson.

PROPOSING VIA RADIO

My mind becomes a vacuum tube

love our boys and girls above any- Your eyes that flash like unquenched sparks, Your hair like copper wire,

Break down my high resistance Like a transformer amplifier.

I really think we're both in tune
And ere through life we roam,
Suppose you hook up with me
And share my humble ohm!
—Good Hardware.

Common Poultry Diseases

IV—Tuberculosis

VIAN tuberculosis, or tuberculosis of poultry, is an insidious disease which causes untold losses. It is often present for a long time before it is recognized, thus lowering the vitality of the fowls and their efficiency in egg production.

The disease is peculiar to various kinds of fowls and transmittable to no animals, except hogs. Hogs take it readily but not as seriously as cattle or bovine tuberculosis. Rarely are slaughtered hogs affected with avian tuberculosis entirely condemned for food as the infection is localized in the glands of the throat or the membrane surrounding the digestive organs.

Symptoms-Lameness in fowls is usually the first indication of the disease. Emanciation or "going light" is also common. This is accompanied with a pale comb and wattles, and lustreless ruffled feathers. In the advanced stages the birds are droopy. The appetite is generally good, in some cases ravenous.

Some of the birds showing such symptoms should be killed and given a postmortem examination. The spotted liver is characteristic of the trouble, but is not a reliable symptom as it does not develop in some cases and other diseases also develop it. The tubercular liver, however, is usually enlarged and spotted with whitish nodules, varying in size from a pin head to a grape. Similar nodules are also found on the intestines and the spleen and if found there are good indications of tuberculosis. However, there may be no interior or postmortem indications of the disease and still the fowl be infected. It is wise, therefore, if there is any doubt at all, to have a veterinarian make a diagnosis, and even he may have to resort to a laboratory examination to make sure. The disease is rarely found in birds less than nine months old.

Treatment-There is no cure as chickens are not worth the cost of any cure that might be given them. The method of procedure then, should be one of prevention and eradication.

All domestic towls are susceptible to the disease. Chickens and turkeys shows greatest susceptibility while ducks and geese have considerable resistance. The infected fowls discharge the tuberculosis germ with their droppings thus contaminating the premises, food, and drinking water.

The disease is spread from flock to flock by the introduction of infected birds or carried by sparrows, pigeons, mice, rats, dogs, cats, and men. Prevention involves keeping wild birds, rats, and other prowlers from the poultry yards and exercising caution in not carrying the disease from one place to another on the person. The windows or openings should be screened so that sparrows cannot get in. The houses should be rat and mice proof. The purchase of day-old chicks is much safer than to buy adult fowls because the former is not infected. The house should be sanitary, with provisions made for plenty of direct sunlight.

Keeping the houses and feeding utensils clean and moving the birds to new ground, sanitary measures which every poultry keeper should use, will help prevent the disease. It is also wise to keep old birds away from young

Eradication-It is a common habit to shun the truth regarding the condition of the flocks with reference to this disease. This may be due to the fact that eradication measures are rather severe ones. However, this attitude is a most foolish and expensive one. If there is tuberculosis in the flock, the wisest thing to do is to learn its extent and then immediately use the drastic eradication measures advised.

If tuberculosis is suspected it may be wise to consult a veterinarian and take his advice. The disposal of the entire flock is usually suggested as the disease has probably been in the flock for some time and all the birds have been exposed. Then the house should be thoroughly cleaned and sprayed with a good disinfectant of creosol or similar product in a three to five per cent solution. Everything including the feeding and drinking utensils should be thoroughly covered with about three applications. Corrosive sublimate should not be used as organic matter prevents its germicidal action.

TB. Test-If the birds are valuable, an intradermal tuberculin test may be made to determine the infected ones. This test is rather difficult to apply and will only give proper results if given by one familiar with it. A veterinarian had best be employed. The test does not react on birds having general tuberculosis. However, such fowls usually show symptoms from which one can diagnose the disease. Those not reacting or showing generalized tuberculosis should be removed to unaffected quarters until the houses and yards are thoroughly cleaned and disinfected.

Prevention-The best way to prevent tuberculosis is to renew the flock each year. The disease does not appear in young birds and if the birds are kept through one laying season and then disposed of, there need be little fear of the disease. However, one should thoroughly clean and disinfect the houses before letting a new flock occupy them. Also, baby chicks for renewing the flock should be bought from reliable sources.

Next week-Fowl cholera and fowl typhoid.

Succeed with Chicks

by learning chick raising essentials from

Michigan Farmer Chick Bulletin

Describes short practical method of raising chicks which assures

Has been approved by poultry experts and practical poultrymen. Contains unique labor-saving feeding method, suggestions on disease prevention, and many practical hints in care and management which make a big difference in results.

Send Self-addressed Stamped Envelope to

Poultry Dept., Michigan Farmer, Detroit, Mich. For Your Copy

"More Chicks Will Be Chickens"

Make it live ~ and pay

THE test of life or death for every chick occurs during the first few weeks after hatching. Every normal chick raised to maturity will amply repay the effort. Avoid double loss of egg production and loss of chicks by death, by feedings. tion and loss of chicks by death, by feeding



One pound of Ryde's Startrite Chick Food will raise a baby chick well past the danger period. It is a natural, safe food made from choicest granular grains, hulled oats, selected whole seeds with natural oil retained, special meat scraps and a liberal portion of dried buttermilk. These are all necessary to rapid uniform growth. Easy to feed and economical; best results are had to feed and economical; best results are had by feeding it dry from the hopper. A good

Use Ryde's "Hav-To-Grow" Chick Mash for rapid, uniform growth after the first few weeks. Combines the best growing feeds correctly balanced with necessary minerals. Makes broilers or dealer's in double quick time. At your dealer's in 25, 50 and 100-1b. bags.

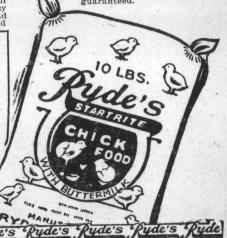
"Make Them Lay," Ryde's "Hav-To-Lay" Egg Mash with Buttermik supplies egg-making elements for greater egg production in one conve-nient, unequaled food. Contains choicest materials—not a by-product. Econom-ical to feed. Guaranteed.

FREE
Children and grownups alike say the Ryde Chick-Game is the best ever! This interesting and instructive game, chicks, will be sent Free (worth 76c) upon recipt of your name and address, Include 10c to pay postage and packing. Address Ryde and Co., Mfrs., 6434 W. Roosevelt Road, Chicago, III.

Ryde's Ryde's Ryde's Ryde's



foundation, robust health is vitally important at the start. Make sure that "More Chicks will be Chickens" and insure poultry profits at maturity. Complete feeding directions with every bag. Your local dealer has Ryde's "Startrite" Chick Food in 25, 50 and 100-1b bags. If not on hand, write us. Satisfaction guaranteed.



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RELIABLE POULTRY FARM & HATCHERY,

AND LEGHORNS



Every breeder carefully selected for size, type, and egg production. Mated to males of 200 to 300 egg pedigreed ancestry.

CHICKS SHIPPED C.O.D. See your chicks before you pay for them. We now you will be pleased and we are willing to ke all the risk. This assures you of 100% live livery and shipment exactly when you specify.

Get Our Low Prices.

Before you order your baby chicks, write for our new low prices. Our new valuable catalogue gives complete detail of these big values. Write for your copy today.

Highland Poultry Farm, R. 9, Box C, Holland, Mich.

8 Varieties MALE MATINGS P

Our Pure Blood -SELECTED CHICKS -BIG EARLY ORDER -DISCOUNTS-15 VARIETIES

This year we introduce to you our Record of performance pedigree male matings up This year we introduce to you our needed to perform a personal personal to 310 egg records direct from British Columbia and Ontario. Canada, including bloodtested, trapnested pedigree White Leghorn matings, 220 to 313 egg records. Winners of many prizes. Every bird standard culled. Get FREE circular of chicks, hatching eggs, and brooders before buying elsewhere. Chicks 9c up.

Beckman Hatchery, Box 57, Grand Rapids, Mich.

CARLETON'S Pure-bred heavy layers from Michigan Accredited flocks, under super State College. Your success depends upon the quality of chicks you at the following prices. 100 per cent live delivery. Write for catalog.

Michigan Poultry Farm,

Michigan Accredited

Carleton Hatchery, Carleton, Mich.

From Our 100% Pure Hanson White Leghorn Mating

W. Leghorns now under the trapnest on our farm, 300 under Michigan R. O. P. now making wonderful rds. Records as high as 103 eggs for 4 cold winter months. Also Tancred & Barron foundation W. horns; large type heavy laying Barred Rocks and Sheppard strain Anconas, All Michigan State redited. You can't fail with our stock. They are bred and hatched right. Don't place your order 1 you have secured our large catalogue and price list free. We ship C. O. D. Box 2 Holland, Mich.





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Egg Bred From Nationally Known Blood Lines MICHIGAN ACCREDITED. 1926 Contest Pen Averaged 239 Eggs each. Customers profit \$3.00 per bird.

We Also Breed Anconas and Barred Rocks WYNGARDEN FARMS & HATCHERY, Box M, Zeeland, Mich. Chicks Eggs Pullets

It will pay you to investigate one of Michigan's oldest and best hatcheries, years' experiences. Every chick hatched from rugged free range breeders accredited by inspectors supervised by Michigan State Poultry Improvement idon, Large percentage of business to satisfied old customers. White Leghorn lish type and American). Barred Rocks, Anconas.

"Never a Bum Lot in Sixteen Consecutive Years"
so writes a customer who has been purchasing chicks from us for sixteen consecutive years. Some record, you'll agree. Your Michigan Accredited chicks bought of this old reliable concern with an established reputation for square dealing get our Free catalog that tells all.

Holland Hatchery & Poultry Farm Van Appledorn Bros. Holland, Mich.

Town Line Hollywood and Tancred Strains and English

Type, S. C. White Leghorns

Also Brown Leghorns, Anconas, and Barred Rocks. All large type Production Bred birds.

Bred for 15 years for heavy commercial egg production. Every bird individually banded and inspected by an authorized Inspector. In breeding up the Famous Townline Egg Laying Strain, we have bred, not for a few high record heas only, but for HIGH FLOCK FREE CATALOG tells how we hatch, breed, cull, inspect, and raise our stock. Tells what to how to be successful. Full instructions on the Care of Baby Chicks. A genuine Poultry Guide.

TOWNLINE POULTRY FARM, Route 1, Box 207, Zeeland, Michigan



TRADE MARK OF QUALITY CHICKS

ARROWHEAD POULTRY FARM Hatcheries at Montrose, Birch Run and Lapeer, Michigan

ACCREDITED WHITE LEGHORN CHICKS is doing nicely. This morning she ate chickens. A postmortem shows an en-

Hollywood and Hollywood sired from 200 to 290 egg stock and commercial stock

Star Matings

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M. D. WYNGARDEN

R. 4, Box 40

ZEELAND, MICH.

PURE BRED BABY CHICKS QUALITY SERVICE

BOX D TIFFIN, OHIO THE LANTZ HATCHERY

GRASS-SOD POULTRY RANGES

A CCORDING to reports from Willard C. Thompson, who has been doing much useful poultry work in England, nearly all English poultry farmers manage their poultry ranges on a permanent grass-sod basis. It is evident that English poultrymen have raised birds on land which has been farmed many years longer than the land in Michigan and I cannot find from reports that their struggles with poultry diseases are any greater than in this country.

Possibly the permanent grass-sod poultry range with its thick mass of rich green grass may absorb and utilize the poultry manure in a way that causes less contamination of the surface soil than the method often used here which consists in the frequent plowing and seeding of the range with the idea of plowing under the poultry manure and turning up fresh, clean soil.

On the permanent grass-sod poultry range the grass grows faster than the hens can eat it. And tall grass becomes tough and lacking in succulence and not suitable as green feed for poultry. So the grass must either be mowed and used for hay to give the young growth a chance to develop or live stock must be used to keep down the grass. At the National Institute of Poultry Husbandry in England they are trying the experiment of using goats to keep down the grass on poultry ranges.

Permanent Poultry Pasture

We have one poultry range in a permanent grass-sod which is also covered with old apple trees. On this fenced range we allow cows to graze until the grass is cut down as if it has been covered with a lawn mower. The hens range on this permanent grass-sod and the mortality rate has been very low. The range is large enough so the grass is not killed out readily and grows right up to the sides of the buildings with the exception of a few spots where the hens come out of the small doors or form dusting holes in summer. The mortality rate up to this time has been very low and the appearance of the birds is very good at this time.

On other ranges in a permanent grass-sod we have started young orchards so it is not possible to turn in the cows to help keep down the grass. We find that the hens help in keeping down the grass. Mowing around the trees with a scythe and leaving the cut grass as a mulch helps to keep down more of the growth and a mowing machine can be run up and down the orchard rows if the permanent sod becomes too heavy with a high growth of grass.

Right now I can't spare the time or the price of the ticket to visit England and find out about this permanent grass-sod method of raising poultry in England but I shall try and visit with farmers who have been there and try and find out if there is any relation between their permanent grass-sod poultry range and their control of poultry diseases.-R. G. Kirby.

A CASE OF CROP BOUND

YESTERDAY I performed a surgical operation upon a white Leghorn hen that had become crop bound. She so I presume the packed material had begun to loosen and pass from the crop. But as bowel trouble had already developed I decided to take no further chance.

Taken in its earlier stage, crop simply by confining a fowl with no

little kneading of the crop with the fingers in a case more advanced. Failing this, there is no reason why a simple operation may not be used to save the bird. Just remove a few feathers, make an incision through the skin, press the edges aside and make an incision through the crop proper, at a point that will not line with the outer incision. I use the handle of a spoon to clear the crop. Wash the parts well with warm water, take a few stitches uniting each edge of both incisions each one separately, of course. Keep the fowl confined in a clean box for a few days, feeding sparingly for a few days and there you are. A small simple operation with very little practice. I have operated on quite a few, losing but one where bowel trouble had advanced so the comb had turned purple. The hen I have under care now laid an egg the first day of confinement.-M. N. Edger-

MINERALS IN LAYING MASH

I feed my hens equal parts wheat ad oats for morning, and scratch feed and oats for morning, and scratch feed and shelled corn for supper. My mash feed in a self-feeder is: 50 lbs. corn, 50 lbs. oats, 50 lbs. bran, 50 lbs. mathematical strength of the sour milk they will drink. Is there anything more I should add to this mash? Have had fairly good results as it is, but some say there should be salt and other things added. Will be very thankful for any advice you can give. We keep Barred Rocks. I am planning on buying some day old chicks. How would you advise feeding them. There was a man here who had been to the State College who advised feeding cottage cheese the first week and then an all mash feed. Of course, he was selling the feed. What do you think of it? I never heard of cottage cheese for young chicks.—Mrs. W. E.

In addition to the ground grains in

In addition to the ground grains in the home-made laying mash it can be improved by adding two per cent ground limestone, two per cent bone meal and one per cent fine table salt. Oyster shells and grit should be supplied in hoppers. Your grain ration and mash feed will probably give good results.

Some poultry owners feed cottage cheese to chicks but it is a difficult feed to keep clean and distribute evenly among a large flock of brooder chicks. I think the dried buttermilk starting mashes in long low hoppers give much better results. By sending a self-addressed stamped envelope to the Michigan Farmer, Poultry Department, you can obtain the Michigan Farmer Chick Bulletin which gives considerable information of use to poultry owners.

The all-mash method of raising chicks has given good results and it was used quite extensively last year. However many poultrymen will continue with the old combination method of feeding both mash and scratch grain. There are so many good feeds and good methods of raising chicks that it is not possible to tell which is the best under all conditions.

LIVER ENLARGED

A lot of our chicks have died lately. They are sick for about a week and then die. We examined one sick chicken and found the liver enlarged and green spots all over it. The gall bladder was very large and black.-Mrs. J. T.

The disease called blackhead which larged liver covered with yellowishgreen or yellowish spots. There is no cure for blackhead. In fowl typhoid the liver is enlarged and often covered with greyish spots. In cholera the liver may be enlarged and dark in color and the spleen may also be enlarged. If you have a large and valuable flock and are losing many birds, it will pay to have a veterinarian inspect the flock and make recommendations. In some cases a laboratory bound difficulty may be overcome examination is often necessary to diagnose a disease correctly and long disfood, only water to drink, aided by a tance advice is not satisfactory.



"Why don't my Hens Eat more Pearl Grit"

We have had this question asked time after time. The answer is simple. "Hens don't need any more than they eat."

The Proof is Here

Maryland Experiment Station in comparing Lime Stone with Oyster Shell found: "The Limestone pen consumed 43% less material but laid 20% more eggs."
"Limestone can be safely used as the sole source of Calcium for growing chicks and laying hens."

Kentucky Experiment Station found that Limestone Grit produced by far the most eggs and the hens ate much less of the grit thus making a gain both

PEARL GRIT Is Carefully Selected Limestone

It is clean and healthful. It is pure limestone, high in Calcium. It furnishes the necessary grinding action in the gizzard, also insures ample supply of Calcium for bone and egg shell structure, A small amount of Pearl Grit will do more good than larger amounts of other grits and shells. "Less grit to buy and more eggs to sell" is borne out in actual practice when you use PEARL GRIT. Made in three sizes: For Chicks, Growing Birds and Laying Hens.

The Ohio Marble Company PIQUA, OHIO

We Have Dealers Everywhere Ask Your Dealer





For White Diarrhea

Death loss stopped in few hours, and sick chicks full of pep.

Simply drop an Avicol tablet in the

Simply drop an Avicol tablet in the drinking water, and watch the dying chicks revive and begin to thrive. Mrs. E. E. Franks, Ramsdell, Tex., writes: "I was losing 10 to 15 chicks a day before the Avicol came. I haven't lost one since."

Used in time, it prevents the whole trouble at trifling cost. A mild, safe intestinal antischicks. Entirely different from anything you ever tried. Money back if not satisfied. Send 50c for liberal package (or \$1 for large economy size) to Burrell-Dugger Co., 926 Postal Station Bldg., Indianapolis, Ind.

Baby Chicks

From Egg Bred Northern Grown Laying Stock



Culled for years for higher egg production. Let our new 1928 Catalog tell you ALL THE FACTS about our White Leghorns, Barred Rocks, White Wyandottes, and R. I. Beels.

White Legacy
Rocks, White Wyandottes, and
Rocks, White Wyandottes,
Rods,
Send for copy at once. Many orders
now heing booked for spring delivery,
we guarantee your satisfaction, and
100% Live Delivery of your Chicks.

GILT-EDGE POULTRY RANCH Zeeland, Michigan



BE SURE

To get our free Catalogue and prices on DEAN QUAL-ITY CHICKS. White Leg-

BOS QUALITY CLASS A CHICKS

From healthy heavy layers of large eggs, S. C. English White Leghorns, Brown Leghorns, Anconas, R. I. Reds and Assoried chicks at reasonable prices. No money down. Pay full amount 10 days before chicks are slipped or C. O. D. Special discounts. 100% live delivery postpaid. Catalogue free.

Kreuper's Chicks Better chicks for bigger profit. It's not how much you pay, but what good quality. We breed for egg production. Barred Rocks, Reds, White Leghorns, KRUEPER HATCHERY, Wabash St., Milan, Mich.

EMERGENCY MASH-FEEDER

WANTED some mash feeders right My "ever-ready" was away. away and although I might have made a passable one, I had no time. So necessity evolved this plan which I like so well that I've never asked the man to make one of the regular feed-

I took two old dish pans, discarded because of leaks, filled them about half full of mash and inverted a handle-less pail, likewise leaky, and pressed it down into the mash.

When I fed them next time they had eaten the mash almost to the bottom of the space around the pail. I picked out the few straws they had scratched into it, lifted the pail and scraped the clean mash under it to the sides of the pan and replaced the

This feeder is easy to fill, never clogs, doesn't tip over, keeps clean, and holds enough for a day's feeding. I usually look at it at noon when I give the hens fresh water and scrape out what is under the pail so they can eat it during the afternoon. Sometimes I fill it at night, then they have it if I do not get out on time in the busy morning.

If you have something you wish to put in a dish for chickens and do not want them to perch on the edge and tip it over at once as often happens, put a brick or a stone in the middle of the dish.-Mildred M. North.

CEMENT BLOCK POULTRY HOUSE

I intend to build a hen house and would like to build it of cement blocks. Some of my neighbors tell me that a hen house of cement blocks is damp. Would you please give me your advice?—G. W.

Cement block poultry houses are not commonly constructed because there are more poultrymen that understand working with lumber and it is the general opinion that cement block houses are more apt to be damp and cold than houses made of lumber and insulated.

Even in a cement block house the roof must be of lumber. Allowing for the windows and open front, it does not require a large quantity of lumber for the front of a poultry house. If the door is in the side that takes more lumber. The fact that most poultry houses are built of lumber is good evidence that experience has found lumber houses the most satisfactory.

If a farmer made cement blocks or lived close to a cement block factory and understood working with blocks, that might change the situation. In that case he might build a modern poultry house of cement blocks and install a proper system of ventilation and find that it worked alright. But it would probably take longer to build and be more expensive than a lumber

DO TRAPNESTS AFFECT PRODUCTION?

Since we put in trapnests, we do not get any eggs to speak of. I think large breeds are better without them. Our hens have all different feeds, good coops, plenty air, are in good condi-tion, are kept clean, and get hot water. Kindly give me your opinion. water. —C. S.

We have had no reports of trap-HATCHERY, Box 8, Birmingham, Mich.

ITY CHICKS. White Leghors, Barred and White Rocks, R. I Reds, White Wyandottes. All Michighs Production. Of course, some hens might not take rapidly to the nests at first and there might be an increase in the number of course. on the floor. The confusion resulting from remodeling a hen house and installing trapnests might cause a reduced egg yield for a few days.

> We are now approaching the end of March when even the old hens which have rested during the winter should be in good production. The days are longer with more sunshine and I think your hens will soon return to normal production.

Draw Down Bigger

With Drew Line Poultry Equipment

Clean quarters—clean nests—clean feed—clean water—that's what you've got to give your hens if you want to make the big, clean-cut profits which successful poultry raisers are making today. Thousands of poultry men have found that assoon as they began to use Drew Line Poultry Equipment, they cut out their losses from waste and disease and started to draw down bigger profits than ever before. Why don't you do the same?

Drew Sanitary Steel
Nests will protect your
hens from lice and mites,
—giveyou healthier hens,
—higher egg production
in Winter and more profits. With the Drew Egg Mash Feeder
you can cut \$15.00 per year off your
feed bill,—save labor and get more
eggs.

The Drew Eight Gallon
—Lamp Heated—Waterer will care for 150 hens
and will pay for itself in
90 days with the increase
in egg production.
The entire Drew Line contains everything you need for profitable poultry
keeping and every item is strong, durable, efficient and priced unusually low.

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Drew Line Equipment is sold by good dealers everywhere. Send for our Free Poultry Equipment Book which shows the equipment and methods others use to get the biggest profits,—and we will send you the name of our nearest dealer. Write for this FREE Book today.



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and will do it for you.

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SILER HATCHERY

BOX A

DUNDEE, MICHIGAN

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STOCK ALL BLOOD-TESTED FOR WHITE DIARRHEA FOR THE PAST FOUR YEARS You can save money by ordering Dundee Pure-Bred, Mich. Accredited and Blood-Tested Chicks. We hatch B. P. Rocks, R. I. Reds, and S. C. White Leghorns. Write for 1928 Catalog giving all details of our matings and full directions on how to raise baby chicks for greater profits. We guarantee

DUNDEE HATCHERY & POULTRY FARMS

DUNDEE, MICHIGAN

Contests Preferred and Why

M. C's Seem to Like Essay Type Best

T is entirely impractical to say knack of "essaying" and may improve which type of contest is most his ability along those lines. beneficial to the Circle at large. Human nature demands a variety,

the course he is to follow.

My choice of career lies wholly within the literary world, therefore, owing to my ambition to develop every surface of that field, I choose

the essay type of contest. Since "Practice makes perfect" I



The Seven Sisters in the King Family Make Good M. C.'s

exercise many efforts to gain practice by answering calls to write.

The M. C. affords many opportunities for this drastic measure of my life's work. I have many reasons for choosing the essay type of contest. Not simply from a standpoint of personal benefit but taken generally, it is a benefit to the Circle.

First, it is of universal value because it is representative of the Circle as a whole. Secondly, it is valuable because it expresses the ability of the individual to place his thoughts on paper such that they can be felt by others. Third is the value that comes from the recognition that is given by readers of the contests. Fourth is the value of self confidence and self reliance, invested in the individual, and fifth, the prominence which it gives the Circle.

The greatest of these qualities is perhaps, the fourth, which finds expression in the definition of genius. found in Emerson's "Self Reliance." "To believe your own thought, to believe that what is true for you in your private heart is true for all men-that is genius."-Zola M. Marsh.

After due consideration, I have come to the conclusion that the essay contest holds the most pleasure for

Notwithstanding the fact that other types of contests are not so difficult and that your work is cut out for you in several of them, I get more genuine enjoyment from the essay contest.

Also there is more competition in nis variety of contest win a prize with your writing it is in recognition of your ability but in a Read and Win contest, for instance, any prize which you may receive is because you are possessed with a

When one realizes he is competing with hundreds from all over the state. he will exert himself to his best power and will probably turn out a better manuscript than he would if he knew all the papers were to be put in a basket and ten drawn out.

If a person is not required to write very many themes, these contests benefit him by helping him retain the

There is some measure of satisfaction in having an essay in print as each individual chooses for himself most of the prize winning ones do get

> In searching for material to compose a theme, many interesting facts are disclosed hitherto unknown to the

> If, in the course of time, you have perused this epistle thus far, it is probable that you will come to the conclusion that I'm in favor of the essay contest!-Herbert Estes, M. C.

> Having just recently made known to Uncle Frank that I was anticipating the pleasure of the announcement of an essay contest sometime in the near future, I would undoubtedly be proving myself deficient in his expectations should I fail to respond now.

The "why" of the topic irritates me more, perhaps, than all the remainder. Why, oh why! is there always a made."-Dorothy Munn.

"why" to question our likes and dislikes?

Since I have already made known my preference for the essay contests I have now to contend with the "why and wherefore" of my preference.

Never having questioned my likes and dislikes in the past, "except in exceptions," I find it exceedingly difficult to do so now.

Would it satisfy you if I should say I preferred essay contests because they afford more "scope for imagination" than the majority of contests? You must comprehend my weakness for preferring anything that possesses "scope for imagination" if you would appreciate my choice.

To come right down to brass tacks I like essay contests because I prefer them. That is my simple straight forward reason. Dare you question it?

If you have any literary inclination and you participate in these contests, it has a "never failing" tendency to develop your literary powers.

When you're reading, did it ever occur to you that the article you are reading has been written by some human hand? I have yet to be convinced that "writers are born, not

tainly was a glad surprise. The pin is real nice. Many of my friends adored it.

I am a lover of books. I read all

the Camp Fire series I can get ahold of. I read a few Boy Scout books, but not many. Do any of my cousins like

I love nature also. My best sport is to roam in the woods and study the trees and flowers and ferns and different leaves and grasses. I don't see why everybody doesn't like nature.— Brown Eyes

You probably will always remember the snow storm and the pin together. It is a funny person who doesn't like nature. An interest in Camp Fire work is wholesome.

Dear Uncle and Cousins:

I am writing this letter to tell you that I received the dandy loose-leaf note book. By golly, how I like it, and say, when I opened up the package and found the prize I was tickled half to death and nearly fell through myself! I thank you very much for the prize.—Clinton Van Duine, R. 1, Dorr, Michigan.

If I had known the prize would have

If I had known the prize would have such serious effect, I would not have sent it. I hope you have fully recovered by this time.

Dear Uncle Frank:

After reading the fine letters that have been written by our M. C.'s of late, it has inspired me to try to equal some of them. It's a pleasure to read letters that are interesting and that show the thoughtfulness of the writer. I, also, admire "White Amaranth's" ability to write. It's not the length that counts so much but the expression and clearness and I might add brevity, that ratches the reader's attention. Just for proof that brevity is more clear and impressing than long monotonous compositions, I'll refer to the Lord's Prayer and Lincoln's Gettysburg Address, both are short, but they could hardly be made more clear or convincing.

Earl Bowen's letter was very interesting; he undoubtedly believes it is best to have an aim and purpose in our work. I certainly agree with Farl

best to have an aim and purpose in our work. I certainly agree with Earl that it gives a person a different spirit when he knows what he is work-

But still as I reflect, success isn't always gotten by those who are working toward some certain purpose. No tice many of our heroes. They didn't have that ambition which have made portunities came to them and they were prepared.



Dear Uncle:

I am writing to thank you for the membership card and pin. I think the law you have set for us is one which we all should be glad to obey.

When I first received my pin I wore it to school and was astonished at the number of students who told me that they also belonged to the Merry Circle. I thought you would like to know that there are probably from ten to fifteen students in this high school who belong.

The questions that come up for dis-

The questions that come up for discussion on this page are interesting and the way they are handled by the members of "Our Page" would make anyone sit up and take notice. I know I did.

one thing I have always wanted to do is travel and since I have never had the opportunity to do so, I learn of other countries through books. I sincerely believe that a book is one's truest and dearest friend and the only one on which one can entirely rely.—Gertrude Thorne, R. 2, Dewitt, Mich.

The discussions on Our Page frequently make me sit up and take notice. It is gratifying to learn there are so many M. C.'s in your school. Books are both friends and enemies, depending on the kind of book. A good book is a fine companion. One often gets more from "book travelling" than from actual travelling.

Hellow Unc:

Uncle Frank, did you have any sisters to tease? If you didn't I'll bet you teased the girls at school. Didn't you, Uncle Frank? Well, my brothers are real tease cats. They like to tease the girls. But don't fool yourself, the girls like to tease too, and we get quite even with the boys.

One day my older brother was teasing me and he really got me mad and he laughed at me and teased me all the more. But I got even with him. I took a pail of water and waited till

all the more. But I got even with him. I took a pail of water and waited till he came to the house and when he did come he got all wet and had to stay wet until his clothes dried. Then it was my turn to laugh and I did laugh. The next time he dodged the pail of water.

Here's a joke my little brother tried on us kids. He put a can of water above the door and tied a string to it. He waited for some one to come, as no one came he went to the barn and I happened to see him coming so I waited until he opened the door and then pulled the string. The water spilled down his collar and I had just time enough to run out of the door time enough to run out of the door before he caught me and I ran out-side toward the barn and he ran after me until he slipped and fell on the

ice. Boy, that got him mad. He didn't chase me any more. But, of course, it made me laugh because he got fooled on his own trick. Ha, ha. He waited till I came, but he pulled the string too soon and that made him madder. But he refilled the can and happened to catch dad at the trick which spilled all over his face and head. That gave him a chance to laugh.—Peggy. laugh.—Peggy

Yours must be a teasy family. I had no sisters to tease and I was one of these good boys who never teased girls, perhaps because I was afraid of them. Sometimes teasing ends in fighting.

Dear Friends: Dear Friends:

I think it is about time for a 1928 quilting party, don' you? I would like flocks of white muslin, twelve inches square with name, address, and favorite design on them. I have some made ahead so will send flocks in return as soon as I receive them.—Eleanor Johnston, Box 3, Edmore, Michigan.

Yes, I think this is a good time to start quilting. I hope many of the girls will make quilts this year.

Dear Uncle Frank:

Michigan.

I might as well confess that the real reason that I have not written before is because I was tight with my pen-

is because I was tight with my pennies. Ha, ha.

I enjoy reading the Michigan Farmer every Saturday and think you are a rough farmer by the looks of your picture. I have an easy life here in Cloverland in the winter—just milk a few cows every day and then sit around the fire and grow fat. I do not go to school anymore but sure not go to school anymore, but sure would if I could.—Emil Koski.

I think I'll have to come up and stay with you to find out if I can grow fat by sitting by the fire. I'm sorry you do not go to school, but am glad to learn that you would if you could.

Dear Uncle Frank:

With much pleasure and surprise I received my M. C. pin and membership card. The day I received it was very stormy, only ten were at school. The roads were drifted with snow four feet deep. Our teacher told me to answer a knock at the school door. It was the mailman. He said he couldn't get through the drifts up our way so left our, mail at the school. At recess I looked through the mail and I saw a letter for me from the Michigan Farmer. Of course, I was very interested. I opened the letter very quickly and saw the pin. It cer-



The Scouts motto "Be Prepared" is a splendid one. By being prepared for work and opportunities every day, one will probably be prepared when his great chance comes.—Albert Peter-

You have filled the requirements that you have laid down for good letter writing. Your selection of requirements is good.

Dear Uncle Frank: I have received my M. C. pin and card and I thank you ever and ever so much for them. The pin certainly is nice. I will try my best to live up to the statements on the card.

I belong to a 4-H Club. I certainly do like to belong to it. I am in the



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S. HARKEMA SONS, R. 1, Holland, Mich.

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Baby Chicks English Single Comb White Leg-delivery, May \$9.00 per 100. Discount on orders of 500 or more. Live delivery guaranteed. HENRY WATERWAY, R. 6, Holland, Mich.

There are so many different kinds of There are so many different kinds of clubs and things to attract the people's attention that I think it is worthwhile being a member. My opinion is that the 4-H Clubs are of great benefit to the country. If it were not for the clubs so many boys and girls would never know how to sew or raise groups approach. Thisse Merinar crops prperly.-Luise Merinar.

I am glad you are an enthusiastic 4-H Club member. The 4-H work is all you say it is and then some.

ADD-A-LETTER WINNERS

More young folks understood this contest than last time. But still some did not read directions or could not understand them. Twelve words seemed to be the limit. The winners were picked from those having twelve words.

Fountain Pens
Elizabeth Olajos, R. 8, Owosso.
Lucille Penzien, R. 2, Imlay City.
Dictionaries

Clutch Pencils Esther Beatham, Alto, Mich.
Grace Mitchell, R. 3, DeWitt, Mich.
Arthur Pelto, Box 157, Ewen, Mich.
Mary Kocsis, R. 1, Prescott, Mich.
Werner Olgren, Chassell, Mich.
Winner's Solution

O, on, ton, tone, stone, stoner, treason, treasons, assertion, serrations, reassertion, reservations, preservations.

CORRESPONDENCE SCRAMBLE

HESE Scrambles have become known as makers of wholesome friendships. As friendships is one of the valuable assets of life, these scrambles are of value, for they are ways to new friendships.

Write a letter to "Dear Friend," or Dear Merry Circler," then address an envelope to yourself and put a stamp on it. Place the letter and the addressed and stamped envelope in another envelope which should be addressed to Uncle Frank, Michigan Farmer, Detroit, Michigan. If you are over thirteen years of age put the letter A in the lower left hand corner of the envelope; if below thirteen, use the letter B. This Scramble closes March 31st when your letter will be put in another envelope and somebody else's letter in yours, and sent

COMMENTS FOR MRS. A. B. C.

70U poor dear misguided mother How my heart aches for you. Your friends tell you that you are too good to your children. Why, my dear woman, you aren't even the least bit kind to them in allowing them to be so inconsiderate and disrespectful to you and to grow to ma turity with selfish dispositions.

I cannot conceive such conditions as existing. Did you just write that to "rile" some of us up? Well, if you did, I am "riled," but what I am about to write won't be any help to you at this late day, nor any consolation perhaps, but it may be an inspiration to some young parent or even those whose little ones have not come yet.

Married at twenty-one years of age to the best John the world ever knew, we went to an Oakland County farm which was heavily mortgaged at a time when butter was sixteen cents and eggs ten cents. After ten years of married life a daughter came to brighten our home. The first few months she ate and slept blissfully ignorant of the financial struggle of her parents. Almost from the cradle we taught obedience and respect for ourselves and for all with whom she came in contact and the utmost kindness to dumb animals.

Anyway, as she grew, we talked over all matters pertaining to our business before her, led her to believe that she was a partner which she was. She knew just what we could afford and why she did or didn't do this or

second year sewing club. Our motto the other thing. When she went to is "We Will Work" or "W. W. W." school we taught her to obey and rethink the 4-H organization surely is spect, her teachers, discouraged her in spect her teachers, discouraged her in bringing home little grievances, and belittled rather than sympathized with her for fancied slights.

> I taught her that her father was the most wonderful man and daddy that any little girl ever had. And I think he must have done the same concerning me. For listen, friend, I am very plain looking with a common education, but she falls all over herself to have her friends meet her mother and delights in bringing acquaintances home. We have the best times together, she and I.

> The Lord took her daddy when she was twelve years old. She will soon be sixteen now, a student in high school, a lover of good books, of music, clean sports, and clean people, kind and sympathetic. I firmly believe she is what she is because of firmness on our part and our refusal to give her the moon just because she may have

William Nelson, Filion, Mich.
Virdie M. Baer, R. 3, Remus, Mich.
Martha Nopola, L Box 13, Covington, Mich.

Deats every night of her life before peats every night of her life before going to sleep. You may smile at it and I must tell you that some times when I am just too tired and sleepy it seems rather superfluous to me but I wouldn't have her know it for worlds. I cannot remember when she began it, but I hope down deep in my heart she won't abandon it during her life at home. It runs thus:

Mother, have I been a good girl today?

Am I a good little Christian girl? Am I refined and well bred?

Do you think I live up to God's standards?

Do you think every one likes me? Rest assured I always answer in the affirmative, however much I may feel I have cause for criticism of any little sidestepping. I take another time for suggestions and corrections. She is only human and errs occasionally as well as her mother and all the rest of the species.-Mrs. Egotistical

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The numbers in the circles above spell three words. Can you tell me what they are? A is 1. Big 2.0 NASH OOR SEDAN The numbers in the circles above spell three words. Can you tell me what they are? A'is 1, B is 2, C is 3, etc. Make out the three words. A Buick Master Six Sedan may be yours absolutely FREE if you rush your sawort oday. No obligation, no risk, no cost to you.

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Looking Back, Three Months

Our Weekly Sermon-By N. A. McCune



HE "Farm Service" Hardware Store "tag" stands for thrift. At our stores you purchase dependable hardware at prices that will continually save money for you. Better business methods, careful buying and the desire to hold your business keep our prices at the lowest level. Quality, however, always comes first, for only by buying quality can you secure economy. Our service means thrift for you. Use it!

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was popular. One or two of the rea- Declaration of Independence. Temptasons for this we shall touch on. Would tion is as insidious and as persistent we want the degree of popularity as when Jesus kept his lonely vigil which he enjoyed? I rather doubt in the wilderness. Power of soul, the whether he always enjoyed it. One power behind everything good, the likes to eat and rest, and at times he was not permitted to do this. Henry Drummond, the Scotch professor, and safe, must be cultivated much the famous as the author of "Natural Law in the Spiritual World," had a popularity hard to explain. At twentythree he was sought by college men in the great cities of Great Britain, who opened their lives to him without reserve. Huge audiences hung on his words. He had, it was said, a genius for friendship. To write his life, said his biographer, was like writing the history of a fragrance. How did he

get that way? we ask. No one can tell exactly. You cannot define personality. He was not selfish, he sought nothing for himself, and his head was not in the least turned by his

popularity. He liked people, and they in turn liked him. Multiply this enough times, and one has a partial picture, at least, of Christ. He loved people. He would do anything for them. He always seemed to have plenty of time for the humblest. The same thing was characteristic of Drummond. Christians all ought to be friendly folk. We ought to specialize in friendliness, and take time for it. Maybe if we did, we would be more

PERSONALITY. Jesus undoubtedly had a striking personality. We do not know what he looked like, though a tradition has come down to us, as to his appearance. What is it that makes personality? It is not good looks, that is, regular or symmetrical features. Some of the homeliest people have had most impressive personalities. Lincoln, for instance. Some folk who have made a deep impression on their fellows have been small of stature, as Napoleon or Wesley, or Wilberforce, or Alexander Stephens. Others have been large. The physical is important, but not everything. It seems to lie in that indefinable thing we call character, that looks out through the physical. Goodness makes personality, if it is the kind of goodness that Christ exemplified—positive goodness.

POWER. Ah, now we are talking. Power is what we want, show us the road to it. We do not need to travel far. This is the age of power. I was in a restaurant a while ago that has machinery for washing 40,000 dishes per hour, and other machinery which can peel and wash 1,500 pounds of potatoes an hour and can bake 500 pies an hour. It has required, we are told, twenty-seven million dollars for new machinery for making the new Ford car. We live in an age of unprecedented power. On the average, each of us has the equal of twenty slaves to wait on us day and night. Oceans of power. But somehow we remain unsatisfied. Jesus had no such mechanical helps. The fastest he ever travelled was when he walked. He never saw an ordinary plow, or talked over the telephone. And we are going back there, to tiny Palestine, to get the real values of life. In other words, the finest power is not mechanical, at all. It is personal. It speaks to hearts from the heart. It can not be counterfeited for any length of time, and it cannot be produced by short-circuit methods. It takes as long to grow a tree or a bird now as it did when men

POPULARITY. The Man we have travelled on foot. It is no easier to been getting glimpses of, now and do right now than it was when John again, for the past three months, Hancock put his signature to the power that gives value to everything else, and without which nothing is same as it was in the long ago. There are no short-cuts to the City of Man-

PRAYER. Jesus went apart to pray a good deal. Just how much we, of course, do not know. No doubt He went many times more than the gospel records mention. This was not a form with Him, but a reality. In prayer He got in connection with the Eternal Batteries, which gave Him all the power He required. There is no other explanation for the cures He performed, and the teachings He uttered. A much-read writer says that he believes Jesus found power in three ways: "He lived close to human need, He withdrew from the multitude for periods of silence, and He spent hours in fellowship with the inner circle." The art of prayer has to be cultivated, like anything else. Through prayer anger is turned into love, fear into joy. It is renewing in its effects.

PLAY. "If we make our work drudgery we are slaves; if we make it work, we are men; if we make it play, we are gods. All great geniuses have made their work play. 'I never worked a day in my life', says Edison, made last spring.

'it was all play'." Was it not so with Jesus? He became so immersed in his work that it seemed play. He forgot to eat at times, he used the night often in talking with God, rather than in sleep, he exulted as he saw the coming Kingdom. It was toil, but there was the play spirit in it all, the spirit of liking to do it. Is it possible to introduce that spirit into church work? Suppose it suddenly became fun to teach that class of wriggling boys. Can it enter into farming? Suppose all the farmers suddenly stopped moaning, and began to tell what a great work they have, and the fun there is in farming. The price of farms would double, and you couldn't drag people off them.

SUNDAY SCHOOL LESSON FOR MARCH 25th

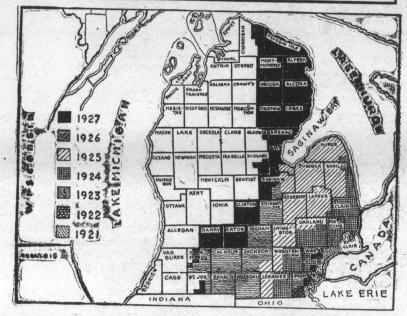
SUBJECT:-Review The Early Ministry of Jesus. GOLDEN TEXT:-Matthew 9:35.

ONTARIO AND THE CORN BORER

(Continued from page 407) awaken the Canadian farmers to the economic danger of the corn borer. But now control measures and cleanup regulations have become established farm practices in Ontario, and farmers are solidly behind this pro-

Michigan farmers might well profit from the experience of their Canadian neighbors and avoid the embryo stage by cooperating one hundred per cent with the state and federal governments in their program to control this alarming crop pest—the European corn borer. An excellent start was

WHERE BORER WILL BE FOUGHT THIS SPRING



Requirements in Corn Borer Clean-up

ERE are the requirements of Michigan law for farmers growing corn in the corn borer quarantine areas of the state. These areas are indicated on the accompanying map. The regulations as issued by the State Department of Agriculture are:

All corn crop parts, all corn crop remnants, and all corn crop residues of form and condition to harbor living European corn borers of each year's corn crop in fields, gardens, barns, barnyards, feeding sheds of feed lots, around canning factories and grain elevators in or about loading chutes and similar places, and all coarse stemmed weeds within cornfields, shall be destroyed, unless herein exempted (a) preferably by burning before May 1st of the year succeeding the growth of that corn, or (b) such material shall be so treated or handled by regular or by special field procedure prior to May 1st of the year succeeding the growth of that corn as to insure that between May 1st and July 10th of that year, no portion of such material or trash in condition to harbor living European corn borers shall appear on the surface of the field after it has been plowed, or disced, or harrowed, or planted, or cultivated.

Exemptions: The following conditions are exempted from the above provisions: (a) Ear corn being stored for the grain attached thereto, (b) Fast corn stubble in clean cornfields which are not more than two inches in height above the soil surface, (c) Corn crop parts, remnants and residues, which are made into ensilage, finely shredded or finely ground, completely plowed under, burned, or tramped into and deeply covered by manure.



J.D.Peterson, R.F.D., Owosso, Michigan, says "My Marietta Concrete Silo has paid for itself in just ten months. I win tered a lot more stock than usual. Most perfect ensilage I've ever had. Cows were never so healthy as now, and butter is of finer quality and in much greater quantity. Your Silo has proved the best investment I ever made on my place."

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Livestock and Dairying

WOULD AMEND OLD LAWS

A N amendment to the oleomargarine law has been introduced in the House by Representative Linthecum of Maryland in the interest of the manufacturers of color oleomargarine. The oleomargarine act of 1886 provided that when oleomargarine is free from any artificial coloration that causes it to look like butter if any shade of yellow shall be taxed at one-fourth cent per pound, but if there be artificial coloration which causes it to look like butter, it shall be taxed on ten cents per pound.

Congressman Linthecum says that the original act was sufficient for many years, and all colored oleomargarine was taxed ten cents per pound. The act, however, in recent years has been circumvented by the discovery of a yellow fat contained in old cattle which when boiled down produces a yellow oil and when mixed with oleomargarine causes it to look like butter and it can be sold as such.

This he considers to be unfair to the man who uses artificial coloration, because the one is just as pure as the other. His amendment provides that when any ingredient or artificial coloration is used oleomargarine shall be taxed ten cents per pound. This would protect purchasers of the oleomargarine however colored.

A bill with the same object in view has been introduced in the House by Representative Haugen, chairman of the House committee on agriculture.

WOOL OUTLOOK ENCOURAGING

HE bill authorizing an appropriation of \$50,000 to be used in improving the quality of wool has been passed by the House. It provides for acquiring and diffusing information on the standardization, grading, marketing, utilization, transportation, handling, and distribution of wool. It is predicted that the appropriation will form the basis of a wool improvement movement, which through standardizations, sheep breeding, and better care and handling of wool, will ultimately bring the standard of American wools up to the high level of Australian wools.

With no immediate prospect of any further increase in wool production in the Southern Hemisphere, J. F. Walker, who recently completed a year's study of the wool industry in Australia, New Zealand, and South Africa, predicts an encouraging future for the American wool industry, with the opportunity for American wool growers to place their business on the best financial basis in history, but it will require a vast improvement in marketing methods in this country.

STEERS BRING GOOD RETURNS

HE Gratiot County Farm bought twenty-four Hereford steers October 20 which weighed 15,955 pounds for \$1,435.95. These steers were sold March third weighing 22,320 pounds for \$2,511.00. The cattle were owned the County Farm 129 days. For twenty-one days they were on pasture, and for 108 days on feed. For the first thirty days they had shock corn twice daily, then was added 150 pounds barley and oats ground equal parts with two and one-half pounds of cottonseed meal per steer daily. The County Farm still has twenty-four hogs that followed these steers to market. For six years this farm has been feeding steers, and have made a little money each year-the top load making \$1,200 while the smallest net was \$125.

No farmer has time to milk a cow that will not produce enough butterfat to pay for the cost of feed.



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TALK OVER DAIRY PROGRESS

SIX years ago a few dairymen met at Parma, Michigan, and organized a cow testing association. Fred Leonard was appointed to do the testing work. This organization is now closing its sixth year and Fred Leonard can look back over six years of successful testing activities.

The goal set at the start to have the average of the three hundred cows placed under test return at least one hundred dollars or more above the cost of feed has been realized this year. Now that this goal has been reached, the dairymen are fully aware of the further progress that may be made through continuing their testing

Fifty dairymen and their wives attended a noonday banquet in order to take stock of their results over this period of time. To Fred Leonard, the tester, belongs the credit for developing the plans for this very fine dairy meeting. Local talent was used entirely in the make-up of the program.

The first speaker was Mr. Emil E. Eppick, a local dairyman, who told of his experience in improving in the the feeding work and how to properly value the testing association records, Briefly, Mr. Eppick explained that mail order test business, as he had seen it in Wisconsin, gave him no results. This type of testing he found to be just a little better than nothing.

Good Breeding Helps

Mr. Sam Beck commented upon the gradual improvement his herd has made each year in milk and butter-fat production. Emphasis was placed on good sires and facts brought out by Mr. Beck proved the point that it pays to analyze the records in the D. H. I. A. herd book.

George E. Dean, owner of the highest producing Guernsey herd during 1927, showed through figures how production improved through careful feeding. Each speaker gave the credit for the improvement to their tester, Mr. Leonard.

Exception to the local talent on the program was A. C. Baltzer, Dairy Department, Michigan State College. Comment was made by him regarding the new herd test that is now being used by pure-bred Holstein breeders and the values that will probably be realized through such a test. The Michigan Guernsey Breeders and the Michigan Jersey Breeders are also mentioned as favoring this sort of test, for they have petitioned the national breed association headquarters to provide a similar test. Results of the mineral feeding experiment being conducted by Carl Huffman, research assistant of the Dairy Department, were also mentioned.

Fred Leonard closed the afternoon's discussion by showing results in improved feeding and how he figured rations. Roy Decker, County Agricultural Agent, spoke briefly regarding the possible further development of another D. H. I. A. in the county and the boys' and girls' club work.

TESTING INCREASES

THE Bureau of Dairying, U. S. D. A., gain in the number of dairy herd im- out included dairymen from Wayne, provement association per cent during 1927 as compared with tenaw! eight per cent in 1926 and six per cent in 1925.

herd improvement associations are operating in the United States under date of January 1, 1928. For four years Michigan is credited with more than one hundred of these organizations and at present eleven and onetenth of the total herd improvement associations in the U.S. are operating in Michigan.

The original start of these organi-

was formed in Newaygo County at Fremont. Wisconsin and Minnesota have a larger number of dairy farmers belonging to dairy herd improvement associations than Michigan, but Michigan has an equal percentage of cattle under test as does Wisconsin. Four thousand two hundred and forty-one herds are being tested in Wisconsin and 2,560 in Minnesota with Michigan ranking third testing 2,428.

The average per cent of cows throughout the country is only two per cent while Michigan dairymen have three and seven-tenths per cent of their dairy cows in testing organizations. The excellent production results and improved money returns coming through these organizations should be incentive for Michigan dairymen to make greater use of these organizations in the state.

Denmark is credited with more than one thousand testing organizations having approximately 27 per cent of the cattle under test. Year after year production at a high and efficient level is necessary in order to expect the largest money returns from the cow investment.

JERSEY BREEDERS TO MEET

FORMER instructor and extension specialist at Michigan State College H. E. Dennison, now field Secretary for the American Jersey Cattle Club, has been engaged to address a general Jersey meeting at Reed City March 20. The evening will be given over to organizing a club for Osceola and Lake Counties.

HORSE MARKET IS ACTIVE

HORSE markets have been more active this spring than for several years. At present, trade is mor brisk that at any previous time durir the season. During the month January, the number of horses received at public stockyards was seventy-seven per cent greater than a year previous and twenty-seven per cent above the average of the last five years. Drafters, wagon horses, and farm chunks which have been properly fitted for market are selling well. At Chicago, the top recently was \$300, with one pair at \$600. Bulk of sales have ranged from \$100 to \$150. Quotations at Chicago are as follows: Good draft horses, 1,700 pounds and over, \$200 to \$300; good chunks, 1,600 to 1,700 pounds, \$150 to \$250; good wagon horses, 1,300 to 1,500 pounds, \$125 to \$175; good farm chunks, \$60 to \$110; common farm chunks, \$20 to \$50; good mules, \$125 to \$200.

WAYNE GANG HAD VISITORS

WHAT would you think of a three-county response to a county-wide invite to attend a Holstein talkfest? And how if a breeder of Jersey cattle came also! That was the set-up in Wayne County recently. County Agent Carr had sent notices to breeders of pure-bred Holsteins in Wayne County to come hear Jim Hays, Secretary of the State Holstein Association expound upon the new reports in a news letter that the Holstein herd test. And lo! the turn-Oakland, and the Jerseyite from Wash-

Joe Cook, herdsman for the Wayne County Training School, Northville, Nine hundred and forty-seven dairy stated that this institution had already entered its herd in the test. Main interest, outside of discussion of the test, lay in planning for a Holstein summer tour amongst Wayne County breeders. County Agent Carr was requested to arrange for such an expedition.

Feeding oats to lambs increased the rate of gain and decreased the cost of zations occurred in Michigan in 1906 the feed. Their use also reduced the when the first association of its kind roughage consumption forty per cent.

HERD-AVERAGES 681 POUNDS BUTTER

HE average production of a herd counts more in herd efficiency than the spectacular record of an indivdual. Over a year ago the entire Serradella Farm milking herd was placed under S. O. test. Thirty-nine head finished S. O. records during 1927. The average of these thirtynine head was 16,248.1 lbs. of milk, 681.43 lbs. of butter for an average of 337 days. Leaders in this Serradella production are:

Doress Canary Rag Apple 26,163.9 lbs. milk, 1,121.65 lbs. butter; Huron Hill Pontiac Sarcastic 25,536.8 lbs. milk, 1,027.05 lbs. butter; Lady Riverside Canary 21,124.5 lbs. milk, 987.65 lbs. butter; Dora Riverside Colantha 21,381.6 lbs. milk, 947.44 lbs. butter; Queen Pieterje Mink DeKol 22,763.4 lbs. milk, 918.88 lbs. butter; Lady Pieterje Wayne Paul Pride 23,171.8 lbs. milk, 951.63 lbs. butter; the average being 23,357 lbs. milk and 992.38 1bs. butter.

Two of these six made these records at past ten years of age. Three of these are sisters, by same sire, the average of these three sisters is, milk 23,572.5, butter 1,006.90.

There is a mother and daughter in this leader class whose average is 21,253 lbs. milk, 967.55 lbs. butter. Seventy-one per cent of the entire herd are under five years of age, and sixty-eight per cent are Serradella bred animals. Forty-five cows calved, giving birth to forty-nine living calves.

The average production of all cow test associations in the state for 1927 was 7,536 lbs. milk, 368 lbs. butter. The average production of 25,431 cows tested under S. O. supervision is 15,720 lbs. milk, 665 lbs. butter.

IT PAYS TO FEED LIBERALLY

SOME farmers when they find the price of dairy feeds going up seem to think that the only and most profitable thing for them to do is to cut down on the amount of feed which they are giving their cows, and some feeders have been know to cut down to such an extent that they reduce the body maintenance requirement.

It is known that a cow which is fed the proper amount and quality of feed uses about one-half of its for Lintaining her body and the other half for the manufacture of her product, hence, cutting down on the ration by ten per cent may reduce the milk flow, twenty per cent while the amount of feed which is used for the maintenance of her body will remain practically the same. The animal must first keep up its body weight and then whatever feed is left over goes for the production of milk.

It is of first importance that the cows have sufficient food for both body and production maintenance. A dairy cow that is bred for production, with the right kind of handling, will pay for her feed, and in many cases she will return two dollars worth of dairy products for every dollar's worth she consumes.

Many dairy farmers make the mistake of reducing the grain ration in the spring, when the supply of grain begins to get low and grass is beginning to start. It is well to keep in mind that green grass can in no way compare with concentrated grain feed, until the grass crop is well established. After the stock has been fed liberally during the winter, do not reduce the ration too early in the spring, and thereby lose much that already has been gained, and in making the change do so gradually.-M. C.

Of the twenty-six members of the Livingston Dairy Improvement Association, twenty-one fed grain during the summer when cows were on pas-



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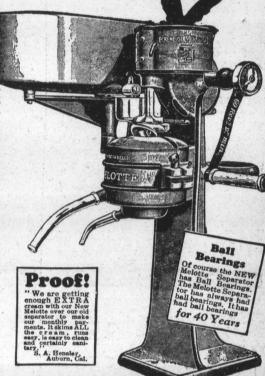
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For most cuts, chaps and injuries to udder or teats Bag Balm effects a healing between milkings. It has wonderful power of penetration and healing, being compounded especially for use in the delicate tissues of udder and teats. For all inflammation, caked bag, bunches, cow pox, cracked teats, teats stepped on, etc., the relief is quick and complete. Bag Balm makes full-time milkers of every cow-keeps milk-flow steady by insuring comfort to the cow and ease to the milker.

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AN INTERESTING LIVE STOCK VENTURE

THE dispersal sale on March 7 of the Capitol View Guernsey herd, owned by Himelberger and Evert, Lansing, Michigan, closes a very interesting and unusual chapter in the history of the Guernsey breed in Michigan and demonstrates what can be accomplished in a few years of constructive breeding.

A parnership which began between E. J. Himelberger and Emil Evert with an initial investment of \$900 in nine heifers, seven years ago, cuiminated in a dispersal sale of two of the original animals and forty-three of their descendants for a total of \$9,835. In addition, approximately \$5,000 has been realized at private sale for animals from this herd.

The forty-five head fetched a total of \$9,835, making an average of \$218.55. Three blemished cows and eight bull calves brought the average down to the above low figure. Thirtyfive females brought \$8,955, an average of \$255.86. The eight bull calves averaged \$51.25.

Two of the original animals went under the hammer at \$425 and \$340, respectively, and a daughter of each of these cows sold for \$500 and \$400. A feature of the sale was the selling of Lorna Girl of Fairmonde 114938. one of the original animals, and fifteen of her descendants for a total of \$3,-525. The old cow, now nearly nine years old, brought \$340, and five of her daughters brought \$1,450.

The top cow of the sale was Cavalier's Dot of Capitol View 147739, a daughter of one of the foundation animals, who went to L. J. Moreland of Kalamazoo for \$500. Three other females fetched \$400 or over. The top bull was Corium Nellie's Hector 118726, the junior herd sire, which brought \$330 from Herbert Martens of White Cloud. Calves of this bull were exceptionally promising and were eagerly sought after.

The forty-five head went to twentyseven buyers, including two from out of state. Rea Riggin & Son, Muncie, Indiana, were the heaviest buyers, taking five head for \$1,180. A bull calf out of Lorna Girl of Fairmonde 114938 went to S. F. Morton, Fordyce, Arkan-A. C. Houseknecht, Jonesville, took four head for \$1,120. H. J. Goldstein, Detroit, took three head for \$950. L. J. Moreland, Kalamazoo, also took three head, including the top cow and her half sister, for \$925.

A crowd estimated at 400 attended Walter Andrews, Beach the sale. City, Ohio, auctioneered the sale in his usual alert and pleasing manner. The Michigan Guernsey Breeders' Ass'n, W. D. Burrington, field secretary, managed the sale. Bidding was very active for the most part and especially so on the outstanding offerings. Good young cows and typey heifers were in good demand at very satisfactory prices.

The herd was not dressed up-just in its working clothes. The prices received are not altogether indicative of the true value of the animals because most of the cows freshened during the fall and early winter and had eight per cent greater than last year. milked off much of their conditioning.

STEER PRICES RECEDE

N spite of a semi-starvation run, the steer market has weakened and the recent upturn of fifty cents to one dollar on better grades with weight has been erased. Changes in prices both up and down on the lower grades have been small, while light yearlings have shown independent strength. Prices of heavy fat cows advanced, but lower grades, cutters, and bulls slumped during the past week.

While total receipts in the last ten days have been smallest in several years except at holiday periods, arrivals include an increasing proportion

of well-finished steers, so that the premium for those showing long acquaintance with corn is diminishing. Supplies of intermediate and low grade steers are not likely to change materially until the grass season arrives and prices for them will be sustained also by feeder demand.

LIVE STOCK CO-OPS DO LARGE BUSINESS

N 1927 more than twenty-three per cent of the live stock receipts at Chicago came from cooperative marketing agencies, according to figures compiled by the Bureau of Agricultural Economics. With the exception of 1926 the increase in business handled by the live stock cooperatives during the last five years has been consistent.

BETTER MARKET AHEAD FOR COWS AND HEIFERS

R ECEIPTS of cows and heifers are more likely to diminish than to increase in the next two months and a higher market can be expected later on. After declining about two dollars from their high point two or three weeks ago, veal calf prices rallied sharply in the last few days. They probably will drop two or three dollars before reaching bottom, although this break will be partly due to poorer quality of the arrivals while the spring rush of light veals from dairy districts is under way.

PORK PRODUCTS IN BETTER DEMAND ABROAD

RADE conditions abroad have changed in favor of slightly larger exports of hog products from the United States. Clearances of both meats and lard have increased in the last three weeks and shipments of lard from January 1 to March 3 show a gain of nearly twenty-five per cent over the same period a year previous. The peak of winter slaughter in both Germany and Denmark has been passed although the extremely unfavorable ratio between prices of hogs and feed costs is still forcing liquidation, especially in Germany. In the United Kingdom, supplies of bacon from the continent are expected to diminish slightly in the next few months. Low prices during the past year have stimulated consumption and this increase in demand is likely to continue for a while.

LAMBS HIGHEST OF SEASON

 $R^{
m ECEIPTS}$ of lambs diminished sharply last week and prices advanced to the highest point of the winter with the top at Chicago at \$16.75. Heavyweights have lagged behind in this upturn, however. In spite of the larger number of lambs remaining on feed, it is probable that receipts in the next three months will not average much larger than in the last three weeks. The early lamb crop in all sections combined is estimated at

FURTHER DECLINE IN HOGS

H OG receipts have declined about fifteen per cent compared with three weeks ago in line with the usual tendency at this season. Prices have strengthened slightly but they still remain in the narrow groove in which they have fluctuated for the last two months. Chicago prices have ranged from \$7.80 to \$8.35 since early in January. With prospects of a further shrinkage in receipts in the next few weeks, higher prices are probable. Whenever the market gets out of the rut in which it has been for the last sixty days, a sharp upturn can be expected.

Always look for the Red Brand (topwire)

SHEEP and SOY BEANS

J. L. Fleshner, Allenville, Illinois, plants 2 or 3 soy beans in each hill of corn. A carload of Fall lambs get fat on the beans, lower blades of corn and stray weeds.

Soy beans planted with corn and rye drilled between the corn rows gives R. V. Disharoon, Villa Ridge, Mo., a live stock profit out of his corn field.

RED BRAND FENCE

"Galvannealed"—Copper Bearing
makes extra profits possible for many years
to come. More than this, it keeps the children on the farm. "For what boy or girl
will learn to love the farm if they are continually worn out running after breechy
stock or chasing neighbors' pigs?" asks
Mrs. Grace Frey, Abilene, Kansas.
Fence for greater profits with RED
BRAND. Copper in the steel keeps long life
in; extra heavy zinc "galvannealed" coating
keeps rust out; picket-like stay wires, wavy
line wires, can't-slip knots help keep it
straight, trim, hog-tight, bull-proof.

KEYSTONE STEEL & WIRE CO.

What has been your experience with or without good fence? We will pay \$5.00 or more for each letter that we use. Write for details, catalog and 3 interesting booklets that tell how others have made more money with hog-tight fence.



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Yes, you need not pay one cent for 4 Months after you receive the NEW Melotte. Special Introductory Low Price RIGHT NOW! 30 Days' FREE Trial. Write for FREE Book and Special Offer.

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Now You Can Own Your Own Thresher



NEW principal of construction gives amazing low cost and makes it practical for you to have a thresher all your own, Although more compact, lighter weight and low of cost, the Farmer's Own Thresher has four times the grate surface of the old type. Full capacity (1,000 bushels of wheat per day). Threshes wheat, oats, barley, rye, clover, and soy beans. Perfectly balanced. Smooth running. Many custom threshers are using it. Saves grain. Saves time. Operated with a Fordson or any good tractor. Buy one and be independent. Thresh when most convenient for you and when weather conditions are most favorable. No delay. No waiting. Beat the other fellow to the market. Get a better price for your grain. The savings soon pay for the thresher. Folder free.

Form a small threshing ring in your locality, and make additional money. Write today for full particulars.

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Dept. 3-A, 2981 Dorr St., Teledo, Ohio.
Dealer representatives wanted in every locality

BREEDERS' DIRECTORY

CATTLE

PUBLIC SALE OF

PURE BRED GUERNSEY CATTLE On Wednesday, March 28,

I will sell at Public Auction, on the farm known as the H. B. Tripp Farm. Horton, Mich., 13 head of Registered and 5 head of Grade Guernsey cattle, consisting of 7 registered cows, 1 grade, 3 yearlings and 6 calves. These animals carry the best blood of the breed, and the herd is free from T. B. and abortion.

Sale of cattle begins at 1 o'clock eastern standard time. Dinner at noon as there is a quantity of tools to be sold in the forenoon.

F. C. Fowler, Horton, Mich.

E. C. Fowler, Horton, Mich.

Wallinwood Guernseus Sons of BROOKMEAD'S SECRET KING for sale F. W. WALLIN,

GUERNSEYS either sex, whose sires' dams have official records of 15,-100.10 milk, 778.80 fat, 19,460.50 milk, 909.05 fat. T. v. HICKS, Battle Creek, Mich., R. I.

Guernsey Bull Registered, 8 mo. old. Cranbrook Farm breeding. Sire, Marshall Chief of Trielm. Write ELIAS,

TWO young Guernsey bulls of serviceable age, good breeding and records, priced to sell quick. M. A. CARPENTER, Edmore, Mich.

Guernsey Dairy Heifer Calves, practically pure bred \$25.00 each. We ship Terwilliger, Wauwatosa, Wis.

For Sale —Reg. Guernsey cows and a few bull calves, sire by Imp. Coro Honor.

FOR practically pure-bred GUERNSEY or HOL-STEIN calves, from heavy, rich milkers, write EDGEWOOD DAIRY FARMS, Whitewater, Wis.

BULL CALF

Born July 1, 1927 At Traverse City State Hospital

Sired by Sir Bess Ormsby Fobes 50th whose dam made almost 1,100 pounds butter in a year and over 32 pounds in seven days. Dain, Traverse Marathon Rag Apple, a tested daughter of Marathon Bess Burke 32d the great son of Wisconsin Fobes 6th who made 1,105 lbs. butter in a year and 38.58 lbs. in 7 days.

Write for pedigree of Tag No. 703

Michigan State Herds J. E. Burnett, Director

Lansing, Michigan



SERVICEABLE AGE

REGISTERED HOLSTEIN
Bull Calves at prices the owner of a small herd can afford to pay. The sire of many of these calves is a Son of the highest record (30 lb.) two-year-old daughter of Creator. His sire is King Segis Alcartra Prilly, an undefeated Show bull with 70 A. R. daughters. Others sired by a 5 times 1200 lb. Champion Bull, the famous K. P. O. P. breeding.

Bred cows and heifers served by these sires are available for foundation stock.

RED ROSE FARMS DAIRY Northville, Michigan

Telephone: 344 Reference: Northville State Savings Bank

PRODUCTION SALE 45 Registered Holsteins

West Michigan Fair Grounds, Grand Rapids, Michigan, April 18th, 1p. m., daylight savings. All animals from the Accredited Herd of Blythe-field Farms owned by Joseph H. Brewer. Write for catalog.

\$250.00 buys five head of Holsteins, four high grade heifers nicely marked, from four to eight months old and one registered bull not akin to heifers. B. B. REAVEY, Akron, Michigan,

Registered Holsteins for sale, calves, and greatless, good breeding. 2 bulls about ready for service. Prices reasonable. Orr Bros., Decatur, Mich.

Auction Sale of Pure Bred Jersey Cattle

7½ miles northwest of Ionia, Mich.,

MARCH 28th

6 cows in milk, all in Mich. R. of P., average production 356.36 lbs. fat per yr. Six heifers from 9 to 13 months old, and 2 heifer calves sired by high class bull from a dam producing 529 lbs. fat at 2 yrs. of age which will be sold. He took 2nd prize at Ionia Fair (6 entries) in 1927. T. B. tested, State and Federal supervision, FRED C. SHENDORF, Belding, Michigan.

Jersey Bull Yearling, dam 9.452 milk, 504 fat, first calf. First 6 dams average 515 fat. Also bull calf from same dam. RAY BAKER, Osseo, Mich.

MILKING SHORTHORNS Central Mich. Shorthorn bulls, helfers, and cows, fresh and coming fresh, priced right. Oscar Skinner, Sec., Gowen, Mich.

HOLSTEIN MEETS

M EETINGS of pure-bred Holstein manifestations.

The annual rally of the Gratiot County Holstein Association held the cream buying department where March 7 at St. Louis came up to the 1928 style; more out than usual and more pep. One thing that has jazzed up the boys is the part they played Manistee County, better feeding practhrough their association in putting tices as the result of cow testing assoacross the TB. test program in Gra- ciations, and a considerable improvetiot County. Another stimulator is the ment in the standard of stock. successful work pulled off last year

to install a "dairy-minded" county the expansion in business. agricultural agent in Gratiot. Formal action was taken at the meeting endorsing such a worthy project. Officers elected are President, T. B. Himes, Perrinton; Secretary-Treasurer, Glen H. leading herd production in the Boyd, St. Louis: Vice-President, Lee Roycraft, Ithaca; other directors, Levi Pritchard, Alma; and Louis Brink,

Kent Meeting

Staging a free feed for "any and all" Holstein enthusiasts may account in part for the copious turn-out March 9 in Grand Rapids at the annual meet of Kent County Holstein Association.

Another drawing card was a brand new line of talk handed out by Dr. E. T. Hallman of M. S. C. Doc talked on "Infectious Abortion." The fact that he was almost swamped by questions proved that Dr. Hallman's talk scored big in interest.

Another speaker who gripped the crowd was Emil Kober, a local calf club boy. Emil described his trip to the National Dairy Show held last fall at Memphis, Tennessee. Emil, by the way, won this trip by the simple act of turning in the highest scoreninety-five per cent-ever rung up by a calf club boy at the State Fair in a judging contest.

Mayhap the fact that the local association has over four hundred dollars in the treasury may account for some of the good spirit. Most of this money accumulated from the association's share of commission through the county sales manager's plan of doing business. Some of this money is to be spent in advertising Kent County Holsteins, part in sending the best calf club boy to the National Dairy Show next fall.

Officers are headed by John Krum of Lowell; William Anderson of Kent City was chosen Vice-President; Albert Jenkins, Grand Rapids, Secretary; H. A. Fick, Kent City, Treasurer; and John C. Buth, Grand Rapids was continued in office as county sales manager.

Jim Hays, Secretary of the State Holstein Association, talked at both the Gratiot and Kent meetings on the new Holstein herd test, the Herd Improvement Registry. Three herds in Gratiot and five in Kent are testing in this new division.

ONEKAMA ASSOCIATION PRUSPERS

A T the annual stockholders' meeting of the Onekama Farm Bureau, Inc., the following directors were elected for the coming year: Fred Bradford, John Gould, Jr.; Ole Miller, Wm. Kline, August Berklund, Eugene Koegler, and Gardie Anderson. These are the same members as last year with the exception of Gould, Berklund, and Koegler who replace Andrew Hansen, W. F. Wagoner, and Louis Porter. The new board will meet in the near future for election of officers.

Currie J. Chrestensen, manager of this farmers' cooperative organization,

read the annual business report showing an increase in sales from \$177,-EETINGS of pure-bred Holstein 707.00 in 1926 to \$194,411.00 in 1927.

breeders seem larger and livelier Fruit sales dropped from \$49,951.00 to usual this year. Possibly the \$33,829.00 due to killing frosts last g market for surplus Holsteins spring and unusually unfavorable spring and unusually unfavorable weather conditions throughout the than usual this year. Possibly the \$33,829.00 due to killing frosts last rising market for surplus Holsteins spring and unusually unfavorable accounts in part for these healthy weather conditions throughout the growing season.

> The most noticeable increase was in the jump was from \$21,139.00 to \$33, 695.00. This would seem to indicate an increased interest in dairying in

It was decided by the stockholders along calf club lines. Glen Boyd, St. to declare a stock dividend this year, Louis, reported twenty boys in calf and for the coming five years, instead club work last year and a larger num- of the usual seven per cent cash diviber planning on getting in this season. dend in order to build the working In gazing about for something to capital up from \$12,000.00 to where it tackle, the boys espied a move on foot will meet demands made upon it by

MACOMB HERDS TEST HIGH

J. SEWELL is credited with the Macomb No. 1 Dairy Herd Improvement Association. This herd averaged 11,732 pounds milk and 490 pounds butter-fat and was retested during the year.

Only three herds produced less than 300 pounds butter-fat while all of the other members of the association had herds which averaged more than 300 pounds butter-fat production.

Good returns for the feed dollar invested was realized by these Macomb County dairymen and on account of the good results achieved, the membership is continuing the testing association with Morris Place conducting

JERSEYS LEAD IN LIVINGSTON

THE best results ever realized in Livingston County dairy herd improvement association work occurred during 1927 when twenty-six herds averaged 9,871 pounds milk and 388 pounds butter-fat. One herd of purebred Jerseys owned by Smith & Parker averaged 8,508 pounds milk and 501 pounds butter-fat for eighteen cows. This was the highest producing herd in the association.

Only three herds in the entire group of twenty-six dairymen averaged less than 300 pounds butter-fat production per herd. The herds owned by Armstrong Brothers, R. W. Darlington, R. H. Donaldson, and the Michigan State Sanitorium averaged more than 400 pounds butter-fat per cow.

Joseph Woolman, the cow tester, reported that special attention was given to balanced rations and proper feeding methods throughout the year. Splendid results of this kind are only possible when good feeding and care in selection of cows and breeding stock is practiced. This organization has finished five years record keeping and is continuing without interruption.

For Sale Pair four year old Belgian mares. Sound. Weight 3,300.

88 Kereford Cows

VAN S. BALDWIN, Eldon, lowa

For Sale REGISTERED SHORTHORN, five calves, one bull, two years, JUREN MURRA, Blanchard, Mich. Six miles east Blanchard.

Registered
Brown Swiss for sale, cows 10 and 11 yrs, old due in Feb. 2 bred heifers. Also bulls of serviceable age. A. A. FELDKAMP, Manchester, Mich.

Red Polled A few choice calves of for sale. ROYSTAN STOCK FARM, Will Cottle, West Branch, Mich.

WANTED—Dairy cows and heifers of all breeds, if you have 4 or more, write me. MERLE H. GREEN, Elsie, Mich.

HOGS

FOR SALE—Duroc Gilts of type and quality, bred to High Orion No. 2:5227. Also a few spring boars at right prices. Shipped C. O. D. on approval. W. E. BARTLEY, Alma, Mich.

DUROC SOWS

Sold at a sacrifice. Never a better time to start in the hog business. The longer the market stays down, the hog business. The longer the market stays down, the higher and faster the come back. We guarantee satisfaction. LAKEFIELD FARMS, Clarkston, Mich.

DUROC BRED GILTS

bred by and to State Fair Winners, good type and quality, sold at a sacrifice and satisfaction guaran-teed. E. P. HELLNER, R. 5, Ann Arbor, Mich.

DUROCS We have a few gilts, priced to sell. Correspondence or inspection invited. NORRIS STOCK FARMS, Casnovia, Mich.

O.I.C. HOGS on time Write for Hog Book Originators and most extensive breeders.

THE L. B. SILVER CO., Box 196, Salem, Ohio

Registered O. I. C. Fall Pigs best of breeding from prolific sows. Shipped on approval. H. J. HUDSON, R. 2, Romulus, Mich.

O. I. C's. Good last spring pigs, not akin also fall pigs, recorded free.

For Sale--Reg. O. I. C. April & May Pigs best of breeding. Shipped on approval. FRED W. KENNEDY & SONS, R. I, Chelsea, Mich.

Registered O.I.C. Gilts bred for April and May farrow. H. W.

Large Type Poland Chinas Fall pigs ready to ship, sired by my two great herd boars, L's, Big Wonder, by Siever's Smooth Wonder and Big Stratton by The Redeemer, and from my best sows. Priced reasonable W. E. LIVINGSTON. Parma, Mich.

Big Type Poland Chinas

Size plus quality and bred that way. Choice gilts bred to Redeemer's Son or The Robber's Son, for April farrow. Choice fall pigs, either sex. We specialize in herd foundation stock. WESLEY HILE, Ionia, Mich.

LARGE TYPE Poland China bred gilts, also G. TAYLOR, Belding, Michigan.

SHEEP

SHEEP Fine wool ewes, one load, load bred to Black Face rams, for April lambs. All young and good shearers, LINCOLN & BRADLEY, North Lewisburg, Ohio.

For Sale Two Registered Belgian Stallions, 3 yrs. old, sired by the great horse Rubis. The Belgian type and half brothers to Pervenche and Minetta De Rubis, Grand Champions at International. Inquire of J. E.SKEOCH, Grand Ledge, Mich., R. R. No. 5.

FOR SALE A few young Reg. Percheron stallions, also some Reg. and at the right price: E. A. ROHLFS, Akron, Michigan.

F OR SALE—Matched team, 7 & 8 yrs. old, weight 3,800 lbs. Sound. E. H. ROWE, Lyons, Mich. R. I, Portland phone 335 2 L 2 S.

FOR SALE Extra good black reg. Percheron Stallion, 20 mo. old. a ton prospect. L. B. STRUBLE & SON, Muir, Mich.

For Sale Several pairs of choice young heavy horses. Priced to sell at GREEN, Elsie; Mich.

Lake Side Dairy Dispersal

March 28, 1928. Sale starts at 12:30 Eastern Time.

35 Registered Holsteins 35

20 head of milking age. 40% have official records up to 31.5 lb. butter in 7 days. In C. T. A. work, herd averaged 515.29 lb. butter, 12,500 lb. milk in 3 consecutive years. 7 bulls whose dams have records up to 31.5

Estate of G. A. Weed and W. A. Schantz (Owners) Lake Odessa, Mich. FOR CATALOG WRITE W. A. SCHANTZ

AUCTION TUESDAY, APRIL 10, 1928, 1:00 P. M.

At the farm of Frank Staffen & Sons, three and three-quarters miles northeast of Amble or five and one-half miles southeast of Morley. Herd includes 31 fresh cows; 10 heifers, bred; 11 open heifers and three bulls; Lakeside King Joe, 351743, a son of Weedie Queen De Kol, a 35 lb. cow—free from T.B. and abortion. Cash or terms with bank reference. These cows are in yearly work in C. T. A.

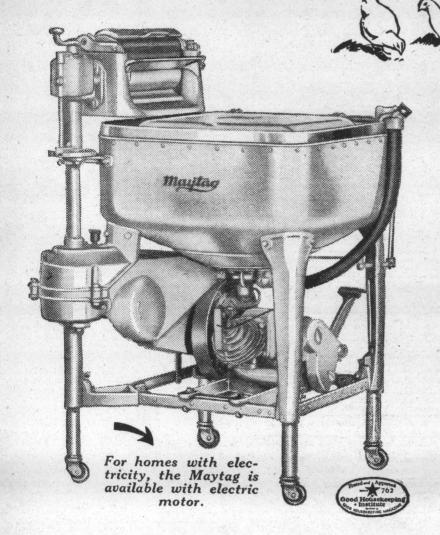
FRANK STAFFEN & SONS

R 2

HOWARD CITY, MICHIGAN

Hours SAVED by the Maytag Make MONEY

for the Farmwife



HE time saved with a Maytag, if spent on a good flock of chickens or in other profitable ways, will pay for the washer. Many a Maytag has been purchased with egg money.

It will positively surprise you to see how quickly a big washing can be done with the Maytag-it practically changes washday to washhour. The seamless, lifetime, cast-aluminum tub holds four gallons more than ordinary washers, and washes everything clean without hand-rubbing, even the grimiest work-

The new Maytag has added to this well-known speed and thoroughness with a Soft-Roller Water Remover that spares the buttons, an automatic feed board, and other advantages exclusive to the Maytag.

Gasoline Multi-Motor

For homes without electricity, the Maytag is equipped with the famous Maytag Gasoline Multi-Motor. It is a part of the washer-no belts to line up, compact as an electric motor, and a push of the foot lever starts it. This simple, dependable modern gasoline motor has brought washday happiness to thousands of farm homes.

ree trial washing

Do your next washing with a Maytag. There is no cost, no obligation, no influence other than the remarkable way in which it will wash for you, the speed with which it gets clothes clean, the remarkable freedom from hard work and long hours. Phone or write any Maytag dealer for an electric or a Multi-Motor Maytag. If it doesn't sell itself, don't

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W. H. O., Des Moines, Sunday Evenings, 7:15 to 7:45.
K. D. K. A., Pittsburgh, Tuesday and Wednesday evenings, 9:00 to 9:30.
W. B. A. P., Fort Worth, Monday evenings, 8:30 to 9:00.
K. E. X., Portland, Ore., Tuesday and Saturday evenings, 8:30 to 9:00.

Hours designated are Standard time at the Stations Named

Look for these features when you try the New Maytag

- Roller Water Remover, which swings to seven po-sitions and reverses. Does not crush buttons and has instant tension release which is the utmost in safety.
- -Non-breakable, heatretaining, life-lasting, cast-aluminum tub which cleans and empties itself.
- Quiet power-drive with precision-cut steel gears.
- washing done in an hour.
- -Tubfuls washed in 2 to 7 minutes.
- No hand-rubbing-even of
- cuffs and collars.

 Adjustable legs which raise or lower the tub to your height.
- Hinged cover which forms handy shelf when open.
 -Scientific construction tested to insure perfect per-
- formance and reliability.

 Beautiful lacquer finish, sanitary and enduring.
- -Lifetime washing service— the Maytag is the most durable washer made.

One out of every three washers sold is a Maytag.

Aluminum Washer