

# MICHIGAN FARMER

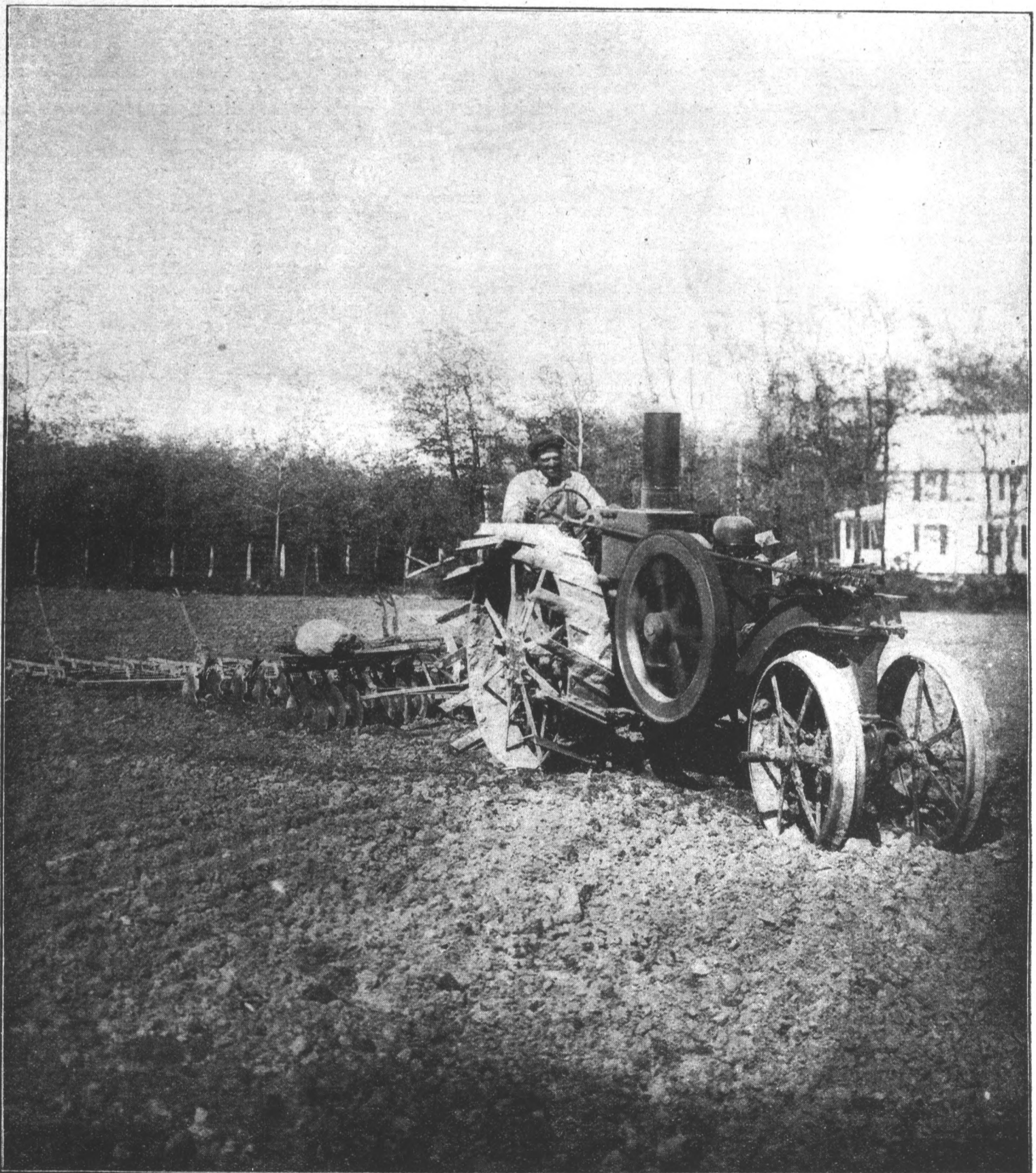
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DETROIT, MAY 14, 1921

## CURRENT COMMENT

### Choosing Work on the Farm

MANY thousands of young men will be graduating from the high schools of Michigan at the end of the present semester. Already these seniors are considering their future course—whether they will go on with their educational preparation for life at a higher institution of learning or whether they will immediately take up their life work. Every young man should have a general knowledge of the requirements of the more common occupations and professions that he may choose the line of activity best suited to his talents, and to that end we are here suggesting thoughts regarding the requirements, training and opportunities of the agriculturist.

There are few occupations requiring more all-round ability and good sense than does agriculture. To be a successful farmer one needs a body that will withstand the strain of heavy work, exposure and occasionally long hours of toil during seeding and harvest time. He must have eyes trained to see the hundreds of things which are necessary to be understood in order to make advancement in the business, and his hands must be accustomed to the use of all the ordinary tools and machinery. He should be a practical botanist, a soil chemist, a careful bacteriologist, a good plant and animal breeder, and a fair mechanic, and the more knowledge and skill he possesses along any of these lines the better able will he be to meet the various and complicated situations which are certain to present themselves. Modern agricultural competition and methods require further that to be successful at farming, a man should have the proper attitude toward his fellow farmers to cooperate with them in the marketing of products and in securing the raw materials needed on the farm.

The prospective farmer should prepare himself by securing both a practical training and a careful schooling in the various sciences relating to the production of crops and animal products. Where one has not had farm experience he had better hire himself out to some good farmer for a year or two before he ventures alone. It would be advisable to supplement this training with a course at an agricultural college. A careful study of the work done by the experiment station of the state in which he proposes to locate will prove a most excellent investment. He should cultivate the acquaintance of a

few successful farmers and reliable books treating of the lines of farming he desires to follow, and he should keep up with the current news on topics related to agriculture by reading one or more reliable farm journals.

The opportunities for the young man trained in agriculture cannot be painted quite as glowingly as has been the future of some other occupations and professions, but taken all in all it is more than probable that farmers as a class get as much or more out of life as do the members of any other class. While there are very few farmers who have amassed great fortunes from their farming business, an unusually large per cent of them have a competence above that enjoyed by the average city workers. Besides getting a good living and enjoying conditions that promote good health, the farmer manages his own affairs and can go and come more freely than can those employed in large industrial organizations. There is ample opportunity for doing community work along both commercial and social lines. The well-trained agriculturist has opportunity also for filling positions as teacher in high schools and colleges having agricultural courses, as experimenters in state experiment stations, as county agents, as investigators of the various branches of the department of agriculture, as agricultural writers, or as experts for some of the hundreds of industrial concerns requiring men with an intimate knowledge of farming. In fact, the person well-trained in agriculture would seem to have as broad a field of attractive positions from which to choose his life work as one trained along any other line.

### The Sugar Beet Situation

I N spite of the fact that the organized sugar beet growers of the state have apparently failed to make a "collective" contract for their 1921 crop with the sugar companies, their efforts in this direction have without doubt strengthened their cause while the manufacturers' refusal to deal with the growers collectively has weakened their position and placed them in an unenviable light before the great bar of public opinion. The growers' campaign was conducted this year without any of the turmoil, confusion and bitter feeling which resulted from last year's efforts toward collective bargaining, although it is probable that the dissension in the ranks of the growers resulting from last year's bitter strife enabled the sugar manufacturers to score a seeming victory over the growers' organization by securing sufficient individual contracts to insure the operation of their factories this year.

The method adopted by the growers' association was to send out contracts to sugar beet growers all over the state, asking them to make the association or the farm bureau their selling agents for the 1921 crop. While hundreds of growers complied with this request, others signed the individual contracts issued by the factories and enough new growers were apparently secured to enable the manufacturers to refuse to deal with the organization as a unit. As a result Manager Ackerman, of the growers' association, in a

statement issued last week, released the growers who had signed the collective bargaining contracts from their obligations.

This closes another chapter in the sugar beet controversy, but does not end the story. This is the day of collective bargaining, and with further constructive work along the line of this year's campaign by the association this principle is bound to win, and the sooner the sugar manufacturers recognize this fact the better it will be for them, and for the important sugar industry of the state.

### Will Solve Mutual Problems

THE Detroit Board of Commerce has established an agricultural division as a direct medium of contact between the people of the city of Detroit and their near-by farm neighbors. Its primary purpose is to aid these two groups in the study and solution of their mutual and related problems.

This division is directed by C. A. Bingham, successful organizer and former secretary of the State Farm Bureau, and J. P. Powers, former assistant secretary of the same organization. "The division essentially operates from the standpoint and viewpoint of the farm neighbors of Detroit. The Detroit Board of Commerce as an institution is representative of all the business within the city. With this agricultural division a part of the central board, the voice of the farmers in the Detroit area now may be heard in matters concerning their interests in the civic and business life of the city." With this object in view, and with experienced leaders directing the work, attractive possibilities are opened up for the development of a better mutual understanding between the city and farm folks of this section of the state. The Board of Commerce is to be congratulated for inaugurating this forward move in which the farmers of the Detroit area should meet them more than half way.

### Watching Production Problems

PROGRESS in agriculture is made much the same as a great railway system is built—each part being constructed more or less independently but with certain definite relations to the whole. The men who lay the ties and the tracks may not be any more conscious of the part they are playing in the whole scheme of transportation than are many scientific specialists who forget many practical things of farming in their devotion to their particular lines, or again, like some of the promoters of new ideas who endeavor to put across their "dope" on the basis that if their idea is put into effect that all problems will have been solved, and if not, all will be lost.

But the men who are actually running this farming business should keep in mind the whole farming system just as the railroad engineers need to keep in mind every factor and all the equipment necessary to the safety of those who patronize their lines. In other words, the farmer should not be stampeded by a single idea. While this better marketing movement is needed and

conditions demand it, there is apt to be some disappointment in the saving that will be effected thereby. After all, farmers are finding that their time and attention are bringing the largest returns when devoted to the larger problems of production. More fertile and better fitted soil, the best seeds, superior animals and the proper organization of the various activities of the farm are the farmer's big problem after all. He must not shirk his part in helping to bring about needed market reforms but at the same time he cannot forget that for himself as an individual the production problems require nine-tenths of his time and attention.

## News of the Week

Wednesday, May 4.

W. M. H. STEUART, of Michigan, was appointed director of census by President Harding.—Four hundred Greek "picture brides" land in New York to marry men whom they know only by a picture.—Auto plants use thirty-two per cent more workers in March than in February, the industry leading all in re-employment.—The emergency bill fixing admission of aliens to three per cent of each nationality resident in the United States passes the senate.—State Federation of Women's Clubs starts state-wide old clothes drive for relief of Armenia.

Thursday, May 5.

TWENTY-FIVE thousand clerks in government positions in Washington have been discharged during the present administration's economy drive.—Poles seize southern Silesia against the will of the allies.—Members of German cabinet resigns as the result of Secretary Hughes' note on reparations.—Duels are becoming a national sport for Hungarians.

Friday, May 6.

WARFARE between Turkish nationalists and Greeks in Asia Minor has developed into a vast guerrilla campaign.—A curfew ordinance requiring children under sixteen to be off the streets at 10.00 p. m. has gone into effect in Chicago.—Cantaloupe growers in California declare the crop will not reach eastern markets unless freight rates of a year ago are restored.—American soldiers who have married Europeans in the Rhineland district have been ordered home.

Saturday, May 7.

THE United States accepts the allies' invitation to send an unofficial representative to the council of ambassadors in Europe.—A grand jury quiz is made of the conduct of affairs at Marquette prison.—One-third of New York City's five million population was born abroad.—Bedford, Mass., board of education forbids teachers using cosmetics.—Viviani, French official, believes league of nations will be revised to suit the United States.—Michigan gives \$109,191 for Chinese aid.

Sunday, May 8.

PRESIDENT HARDING has various federal agencies studying freight rate situation. He believes lower rates are necessary to encourage trade revival.—"Uncle Joe" Cannon, holder of the record for service in congress, celebrates his eighty-fifth birthday "in the harness."—A bandit-proof mail car proves success on trip from New York to Chicago.—Germany and Soviet Russia make trade pact.—Department of agriculture statistics show that Michigan succeeds North Dakota as leader in rye production.

Monday, May 9.

HAITI demands that United States withdraw naval forces because of atrocities by American marines.—The British dock and railway employees refuse to handle coal sent into country to relieve shortage caused by miners' strike.—Polish insurgent movement gains force in upper Silesia.—Caruso has recovered sufficiently to sing in opera again.—United States Postoffice Department cannot pay bill of eight dollars due city of Owosso, Michigan, for water used at the postoffice, until new appropriation bill is passed by congress.—A large air cruiser with a capacity for fourteen persons makes trip from New York to Detroit.

Tuesday, May 10.

THE United States government lost \$1,200,000,000 in the operation of the railroads under federal control.—Senator Newberry resumes his seat in the United States Senate, after having his name cleared of election fraud charges.—Explosion of gas in sewers in the downtown district of Detroit caused manholes to blow up.

## Steer Feeding Day at M. A. C.

RESULT of the winter's work in steer feeding at M. A. C. will be reviewed by farmers and others interested, on May 17, which has been designated as visiting day. During the last six months three lots of steers have been on feed to determine the relative value of normal silage made from well-matured husking corn, and silage made from corn stover which is run through the cutter after the ears have been removed. The college breeding herd of beef cows, together with their calves, being fitted for show purposes at the International Live Stock Show, will be on exhibit. Another feature of the day will be a discussion of live stock investigation work of the experiment station for the coming year.—H.

# Reducing Cost of Beet Production

*More Efficient Methods Required Under Present Conditions.—By J. F. Cox*

**A**PPARENTLY most farmers have come to the conclusion that methods, which lead to increased yields per acre and thus lessen the cost per ton of beets or per bushel of beans, are the methods which will best meet present price conditions.

The possible profit from the sugar beet crop is a matter of great concern to sugar beet growers. Two factors will control returns—the price, and the cost of production. The price will ultimately be determined by the buyer and seller—the beet sugar manufacturers and the producer acting individually, or collectively through the beet growers' association of the farm bureau. The matter of cost of production is largely in the hands of the Divine weather maker and the growers, and the object of this article is to call attention to a few practices which tend to reduce the cost of production per ton.

In general, it may be taken as safe counsel to state that it will be safest for each individual to grow the crops which are best suited to his particular soil, climate and experience. For instance, men located on strong loam, silt loam, and well-drained clay loam soils in the Thumb district and south-east of the Saginaw Bay in central Michigan, will find sugar beets and beans dependable cash crops as in the past, but there is certainly nothing in present conditions to justify the expansion of these crops to areas where they are not particularly suited and where production is not well understood.

## The Seed-bed Largely Determines Beet Yields.

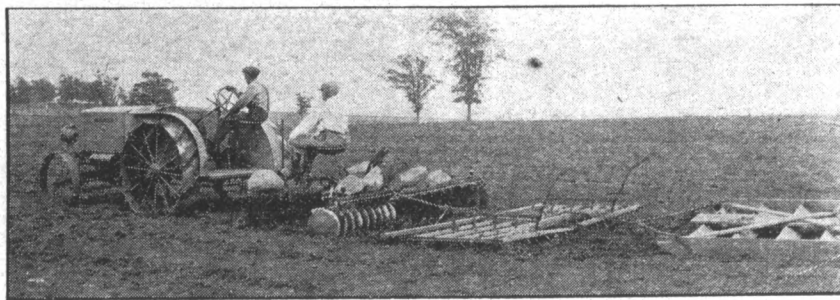
In preparing for most economical yields from sugar beets, it is particu-

larly important that the seed-bed be well fitted. The ground, whether fall-plowed or early spring-plowed, should be thoroughly fitted by discing and harrowing. Beets need a deep, finely worked seed-bed, well firmed in the lower part of the furrow slice, and with the surface in an excellent condition of tilth.

The cultipacker is an excellent tool to use in securing a well firmed seed-

bed supplemented with three hundred pounds of acid phosphate will pave the way for a good yield of beets.

Most Michigan soils are greatly benefited by applications of sugar beet lime, at the rate of from three to five tons per acre, applied from four to six years in the rotation. Not only is the yield of beets increased, but much better stands of clover and alfalfa are secured, thus increasing the content of



bed, though the roller, followed by the harrow, can be used to accomplish the same results. A thorough working of the seed-bed greatly lessens the cost of cultivation between the rows after the crop is planted, and goes far toward insuring a satisfactory yield.

When fitting the seed-bed is an excellent time to apply fertilizer. Far too little fertilizer is used by most beet growers. From three hundred to five hundred pounds of a fertilizer, high in phosphoric acid and potash, such as a 2-12-4 or 2-10-4, or three hundred pounds of straight sixteen per cent acid phosphate will give the most profitable returns with beets.

If ground has not been manured in the fall, a top-dressing of eight or ten tons, worked in when fitting the seed-

organic matter and nitrogen, and improving the fertility and condition of the soil.

Comparatively early plantings on a well-worked seed-bed give best results. Plantings should be begun as early in May as the seed-bed can be brought into condition, and is properly warmed up. The usual period ranges from May 5 to May 20. The usual rate of planting is fifteen pounds per acre, in rows twenty-two or twenty-four inches apart.

## Watch Blocking and Thinning.

Careful attention to blocking and thinning will go far toward insuring a good stand. The largest yields of beets are secured when plants are spaced from ten to twelve inches apart in the row.

Blocking begins when beet plants

are large enough for extra handling, or about the time when four leaves have developed. It is important that the strongest bunches, eight to ten inches apart, be left in blocking, and that in thinning the bunches, the most vigorous plants be left in place.

The workers engaged in blocking and thinning should be given careful attention to see that this work is properly done, since careless thinning may easily lessen the yield by several tons per acre.

The first cultivation should be given just before blocking and should come as close to the rows as possible without injuring the plants. The next cultivation should be given immediately after blocking and followed by careful hoeing, the dirt being drawn carefully around the plants without covering the crowns. Cultivation should be given at intervals of a week or ten days until the beets crowd the rows. Usually from four to six cultivations and two or three hoeings are necessary.

The first and second cultivations may be fairly deep between the rows, but later cultivations should be of shallow depth, not more than two or three inches, so as not to prune the feeding roots, which tend to interlace between the rows after thirty-five or forty days' growth.

The spring handling of the sugar beet crop is most important in determining yields. A thorough job of preparing the seed-bed will greatly lessen the cost of controlling weeds by later cultivations. Extra attention to the seed-bed and to blocking and thinning are practices which increase tonnage with comparatively little effort and expense.

# Warring Against the Cutworm

*This Destructive Pest Adds Much to the Cost of Corn and Other Crops*

By Earle W. Gage

**D**URING May and June remedies for the various destructive species of cutworms are urgently requested by farmers, market gardeners, fruit growers. Many of our common cutworms pass the winter in a partially grown condition and in spring as soon as young seedling plants appear above ground or when such plants as cabbages and cauliflowers are transplanted in the field, many are cut or eaten off near the surface of the ground, or a little below it. In many instances the young plant will be found to have been drawn partly into the ground.

Not all cutworms, however, feed in this manner; some climb up fruit trees or such plants as currants, gooseberries, tomatoes, etc., and feed upon the foliage or the fruit. In fact, when they are excessively abundant they will attack anything green and juicy. In years of abundance some kinds, such as the Variegated cutworm, the Spotted cutworm, and the Black Army cutworm, assume the marching habit, so characteristic of the true Army cutworm.

The poisoned bran remedy is the one which is now used most extensively for the destruction of cutworms generally. This is made by moistening the bran with sweetened water and then dusting in Paris green in the proportion of half a pound of Paris green to fifty pounds of bran. It is important that the bran be noticeably moistened (but not made into a mash or moistened too much to prevent its be-

ing crumbled through the fingers) so that when the poison is added, it will adhere to practically every particle. Two gallons of water, in which half a pound of sugar has been dissolved, is sufficient to moisten fifty pounds of bran. The mixture should be applied

actually eat it in preference to the growing vegetation.

If the mixture is put out during a warm day, it soon becomes dry and is not, of course, as attractive to the cutworms. In treating fields of hoed crops, such as beets, turnips, etc., a



Difficult to Secure an Even Stand of Corn where Cutworms Are Active.

thinly as soon as cutworm injury is noticed. It is important, too, that the mixture be scattered after sundown, so that it will be in the very best condition when the cutworms come out to feed at night. This material is very attractive to them and when they crawl about in search of food they will

simple method is to have a sack filled with the bran, hung about the neck and by walking between two rows, and using both hands, the mixture may be scattered along the row on either side. When cutworms are so numerous as to assume the walking habit, the poisoned bran may be spread just ahead

of their line of march. In gardens, where vegetables or flowering plants are to be protected, a small quantity of the material may be put around, but not touching each plant.

Fruit trees may be protected from climbing cutworms in the same manner, but the mixture should, of course, not be thrown in quantity against the base of the tree, otherwise injury may result from the possible burning effect of the Paris green. As an instance of the remarkable effectiveness of the poisoned bran, I would mention that on one occasion when it was used to protect young tobacco plants, about one plant were found seventeen, another eight, another nine, and so on.

A very satisfactory formula to use on the Variegated cutworm is as follows: Bran, twenty pounds; Paris green, one pound; molasses, two quarts; oranges or lemons, three; water, three and a half gallons.

In preparing the bran mash mix the bran and Paris green thoroughly in a wash tub while dry. Squeeze the juice of the oranges or lemons into the water and chop the remaining pulp and the peel into fine bits and add them to the water. Dissolve the molasses in the water and wet the bran and poison with the mixture, stirring at the same time so as to dampen the mash thoroughly.

Scatter the mixture in places where it will reach the greatest number of cutworms, spreading thin, and when thus spread there is no danger of birds, or live stock being poisoned.

# ACTIVITIES OF FARM BUREAUS

*Latest News From Local, State and National Organizations*

## THE MICHIGAN WOOL POOL SUCCESSFUL.

ALL the optimism which the State Farm Bureau has felt concerning the inauguration of the 1921 wool pool seems to be justified according to its reports of the opening of the pool and the first week's grading. The grading crew started May 2 at Mulliken in Eaton county and received 6,600 pounds of wool the first day. It then went to Eaton Rapids where the farmers brought in 11,000 pounds, almost double. At Charlotte on the third day the grading crew was overwhelmed. A second grader had to be secured from Lansing and a second warehouse had to be leased in which to store the wool. It took hard work from six a. m. to six p. m. on the part of the graders and their helpers to get all the work done.

From Charlotte the crew moved on to Bellevue in the same county where forty cars and wagons stood in line when the graders began work in the morning.

The large amount of wool being pooled is no greater a source of satisfaction to the farm bureau than is its observation that wool is of a much better quality this year than last. The wool department has maintained all along that the educational features of its marketing system were equal in value to its economic features. The farm bureau reports that a single year of selling wool according to its quality instead of in bulk as is done in sales to the ordinary wool buyer seems to have made its effect noticeable already. Donald Williams, extension specialist in sheep husbandry of M. A. C., who was present at Charlotte, says that the condition of the fleeces showed that the sheep had had better care during the winter, that chaffy necks were less in evidence and that a higher percentage of the wool was being thrown into the upper grades than last year. Quarter-blood and three-eighths blood wool predominated. There was only a very small amount of "rejects," much less than last year. Mr. Williams believes that one of the main reasons for this is that wool growers realize more than ever before the approximately large amount of their wool which was being graded "reject" and, knowing that they can cut down this amount by more careful methods of feeding and tending their flock, have profited by their experience in the 1920 wool pool.

The spirit of the wool growers seems to be undaunted. "If we are beat at this game now, we will lose it forever, but we are not going to get beat," is the expression of one of the leading growers of Eaton county. Practically all through the day from fifteen to thirty farmers stood about the grading table and watched which way their fleeces were thrown. Questions were frequent. As a demonstration each one of these "grading days" are veritable colleges.

There have been two grading crews in the field, one in Calhoun and Barry counties and the other in Lenawee county. The schedule of the grading days in the future is as follows:

Branch County.—May 16-17, Coldwater; May 18, Bronson; May 19, Union City; May 20, Quincy.

Monroe County.—May 20-21, Ida.

St. Joseph County.—May 23-24-25, Centerville; May 26-27, Colon.

Oakland County.—May 23-24, Holly; May 25-26-27, Oxford.

Practically all of the hundred warehouses which will ultimately be visited by the grading crews have already been selected but the exact dates for

most of them have not been decided upon. A few of the dates in June will be announced within a week.

The wool department reports that it made a sale of 50,000 pounds of fine clothing wool last week for which it received twenty-three cents per pound.

## A CATTLE INSPECTION TOUR.

ALEX MacVITTIE, county agent of Tuscola county, is arranging with the farmers of Tuscola and adjoining counties to take a three-day trip through a dozen counties inspecting the cattle and swine herds of some of the best farmers in that part of the state. It is planned that the tour shall begin on the morning of May 23 with approximately a hundred automobiles in line. They will proceed in a south-westerly direction through Flint, in-

specting the Frankenmuth herds and visiting the Crapo farms at Swartz Creek. Three stops are planned in Shiawassee county. The tourists expect to spend the first night in Lansing. On the following morning they will visit the Michigan Agricultural College and the State Farm Bureau and about noon start south, visiting the Livingston farm at Parma and the Probert Jersey Farm near Jackson. At Jackson the trail will turn eastward through Washtenaw and Oakland counties where a number of the best stock raisers will be visited. They will return by way of Lapeer. This is just one of a number of similar tours which it is understood are being planned in various parts of the state. The object is largely inspirational but the value of the tour from an educational standpoint has not been overlooked.

en them and usually at prices below the cost of production. A survey should be made to find the areas where lowest prices are being paid and organize those farmers first."

D. D. Aitkin, of the Holstein-Friesian Association, advocated an advertising campaign of dairy products which must be of a quality above reproach since consumers must want the goods or advertising will be fruitless.

The Twin City Milk Producers' Association was described by H. R. Leonard. This organization handles from 7,000,000 to 13,000,000 pounds of milk a month, boasts own creameries, condensaries and cheese factories for the handling of the surplus, has its own testers in the plants of the distributors, guarantees all accounts and a market at all times. Its handling charge in 1920 was 5.7 per cent, or 20.1 cents per hundred pounds.

Mr. J. D. Miller, representing the Dairymen's League Cooperative Association, told of the transformation of that organization to its present form with 93,000 members in six states, all tributary to New York City. The new organization has just begun to function. It has bargaining power, can name different prices for various uses, can blend the returns, pool them with differentials to various producers on the basis of quality of milk and freight to New York City.

W. J. Kittle, superintendent of the Milk Producers' Cooperative Marketing Company, of Chicago, told of the evolutions through which that organization had passed. It handles around 1,000,000 pounds of milk daily and is increasing its capital and acquiring condensing plants to care for the surplus milk. It looks forward to the time when it can say to its distributors, "ours and ours only."

Richard Pattee carried the history of the New England Producers' Association back to 1872 and stated that he believed the Boston milk producers were the first group to be thrown into jail for trying to get living prices for their product. The organization on a New England wide basis was first established in 1916. Members agree to sell through the association. Sales committees negotiate for the sale of products in the greater Boston markets while local sales committees are chosen for each local market branch in the smaller cities, but a representative of the central association is also a member of each local market committee. This organization is a bargaining association. The laws of New England require that facilities for actually handling milk must be legally separate but organizations of this sort are being formed by growers to make butter and cheese, and also the cooperative distribution of market milk is well on its way with two large concerns operating in Boston.

Albert S. Hall, representing the Oregon Dairymen's Cooperative League, and S. N. Ayres, manager of the California Dairymen's Association, were Pacific Coast representatives. Both of these organizations are state-wide in scope and in sections in which the whole milk interest is much less than the milk manufacturing interest. Both are built along the familiar California-Danish organization lines.

Mr. Hall described the five and a half year old iron-clad contracts and other internal details of the Oregon organization in its relations to the whole milk market, especially of Portland, its twenty-seven factories, its staff of experts, and its grading, standardization and advertising efforts, and incidentally its ultimate success in es-

(Continued on page 627).

## Dairymen Hold Conference

*Plans for Correlating Dairy Marketing Activities in a National Way Follow Call by the Farm Bureau*

MORE than two hundred representatives of milk producers' marketing organizations from twenty-five states met in Chicago on May 3-4, at the call of President James R. Howard, of the American Farm Bureau Federation to consider the cooperative marketing of milk and dairy products. At the close of five sessions packed full of meaty discussion the conference unanimously recommended that President Howard appoint eleven representatives of the dairy industry with the advice and consent of the National Milk Producers' Federation to study the various cooperative dairy marketing organizations and recommend plans for strengthening them wherever possible, for organizing the territory not now organized and for correlating the dairy products cooperative marketing activities in a national way.

Other resolutions recommended that the American Farm Bureau Federation appoint a dairy marketing specialist in its marketing department and that its information department undertake a milk producers' advertising and publicity campaign. The enactment of the Capper-Volstead bill enlarging the power of farmers' cooperative marketing associations, and the amendment of the bonded warehouse act to include dairy products were favored. Present freight rates were declared unbearable and the senate investigation of the railroad problem was approved. Legislation being pushed by vegetable oil interests furthering the manufacture of dairy substitutes and prohibition of the manufacture of "filled" milk was requested. Treatment equal to that accorded the products of the factory, recognition of the difference in cost of production between this and foreign competing countries and of high freight rates by rail compared with ocean rates were asked for in the revision of the tariff.

Because of the advanced state at which cooperative marketing of milk and dairy products has already arrived in many localities or sections, the meeting proved to be unusually fruitful as a means of exchanging experiences. Representatives of organizations from New England to California and Oregon, representing every type of producer of dairy products, described their methods and revealed the points of weakness and strength of their organization. Most of these were whole milk marketing organizations around large cities or those of medium size, but cheese and butter marketing or-

ganizations and state-wide organizations covering all kinds of dairy production were also represented. Finally the problem of unorganized territory was recognized as important for the sake of the unorganized producers themselves and also because of the influence which their methods of marketing have upon the efforts of organized producers to better their own condition.

In describing the origin of their organizations many of the representatives told the same story of arrogant dealers and distributors thoroughly organized, of unprofitable prices and oppressed dairymen. Many of them became active about 1916 to 1918 when conditions seemed to be at their worst. Older organizations were then reorganized on a more effective, business-like basis.

N. P. Hull, representing the Michigan Milk Producers' Association, described the growth of that organization from its origin as a means of obtaining a better price from the condensaries until it was asked to take charge of the Detroit district and the formation of the Detroit Milk Commission. Thus far the organization merely has had bargaining power, but Mr. Hull told of the plans to form a separate organization with capital stock of which the producers would hold at least forty per cent, to engage in the manufacture of dairy products and care for the surplus of whole milk in surplus periods of the year.

Mr. Hull stated that the farmers of Michigan were not yet ready to adopt the pooling idea. The organization has had so little opposition in accomplishing its purposes that it may possibly lack the cohesion which outside attacks usually beget.

Milo D. Campbell recounted the achievements of the National Milk Producers' Association and discussed the influence of unorganized territory upon organized producers. He stated that through organization milk producers had avoided tremendous losses; that for each dollar spent for organization in the last four years, fifty dollars had been saved. He stated that "prices for milk products cannot be maintained at living prices with organized banditry going on among unorganized producers just outside. Whole milk, butter, cheese, condensed and other milk products are in a chain in which one weak link affects the whole. Markets are largely regulated in the 'sag holes,' the unorganized milk areas where farmers take what is giv-

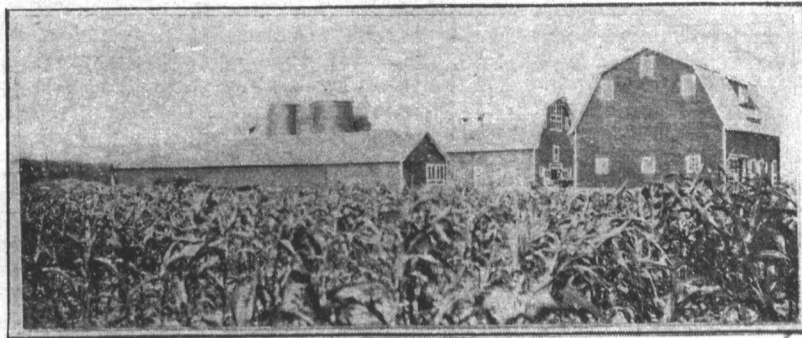
# A Corn Grower's Experience

*Or Things I Have Learned About Planting Corn*

By J. L. Justice

USUALLY along about ten days or two weeks before corn planting time somebody begins to get nervous and when a few nice days appear they get their ground ready and plant their corn. Once in a number of times the practice is productive of good results. But the feature I have noticed most in regard to the extra early plantings is that much of the corn fails to germinate if the weather is cool after planting and a thin stand results. On good corn ground thin stands are likely to be disappointing in yield, for there may be from one to three stalks missing to a hill, and if the soil is fertile enough to grow three stalks of corn we ought to have three or very close to that number on the average.

The only way to secure those three stalks to the hill is either to replant the whole field or go along each row and hand-plant the missing hills. After one has put in his crop he doesn't have much enthusiasm to do either. Many men simply let the thin stand go and let it produce what it will; but if the thin stand can be avoided or thickened somewhat the farmer is just that much ahead and the results of his year's work are more satisfying. While replanting is tedious work and presents difficulties in the way of cultivation, uneven-sized corn, late and early



Good Yields Follow Only the Good Stands.

ripening grain, some of which may be soft and immature, it has the advantage of holding up the yield and utilizing the available fertilizing elements in the soil.

When is the right time to plant corn? As to date, one cannot specify any time, for conditions of soil and temperature are so variable from year to year. If one is uncertain it is usually well to follow the majority of the best farmers in a community; when they begin to plant it will be pretty safe to follow suit. If one has a fairly early-maturing strain of corn there is

no need of hurrying to get it planted; it may pay handsomely to concentrate a little more on the preparation of a good seed-bed.

Corn we have planted after the middle of the regular season has done exceptionally well, largely because the soil has become pretty well warmed by that time and the seed germinates quickly and the corn comes up rapidly though not in a forced growth like it would if the days were hot.

Corn germinates quickly and a larger per cent will germinate in a warm seed-bed. We can help wonderfully

in warming the soil by following good tillage practices, and when we have done this the sunshine and air will do the rest. Soil that is made loose and open near the surface has a tendency to warm faster than soil left hard, packed and unstirred. The warm air above it is permitted to circulate through it and impart some of its warmth to the soil. The first warm rains are readily absorbed and give up some of their warmth to the soil also. Bacterial action and the decay of vegetable and all organic matter goes on more normally in the porous soil which adds that quality which hastens the growth of corn.

The poorer or more run-down the soil the more reason there is to make an ideal seed-bed. Every ounce of fertility must be utilized as made available. On a deep, rich, loamy soil we can grow our corn without half trying because the organic matter in it is such as to make it loose and ideal to work. But the poorer soil must be worked into a fine state by a harder course in order to yield up its plant food; and it pays. If we give our corn the benefit of a good seed-bed and use viable seed we may expect good results if we are a week or so late in getting it planted, perhaps better than if we are that much too early in planting.

## Shall I Grow Beans This Year?

*Mr. A. L. Bibbins of the Michigan Crop Improvement Association Collects Interesting Data for Farmers Considering This Question*

SHALL I grow beans again? That is a problem confronting a large number of Michigan farmers who for years have relied upon beans as a cash crop.

Throughout the United States and even in foreign countries the state of Michigan has been known for years as a great bean-producing section. Our yearly average of nearly a half million acres producing over four million bushels of beans has placed us up at the top of the list of bean-producing states. There are many who believe that this day has passed and that Michigan will no longer occupy such a foremost position. This opinion may be based upon not a few economic principles, however, we find that there are also facts which might lead one to conclude that Michigan will continue to furnish the world with three to four million bushels of choice beans.

### Cash Must Be Available.

This is as true with farming as with any other enterprise. Bean growers depend somewhat upon this crop to provide them with ready cash to operate the other phases of their business. It is an axiom of life that if something be removed a replacement is necessary. If those thousands of farmers who have depended upon beans as a source of revenue do not grow beans this year, what may they depend upon as a profitable substitute? That is an economic problem that thousands of Michigan farmers are studying.

### Bean Substitutes.

In considering a crop to take the place of beans, one must first consider at least two limiting factors, namely time of the year and the soil. It is

now spring, hence we cannot consider such fall sown crops as wheat and rye. A large percentage of the soil usually given over to bean growing is of a light sandy loam nature and cannot be depended upon to profitably produce sugar beets and barley, hence these spring-sown crops may be discarded, except perhaps on some bean land of darker and more fertile nature. If a substitute is to be made, such crops as corn, oats, buckwheat, potatoes, annual hay crops, etc., are left from which to make a choice.

A few bean growers have already put in part of their usual bean acreage to oats but the time is now so late that it is very doubtful whether much return would be received by planting oats now. Many of those growers who substituted oats for the beans reasoned that oats required less work than beans and if they are worth anything at all that they would at least break even on the deal.

In the bean growing district there is quite a large acreage of buckwheat produced, hence not a few heretofore bean men are considering this crop with the idea of getting a cash crop which may be cheaply grown.

Potatoes and corn may be grown on the great majority of our bean soils and in that the time of planting is still well ahead of us one may quite easily make such a substitution.

Among the annual hay crops we have millet, sudan grass, soy-beans, oats and peas, and oats and vetch. The cash value of these forage crops is usually not great and, in fact, those growers who have mentioned the proposition to the writer have not consid-

ered the direct sale value of these crops. The plan in mind is to utilize the annual hay crop for their own feed requirements, selling the clover, timothy, or alfalfa which they would ordinarily feed on the farm.

Only those heavier loams may be relied upon to produce oats and peas for hay, but most of the bean land should produce the oat and vetch combination. Very little bean land will profitably grow millet, sudan grass being much better suited to such soils.

Not a few bean growers are using soy-beans on part of their acreage. Some are growing the soys for seed and from all indications there is a good opportunity for a few, but if a large number were to follow this practice the market would be quickly oversupplied, with a resulting drop in price and possibly a financial loss. Soy-beans may be used for forage in the same manner as the other annual hay crops.

### Comparative Acreage Value.

The following data was obtained from the January, 1921, Michigan crop report showing an average value per acre for the years 1905 to 1920 inclusive, except for beans, which is an average of the seven years, 1914 to 1920, inclusive:

Crop.	Average Yield.	Average Price.	Average Value.
Corn .....	32.9	\$ .80	\$25.48
Oats .....	32.6	.46	14.96
Beans .....	9.7	4.08	36.53
Buckwheat .....	14.2	.84	11.26
Potatoes .....	89.	.68	57.55
Hay (tons) ..	1.31	14.15	18.00

The bean growers will quickly notice that the average price of \$4.08 is without a doubt far greater than one may expect for 1921 beans. The figures of

Mr. Church in the crop report show that in 1914 beans sold at \$2.02 with an average yield of 11.2 bushels per acre, making an average value per acre of \$22.62. Probably these figures more nearly correspond to the present condition than the average of the seven years, which included the war-time high prices. The same might be said of other crops mentioned above, corn, oats and potatoes being quoted at prices excessive of present-day quotations.

In 1910 with corn at fifty-three cents per bushel the average value per acre was \$17.17. The same year oats sold at thirty-five cents, totaling \$11.90 per acre. Thus it is seen that when lower prices prevail beans will give larger returns per acre than is received for oats, corn, etc., but not so in regard to potatoes. "Spuds" in sixteen years returned on an average of \$57.55 per acre, the lowest return being in 1906 when potatoes sold at thirty-four cents per bushel, giving an average of \$32.30 per acre.

Let us study the records made by hay to see what those who are considering the growing of annual hay crops in order to sell their clover, timothy, etc., for cash, may expect. We find that \$18 per acre is the average return at the price of \$14.15 per ton. The lowest per acre return quoted by Mr. Church was in 1905 when hay sold for \$7.70 per ton, yielding \$11.24 to the acre.

Perhaps the conditions existing in 1914 correspond more nearly to those of the present age. At that time hay sold for \$12 per ton, or \$15.36 to the average acre. Again we find that the



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## The Man for The Job

Conforming with the above plan it was readily seen that the success of the idea depended upon the man chosen to put it over. **COLONEL AUGUSTUS H. GANSSER** was selected to take full charge of developments, being chosen because of his ability and previous experience in similar work.

Colonel Gansser has worked out the idea of  
**A MOTOR TROOP FOR EACH COMMUNITY**  
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**A MOTOR CORPS FOR EACH STATE.**

The local units are administrative. County and state units are tactical only. Local troops (clubs) will have the following officers:

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Col. A. H. Gansser, General Mgr., Bay City, Mich.

average bean grower is receiving a larger financial return per acre than is he who has depended on the other spring crops for cash, that is, except potatoes.

### Cost of Production and Market Factors.

One should go further with his study of this problem and take into consideration the cost of production. Oats and hay bring less return than beans but they do not require as much labor to produce them. The cost of production of corn will not vary so much from beans but we know that spraying and other operations increase the cost of growing potatoes until the financial returns received per acre for potatoes does not look as large as the tables would indicate.

What about the market? Another perplexing problem. Oats and corn are worth very little. The Michigan farmer cannot hope to compete with the corn belt farmer in raising and marketing corn, hence it would appear that the bean grower of the past might better depend upon beans for a cash crop than to take up corn, especially when corn can be raised in Argentina and laid down in New York at a lower figure than freight cost is from Chicago to New York.

If the bean grower raises potatoes as a substitute he will meet the competition of the already established potato growers who are now "up against it" in trying to break even on the 1920 crop.

A few bean men have indicated that they would divide the acreage and grow one-half each of potatoes and beans and thus not have all their eggs in the same basket.

### What About Alfalfa?

At least one Michigan bean grower is of the opinion that alfalfa is about the best crop to put on bean land. The arguments in favor of this plan are that there would be an improvement of the land that would add to the production and soil value of the farm and that alfalfa may be utilized as both a feed and cash crop. One man stated, "on a three-year average I can raise fifteen bushels of beans to the acre which, selling at \$3.00 per hundred pounds, returns in cash \$27 to the acre per year, or a total of \$81 for the period of three years."

"I can put in the alfalfa and during the first year while the crop is establishing itself there is no revenue received but during the next two years from the same land I would expect to harvest four tons of hay per acre per year, or altogether, eight tons of alfalfa hay, which allowing \$12 per ton would net me \$96 to the acre. I believe that alfalfa may be produced at a lower cost than beans, hence the alfalfa business is even more profitable than the above figures would indicate, especially when you consider that I would expect to pasture my alfalfa some and in the end would turn under a large amount of valuable plant food to enrich my land. Beans never have done that but, in fact, the reverse is more true. We sell the beans from the farm thereby taking considerable plant food from the land. The pods and vines are fed to the sheep, usually with considerable loss of manure.

"No—I need a cash crop but it will not be twenty acres of beans this year. I shall put in ten acres of beans, expecting more in return from them than I would from oats, corn, buckwheat or any other cash crop that I might raise. The other ten acres is going into **ALFALFA**—spelled in capital letters.

"Perhaps next year will find that ten more acres will go into alfalfa and if so that ends the Boston Baked Bean business on this farm; however, I feel my future cash crop will be ten acres of beans and ten of alfalfa. This is a point that perhaps many could well consider."

If one is only a ten-bushel per acre bean grower he must receive a good price for his crop if he is to make a

profit on the crop; however, if he is like quite a few and harvests twenty or more bushels to the acre he is not so dependent upon the higher prices. If a man receives \$3.00 per hundred pounds for fifteen bushels of his beans, he who produces twenty bushels receives returns that would make his crop worth, comparatively speaking, \$4.00 per hundred pounds, while the twenty-five bushel producer receives \$5.00 per hundred pounds.

The overhead expense of preparation of the seed-bed, land rental, investment in implements, seed, etc., is as much for ten to fifteen bushel crop as for a twenty to thirty bushel yield, so we should expend every effort to produce the maximum yield and thus lower the productive cost of a bushel which then may be profitably marketed even at a lower price.

### OTHER STATES USE MICHIGAN POTATOES.

**C**ERTIFIED potato seed grown in Michigan is being planted in four other states—Indiana, Illinois, Ohio and Iowa—through a cooperative demonstration plan backed by the Michigan Potato Growers' Exchange, M. A. C., and the Grand Rapids & Indiana Railroad, with the idea of developing an out-of-state market for this seed.

Four carloads of stock will be used and one hundred demonstrations will be made in Indiana and Illinois. Seed from ten of the most successful growers in Michigan will be distributed. Plantings are in charge of the county agents in the four states named. Besides opening up market possibilities, the demonstrations are expected to afford a basis of comparison of the Michigan product with the best seed grown elsewhere.—H.

### PROGRESS OF PACKER CONTROL BILLS.

**E**XTENSIVE hearings have been in progress before the house committee on agriculture, on packer control legislation. The Haugen bill, similar to the bill reported out by the house committee last session, is under consideration with some prospects that it may be reported out with a few changes. The bill places the administration of the packers under the secretary of agriculture and of the stock yards under the interstate commerce commission.

Representative Sidney Anderson, of Minnesota, proposes an amendment providing that the federal law shall not supercede state authority to control packing houses and stock yards within the state. Minnesota, which is foremost in farm cooperation, has exceptionally well managed state controlled stock yards at South St. Paul, and it is working so well that Minnesota people do not want any interference by the federal government in the management of their stock yards. R. J. Wells, supervisor of the state public stock yards of Minnesota, said that in Minnesota there were between five hundred and six hundred cooperative associations of live stock breeders and shippers. The weighing in the yards is all done under state inspection, and last year more than 4,271,000 animals were weighed in the yards without a complaint.

In discussing the Haugen bill Dr. T. C. Atkeson said he could see no reason why there should be two administration factors. If he were writing the bill he would substitute secretary of agriculture for interstate commerce commission, placing the control of both yards and packers under the department of agriculture.

The American Farm Bureau Federation has drafted a bill which differs from the Haugen bill in that the authority to enforce the law and regulations is placed with the secretary of agriculture for both the packing plants and the stock yards.

## Shooting New Ideas

### Experiment Station Wrestles with Forage Crop Questions

**D**URING the past two years a number of tests with various forage crops have been conducted by the farm crops section of the Michigan Experiment Station. Some of the results obtained, together with a few statements concerning the new projects now being started are discussed in the following paragraphs.

#### Soy-bean Tests.

The outstanding superiority of well-adapted varieties, such as the Manchou, Itô San, Black Eyebrow and Early Brown, over varieties that are not well adapted to Michigan conditions, has been clearly demonstrated. In a two-year average the well-adapted varieties listed above have yielded from two to two and four-tenths tons of air-dry hay per acre, while the varieties not well adapted, such as Mammoth Yellow and Ogema, have yielded less than three-quarters of a ton of air-dry hay per acre. This difference is great enough to make either success or failure, depending upon the variety used. Seed of both the adapted and the unadapted varieties has been offered freely to the farmers of Michigan and the farmer should be careful which he chooses.

Various times, rates and methods of sowing soy-beans have also been made, and it has been found that for hay production under present conditions they should be sown at the rate of thirty-five pounds of seed per acre in rows twenty-eight inches apart, the latter part of May. Bulletin No. 100 on soy-beans may be secured from the director of the experiment station, East Lansing, Michigan.

#### Short Season or Emergency Hay Crops.

Owing to the frequent failure of clover it is oftentimes necessary to make use of crops from which a crop of hay may be secured the first season. A large number of these crops have been tested. When possible it is advisable to make use of leguminous crop or mixtures containing legumes.

#### Oats and Peas.

Quite satisfactory yields have been secured by sowing a mixture of one bushel of oats and one bushel of field peas at the rate of two and one-fourth bushels per acre during April. This mixture yielded one and three-fourths tons of hay per acre, while oats alone yielded one ton per acre. This mixture is quite well adapted to the loamy soils of northern Michigan.

#### Oats and Vetch.

A yield of two tons per acre was secured by sowing two bushels of oats and twenty pounds of hairy vetch seed during April. It is recommended in sections where hairy vetch has proven adaptable.

#### Millets.

The Golden, Hungarian and Common are the most important millets and yielded in the order named with but little difference in yield of Golden and Hungarian. The Hungarian, however, is better adapted to low, moist soils. A yield of two and one-fourth tons of hay was secured by sowing Golden millet at the rate of twenty-five pounds of seed per acre the first week in June.

#### Sudan Grass.

This crop has given a slightly higher yield of hay per acre than the millets, and while a little coarser it is considered a safer feed for horses and has about the same feeding value as timothy.

It is from a week to ten days later in maturing than Golden millet and not adapted as far north. The best yields were secured by sowing twenty-four pounds of seed per acre the first of June. Circular No. 42 on Short Season Hay Crops, is available for free distribution by the Michigan Experiment Station.

#### Alfalfa Tests.

Early alfalfa tests have shown the superior winter hardiness of Grimm and other variegated strains, such as Baltic and Cossack. Since Michigan produces only a very small amount of the seed sown in the state each season it is necessary to sow large quantities of seed that is grown in other states as well as foreign countries. To secure complete information concerning the adaptability of seed produced outside of the state samples of both the common and variegated strains have been secured from all seed-producing states as well as from foreign countries from which seed is imported into the United States. These samples have been sown on carefully checked plots on the experiment station field and are open to the inspection of Michigan farmers.

#### Red or June Clover Tests.

Preliminary tests have shown the superiority of Michigan-grown red or June clover seed for Michigan conditions. However, since large quantities of red clover seed have been imported into the United States, especially from southern France and Italy, it has been deemed advisable to secure samples from all available sources and seed in plots similar to the alfalfa plots. The preliminary tests indicated that much of the red clover seed from southern Europe was less winter-hardy and more susceptible to anthracnose than Michigan-grown seed.

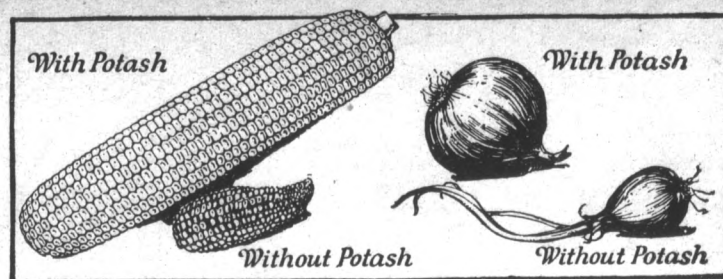
#### Sweet Clover Investigations.

Hubam.—This new annual strain of sweet clover is being tested with oats, barley, wheat and rye as companion crops as well as being sown alone at different times and rates. Seed secured from Alabama is also being compared with Michigan-grown Hubam. The test will undoubtedly be of great value to the farmers of the state because of the interest shown in this new crop.

White Biennial Sweet Clover.—This is the strain ordinarily grown in this state. Since the yields of hay and seed are influenced greatly by the time of harvesting, the height of cutting and the stage of growth of the plant, tests are being conducted along these lines.

#### Field Pea Tests.

Variety testing of both forage and seed production is being started this spring. The office of forage crop investigation of the United States Department of Agriculture is cooperating in this test and has supplied seed of nearly one hundred of the most important varieties. Seed has also been secured from various commercial sources and from county agents. A similar test is being conducted at the experiment station in the upper peninsula under the direction of Mr. G. W. Putnam. Michigan is one of the largest producers of field pea seed and is called upon to furnish large quantities of seed for planting in other states. More complete information concerning the adaptability and purity of varieties will unquestionably be of value to the farmers of this state.—C. R. M.



## Potash for Swamp Land

**D**OES the corn grown on your swamp or muck land look like the large ear or like the small one? The small one shows the kind of corn produced on potash hungry muck land. When 100 to 200 lbs. per acre of Muriate of Potash, or 400 to 800 lbs. of Kainit, are broadcasted on potash hungry muck, full yields of sound corn are produced.

For onions, on such lands, 100 to 200 lbs. per acre of Sulfate of Potash is the right amount to produce full yields of sound onions that ripen normally and keep well.

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The Nitrate Agencies Co.,	85 Water St., N. Y.
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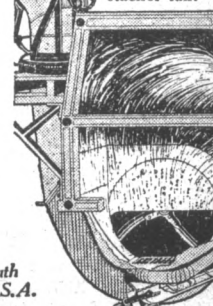
**T**HE Grain-Saving Wind Stacker saves one to three per cent more grain, according to tests made under ideal threshing conditions. This is not the ordinary wind stacker but the improved Wind Stacker with the grain trap which catches the grain and unthreshed heads that otherwise are wasted by the threshing machine—blown to the stack and lost—due to faulty adjustments of sieves, improper regulation of blast, undue speed variations, careless feeding, unfavorable weather, etc.

Leading manufacturers of threshing machines in the United States and Canada have adopted this stacker. Many supply it exclusively. Others can supply it if you demand it and insist on having it. Get every dollar's worth from your grain crop, which costs you so much labor and expense to produce. Specify The Grain-Saving Wind Stacker on the separator you buy or hire this year. Accept no other! Ask your dealer or any threshing machine agent.

The Grain-Saving Wind Stacker originated with  
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Partial View—  
looking into hopper, showing grain trap near stacker fan.



# The GRAIN-SAVING Wind Stacker



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With a Colt plant on your place, you can make the finest fuel for hot-plates or flatirons. You can make artificial sunlight that will make your place a beacon of cheer in the gloom of moonless night, a veritable oasis of sunshine in the desert of darkness.

A Colt plant will give you added prestige and standing in your community. Your farm will be pointed out as one of the show-places of the vicinity. Your neighbors will accord you that consideration that invariably attaches to the progressive agriculturist.

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## Our Service Department

### RIGHTS OF LESSEE OF FARM AGAINST BUYER.

I bought a farm last December, not knowing it was leased until March. The lease gives tenant the right to take all dead and down timber in the woods. There are a good many large trees blown out by the roots but still on the stump which tenant expects to cut. If he takes them, have I any claim against him or against the man from whom I bought the farm? I have a warranty deed, and according to the transaction was to have immediate possession.—O. T.

The possession of the lessee is notice to all persons purchasing any interest in the land of his rights. What rights he had against the seller he has against the buyer. The warranty gives the buyer his remedy against the seller.—J. R. R.

### RIGHTS UNDER LAND CONTRACT.

A bought a farm of B on contract. The down payment A made would exceed three years' cash rent. A is unable to meet payment due the first year. Is there any lawful way that B can get possession of farm again until A has stayed there a sufficient length of time for rent to equal payment? Has A the lawful right to work the farm another year? Would B be obliged to accept payments if tendered second year? Would A have to make up deficiencies of first year later, in order to have contract good? Having failed to make payment or pay taxes first year, how long can A remain and work farm, providing he makes no attempt to meet any subsequent payments? Could A rent farm to someone else under conditions in last question?—W. B. M.

One who has purchased land on contract must perform his covenants if he would maintain his rights. Ordinarily the contract provides for a forfeiture on failure to make payments; and if it does not, still the statute provides how the seller may recover possession by summary proceedings in case of such default; and such proceedings require only about a month to six weeks. The statute also provides that the buyer who is in default for non-payment of installments may be reinstated by making the payment and costs within thirty days after judgment for recovery by the seller for the default of the buyer. The buyer may continue making payments and so preserve his rights until his rights have been foreclosed as above stated. Such redemption can be made only by making up all back payments. The buyer may rent the farm to another so long as he is not in default, or after till he is foreclosed.—J. R. R.

### SWEET CLOVER QUESTIONS.

Would sweet clover have a tendency to eradicate milkweed and quack grass? How long after planting before a crop can be cut for hay under normal conditions? How early should it be sown, and how much seed per acre? K. C. Y.

While sweet clover makes quite a rank growth after once becoming established, it is not a very good crop to combat weeds, because of the very slow growth made where first seeded. If field is badly infested with quack-grass, would suggest thorough harrowing with the spring-tooth harrow at least once a week if weather conditions permit, until late May or early June, and then planting to a clean cultivated crop.

Under favorable conditions, a crop of hay may be secured from sweet clover the first season. The seed may be sown with oats or barley. If the grain drill is not provided with a grass seed-er attachment, the sweet clover may be seeded broadcast after the oats or

barley, and covered lightly with spike-tooth harrow. Would recommend from twelve to fifteen pounds of scarified white biennial sweet clover seed per acre.—C. R. M.

### RUPTURED OVIDUCT.

We have a hen which is apparently healthy, except that she walks with head up and tail dragging the ground; she has been that way for several weeks. She eats well, has nice red comb, but does not lay. It seems hard for her to walk. Can you tell me what ails her, the cause and remedy?—A. V.

When a laying hen has appeared healthy and then walks with her tail on the ground, often described as penguin-fashion, it is a sign that the oviduct is ruptured. An autopsy may find yolks of eggs in the abdominal cavity. There is no cure for a hen in that condition, and she might as well be killed when the condition is observed, as she will be of little practical value.

### FRUIT TREES ALONG THE ROAD.

I would like to know whether I own an apple tree that is half way between my fence and a public road?—H. R. S.

All trees and crops growing on the land in the highway belong to the person owning the land on which they grow, which is the abutting owner. The public has merely the use of the land for highway purposes, the rest of the title is in the abutting owner.—J. R. R.

### ADVERTISING STRAYS.

Does one have to advertise stray poultry the same as live stock if found on their premises?—L. F.

The statute forbidding stock to run at large extends only to cattle, horses, sheep and swine (Comp. Laws Sec. 7285); and the statute authorizing any freeholder to take up any stray extends only to horses, mules, asses, cattle, sheep and swine (Comp. Laws Sec. 7447); but another statute requires the finder of lost goods and knowing the owner, to give him notice, and if the owner is not known and the value is \$3.00, to notify the town clerk and pay a fee of twenty-five cents for entry (Comp. Laws Sec. 7445).—J. R. R.

### LIABILITY FOR LOSS OF PASTURED CATTLE.

Would like to get information as to the law in a case like the following: Last spring I sent three heifers out to pasture, paying the owner of the land three dollars per month. In the fall the owner of the pasture called me up and told me the heifers were at his barnyard. I immediately called for them, but found only two there. The owner of the land said the third was out at the pasture and I could go and get it. I went several times but could not find it. Lately he called me up and said he found it dead. Apparently it sunk in a mud hole and could not get out. He charged me in full for the pasture of the three. Who stands to lose?—O. J.

One receiving cattle to pasture is not an insurer of their safety, but he is bound to exercise that degree of care which an ordinarily prudent man exercises in dealing with his own property. In order to hold him liable the owner of the stock must prove, for the burden is on him, that the injury was due to the negligence of the defendant. The price paid for the pasturage is not material, unless they were pastured free, which would reduce the degree of care required to that of a gratuitous bailee—liability only for gross negligence. At all events the party taking the cattle to pasture is entitled to pay for their keep for the time each animal was pasturing.—J. R. R.

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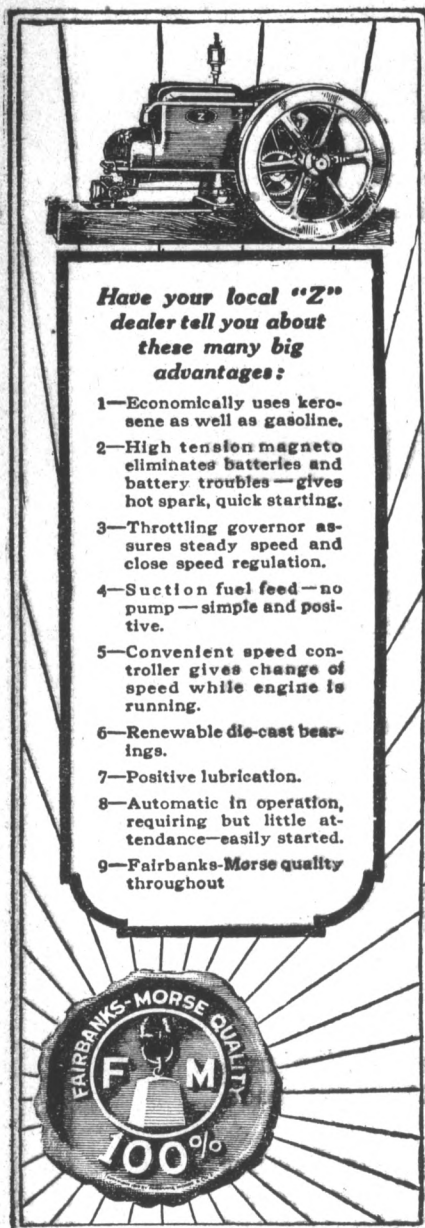
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## News From Cloverland

By L. A. Chase

### ADVANTAGES OF LIME.

MR. KUNZE'S edition of the Sault Ste. Marie News, has a little preachment this week on the advantages of liming the soil, pointing out that it corrects acidity, improves the condition of heavy soils, supplies lime to growing plants and helps to make available other elements in the soil, and that it stimulates the decomposition of organic matter in the soil. Chippewa farmers are reported to be increasing their use of lime, which is not a difficult matter for them, in view of the fact that abundant original sources of the material lie close at hand, both in the quarries along the Duluth, South Shore & Atlantic Railway and the Soo Line, and also from the waste at the Carbide Plant in Sault Ste. Marie. Much commercial fertilizer is also being ordered by Chippewa farmers this spring.

### COUNTY AGENT ACTIVITY IN CLOVERLAND.

MR. J. W. WESTON, the assistant state leader of county agents in the upper peninsula has recently prepared a narrative report of work in this section during the past winter months. Mr. Weston informs us that the organization of the Michigan State Farm Bureau campaign was completed by the solicitors in November, 1920. During the winter months following, the local organizations were rounded out and completed, with the establishing of a solid connection between the locals and their members both on the basis of loyalty and business relations. One telephone company has been organized in the rural section of the district, and prospects are good for an electric power and light company.

Under the head of soil improvement, the county agents have promoted the use of commercial fertilizer and of lime where farmers have had difficulty in getting good stands of clover. About eight cars of lime have been ordered for spring delivery, and twelve cars of commercial fertilizer, and arrangements have been made for demonstrations on the use of manures, lime and fertilizer, and for drainage demonstrations.

Mr. Weston thinks this an excellent time to promote land-clearing, while labor is cheap, and he reports shipments of considerable quantities of TNT, of which some six carloads were ordered last winter in addition to what was ordered last fall. This, Mr. Weston states, represents a saving of about \$30,000 as compared with dynamite.

The treatment of cereal grains for smut has become a regular feature of farm operations in this territory, says Mr. Weston, and the agents are continuing to send out literature and information to the "doubting Thomases" who question the utility of this procedure.

Additional demonstrations of sunflower ensilage are to be put on this year with a campaign for more silos. In regard to sunflower ensilage, Mr. Weston quotes the results of tests made at the Emblegaard Dairy near Marquette. The analysis stood thus: Moisture, 75.8; protein, 2.12; fat, .81; crude fibre, 8.15; nitrogen-free extract, 11.18; ash, 1.94. These results, Mr. Weston observes, compare very favorably with analyses of mature corn in the corn-growing states; and is much superior to the immature corn grown in the upper peninsula; while twice or thrice the volume of feed is produced per acre.

Much of the grain seeds that will be

planted in upper Michigan this spring have been ordered through the State Farm Bureau. Black rust has affected spring wheat during the past two years and not much planting of this crop is expected in Mr. Weston's territory this season. He reports a considerable increase in the growing of barley as a substitute for corn here. There is a noticeable increase in the demand of farmers here for clean and improved seeds. County fair premiums are given credit for promoting improvement both in regard to farm crops and live stock in this section.

Several county agents, having been chosen secretaries of the county fair associations in their counties, are now in a better position to further this good work. The promotion of a better agriculture is the underlying motive in this arrangement, it is stated.

### URGES THE GROWING OF SUGAR BEETS.

THE Menominee County Journal of Stephenson urges the advantage of sugar beets as a cash crop for the farmers of its territory, pointing out that if farmers in other states can find it profitable to raise beets at \$6.00 per ton on high-priced land, \$7.00 a ton should make it worth while on our cheaper lands.

### CROP EXPERIMENTER RECOMMENDS FERTILIZERS.

MR. G. W. PUTNAM, crop experimenter at the Chatham Experiment Station of the Michigan Agricultural College, has been conducting a series of farmers' institute meetings in Baraga county. He is reported to have expressed a belief, that upper peninsula farmers should be growing their own seeds. "Most of our soils are supplied with sufficient supply of potash," he said, "and it is not usually advisable to sow this except on potatoes or root crops, when a high-grade commercial fertilizer such as a 2-8-6 may be used. Some experiments were run last year at the experiment station," he said, "on the use of a complete fertilizer on potatoes and an average increase of seventy-five bushels per acre was received where the fertilizer was used."

### TIMBER RESERVES.

UPPER Peninsula newspapers have widely quoted the estimates of standing timber, recently given out by Mr. Rollin Payne, chief timber examiner of the state tax commission. Mr. Payne's estimate for standing saw timber in the fifteen counties of the upper peninsula is put at 26,207,875,000 board feet, which is much under that of other sources of information, such as the forest service of the United States. We have for a long time recognized, however, that the files of the state tax commission should contain the most exact data relating to our timber resources, and if Mr. Payne's estimates are based upon the records in the Lansing office, they should be close to the mark, as such things go. It would have been well if, years ago these tax commission records had been gone over by agents of the tax commission or the public domain commission with a view to determine just where we are at in regard to our forest resources. Mr. Payne's table credits Gogebic county with the most present standing timber in upper Michigan—2,390,000,000 feet, with Ontonagon next with its 3,163,500,000 feet, and Marquette with 3,000,000,000. Chippewa has 2,720,000,000 feet, and Iron 2,062,500,000. This looks all right.

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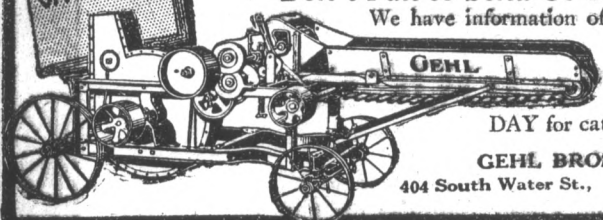
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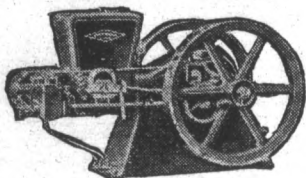
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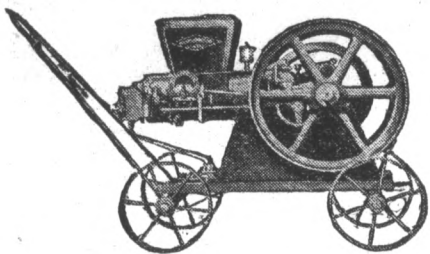
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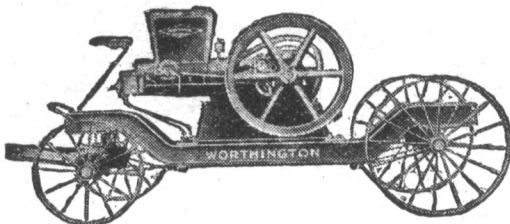
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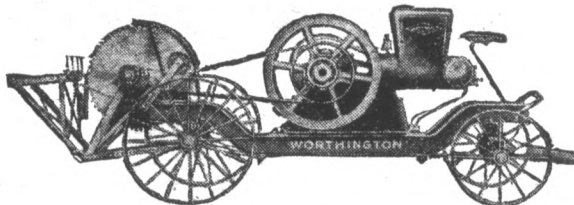
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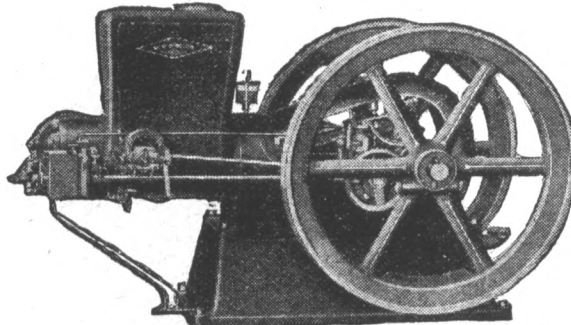
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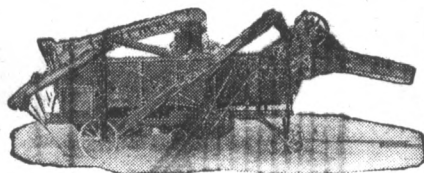
Usually some turpentine is used in the paint for the first coat and colored paint is made by adding tinting colors ground in oil.

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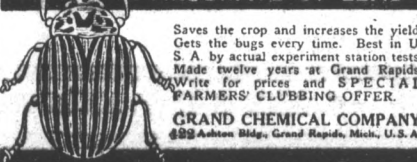
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## Strawberry Black Root

By G. H. Coons

My strawberry plants seem to be dying here and there over the patch. I noticed a row or two die last summer. What is it and what can I do for it?  
Berrien Co. F. C.

For many years strawberry growers have complained of a disease called black root which has in many cases been serious enough to destroy whole patches.

Fletcher, in his book on strawberry growing, mentions the disease and suggests that bacteria are responsible. No investigation has been made on the disease.

It is characteristic of this disease that the roots turn black and the cortex (outer part) of the root loosens and peels readily from the center of the root. This core is not discolored. Similarly the crown of the plant may be blackened, but the heart is sound. Plants with affected roots frequently bear a crop, only to wilt and die with the warm summer weather.

The only fungus associated constantly with diseased plants is the fungus Rhizoctonia, well known in its attacks on other plants, such as potato, beans, geranium, etc. The diseased tissue is heavily infested with threads of this fungus. It is characteristic of the black scurf fungus, which attacks such a wide range of hosts, to cause a disorder of the cortex and to attack the underground parts. It would seem that Rhizoctonia might be an important factor in black root.

Black root is worst where strawberries follow strawberries closely, as in garden soils and in very rich soil. It seems to be especially common with nursery plants which are delayed in transplanting. In seasons where the spring is excessively wet, new plantings suffer. Flooded soils, poorly drained soils, soils of fine texture which compact readily, show a high amount of the root rot. Soils which tend to be cold will show a higher amount of infection. These conditions under which black root is most serious are exactly the ones which favor Rhizoctonia. This is another bit of evidence as to the cause of the trouble.

It is a well known fact that strawberries winter-kill when not properly mulched. Much of the suspected black root is probably winter injury. Winter injury with small plants like strawber-

ries is apt to be most serious in a year when the snow covering is scanty, and alternate freezings and thawings occur. Killing out of an entire patch in an exposed location would probably best be attributed to winter injury, since a fungous disease is more apt to be irregularly distributed or to occur in patches in a field.

Control measures are difficult to outline for such a commonly occurring disease which presumably is caused by the fungus Rhizoctonia. Rhizoctonia occurs in virgin soils and is especially abundant in soils devoted to root crops. Grain crops seem to reduce the Rhizoctonia infestation of soils. The utilization of soils which are otherwise suitable and which have previously borne grain crops is suggested for projected strawberry plantings. Certainly, strawberries should not follow strawberries. The choice of plants with sound, bright roots instead of plants with part of the roots blackened, is certainly to be advised. Some day a root treatment may be devised, but none is known now. These measures, along with general ones, protection of the plants from winter injury, the use of proper mulch and adequate drainage are all that can be suggested.

For a patch badly affected the only suggestion that can be made is to improve general conditions and to stimulate new root formation from the diseased plants by use of a light dressing of well-rotted manure or by a weak solution of sodium nitrate. A new source of plants should be sought for new plantings. A strong strawberry plant with sound, clean roots is worth what it costs.

### STRINGING PORCH CLIMBERS.

**I**N putting up strings on which porch climbers are to run, instead of attaching the lower ends of the strings to sticks stuck in the ground, take narrow boards and drive small nails part way in. Lay the board down flat and tie the strings to the nails. This looks much more neat, is more easily worked around, and prevents weeds from coming up between. By there being a number of strings fastened to the board, it makes them much less likely to be disturbed by strong winds which often pull the single sticks up.—H. S.

## Things Learned About Spraying

**A**T one time the writer assisted with experimental work in spraying fruit orchards and worked with men who had made a business of spraying carefully to obtain accurate results. We found that it paid to clean up the spray tank, engine and hose after each application. The nozzles and rods were thoroughly flushed out. Spray chemicals are so strong that many outfits are injured by improper care after use. A good hose will also be reduced in life if it is not cleaned after use.

We found that the nozzles of simple construction were best. They did not clog frequently and the material was easily dislodged if they did clog. We found that the angle nozzles were better than straight nozzles. With the angle nozzle it was possible to change the direction of the spray dope with a slight turn of the wrist. These angle nozzles enabled us to get in under the trees and place the rod high up in the branches where with a slight turn the spray could be sent out in all directions.

The new variable spray rod is a big improvement over the old disc nozzle, as it makes it easy to spray trees of most any size from the ground. The only danger is that one is likely to become careless and use the coarse,

strong spray on nearby parts of the tree and thus cause spray injury.

Experiments proved that it was not necessary to saturate trees with the mixture to obtain good results. We did not leave the tree dripping but placed on just enough to cover every bit of bark or foliage with a film of spraying material. This made it necessary to keep the spray rod always on the move. The careless rodman is apt to spray too much on one place and then skip other places. This leaves parts of the tree without protection while other sections are drenched. It is good business to keep the rod moving all the time when spraying.

We found that a long line of hose made it easier for the rodman working on the ground. Then he was not covered with spray dope by the man working in the tower. And he was not jerked forward by the moving of the team before completing his work. We found that a tank filler saved time in making up the mixture and that suitable clothes for the work saved time in putting it on the tree. A pair of goggles often proved useful in keeping the spray mixture out of the eyes on windy days. A substantial pair of gauntlet gloves were needed to keep the hands and wrists dry.—R. G. K.

## PRE-WAR LAND CLEARING PAID BIG.

POSSIBLY you can use a little contribution from a subscriber. We all remember the agitation in 1915 in favor of clearing more land, producing more crops to feed the world at war. A good many farmers refused to spend money to clear additional acreage, and I believe most of those that did any clearing acted from humanitarian motives and were gravely in doubt about whether it would pay.

Now that it is all over some of them like to tell how they made out. Hon. Charles P. Wheeler, of Three Rivers, Michigan, was one of the public spirited men who decided to clear fifteen additional acres to enable him to produce more food.

There were about fifteen hundred stumps on the plot. Two men cleared it with one ton of forty per cent ammonia dynamite in two and a half weeks. The clearing cost \$412.50.

It is gratifying to be able to report that Mr. Wheeler's patriotism turned out to be very profitable. Those that took the chance—and it was a chance—deserved to do well. Mr. Wheeler told me recently that he had sold nearly \$4,000 worth of hay, grain and potatoes off the fifteen acres, that cost only about one-tenth as much to clear, since I shot the stumps out of the ground for him.—P. A. SNYDER.

## TO DEMONSTRATE VALUE OF WOODLOTS.

WISHING to show that a forest plantation on valuable land is a paying proposition, G. B. Horton, of Fruit Ridge, has requested the M. A. C. forestry department to study the rate of growth of the timber in his woodlot, and arrangements have already been made for Prof. A. K. Chittenden and G. A. Garratt to carry on the investigation.

It is interesting to note the results that have been obtained in measuring the rate of growth of the college woodlot during the last few years. With systematic thinning, the volume of timber is increasing 6.5 per cent each year and the lot is said to be in excellent growing condition. Rising stumpage values have also added to the total value of the woodlot.

The annual growth of timber has been cut and sold for firewood in East Lansing, the net income exceeding that from the maple syrup in another woodlot worked as a sugar bush.—H.

## GOVERNMENT TESTS DEHYDRATED VEGETABLES.

THE United States Department of Agriculture recently sent three thousand packages of commercially dehydrated vegetable soup mixture to as many hotels. Reports of its use show keen interest in the product. The cost is much less, quality as good, and convenience greater than the use of fresh vegetables. Thus far the chief difficulty in introducing these products has been the overcoming of old prejudices.

## FARM LABOR PRICES LOWER.

THE Illinois State Department of Labor reports lower farm wages. North Dakota farm labor for spring and summer is plentiful at \$30 to \$40 monthly, against \$50 to \$60 last year. Kansas farm labor is being paid \$40 with board and lodging, about \$20 less than last year. Missouri's labor commission expects plenty of farm labor at lowest wages since 1915. Harvest pay in the southwest will be around \$5.00, \$2.00 less than last year.



# Now That Coupon is Worth \$2 on a Famous New Butterfly

**More than 200,000 New Butterfly Cream Separators Now in Use.**

**How the COUPON Saves You \$2**

By ordering direct from this advertisement you save all expense of catalogs, postage, letters and time. And we give you the benefit of this saving if you send the coupon now. Furthermore, isn't it better to have one of these big money-making machines to use instead of a catalog to read? Wouldn't you like to compare the New Butterfly with other Separators in your neighborhood regardless of price? Wouldn't you like to see just how much more cream you would save if you owned a Separator? We believe you would, so we send you a machine from our factory to try 30 days. Then if you decide you want to keep it the coupon counts the same as a \$2 payment. You take that much right off from our factory price on any size Separator you select. For example, if you choose a \$44 machine you have only \$42 left to pay in 12 easy payments of only \$3.50 a month. If you select the \$56 machine you will have only \$54 left to pay in 12 easy payments of only \$4.50 a month—and so on.

**The Coupon Makes First Payment And the Separator Itself Pays the Rest**

You get the benefit of the great saving in time and work while the Separator is paying for itself. After that the profit is all yours, and you own one of the best Separators made—a steady profit producer the year 'round—a machine guaranteed a lifetime against all defects in material and workmanship, and you won't feel the cost at all. If you decide to keep the Separator we send you, you can pay by the month, or you can pay in full at any time and get a discount for cash. The coupon will count as \$2 just the same. The important thing to do now is to **send the coupon**, whether you want to buy for cash or on the easy payment plan. We have shipped thousands of New Butterfly Cream Separators direct from our factory to other farmers in your State on this liberal plan.

**Pick Out Size You Need**

Order from this Advertisement on 30 Days' Trial. Use Coupon

**—But You Must Act NOW!**

We will accept the coupon below the same as cash for full payment of \$2 on any 1921 model New Butterfly Cream Separator. Don't send a single penny in advance. Just fill out the coupon telling us which size machine you want (see list below) and we will ship it for you to try 30 days in your own home. Then you can find out for yourself just how much a New Butterfly Cream Separator will save and make for you. You can see for yourself before you pay a cent how easily this great labor-saving money-making machine will save enough extra cream to meet all the monthly payments before they are due.

**In this way you won't feel the cost at all. You will have the Separator to use on your farm and your money in your pocket.**

**If at the end of 30 days' trial, you are not pleased just send the machine back at our expense. We will pay the freight both ways. You don't risk a single penny.**

**Send No Money — Just The Coupon — Save \$200**

**No Discs to Clean**

The New Butterfly is the easiest cleaned of all Cream Separators. It uses no discs—there are only 3 parts inside the bowl, all easy to wash. It is also very light running with bearings continually bathed in oil. Free circular tells all about these and many other improved features.

**No. 2½—Machine illustrated at left. Capacity up to 250 lbs. or 116 qts. of milk per hour.**

**Price, \$44.00**

**TERMS: Free \$2.00 coupon with order. Balance, \$3.50 a month for 12 months.**

**No. 3½—Machine shown at left. Capacity up to 400 lbs. or 195 qts. of milk per hour.**

**Price, \$56.00**

**TERMS: Free \$2.00 coupon with order. Balance, \$4.50 a month for twelve months.**

**No. 4½—Machine shown here. Capacity up to 500 lbs. or 250 qts. of milk per hour. Price \$65.00**

**Terms Free \$2.00 coupon with order. Balance \$5.25 a month for 12 months.**

**No. 5½—Machine shown here. Capacity 600 lbs. or 300 qts. of milk per hour. Price \$74.00**

**Terms: Free \$2.00 coupon with order. Balance \$6.00 a month for 12 months.**

**No. 8—Machine shown here. Capacity up to 850 lbs. or 425 qts. of milk per hour. Price \$78.80**

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**It is Always Best—**

to select a larger machine than you need. Later on you may want to keep more cows. Another thing also, remember, the larger capacity the less time it will take to do the work.

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2340 Marshall Blvd., Chicago

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one New Butterfly Cream Separator, size..... If I find the machine satisfactory and as represented by you, I will keep it and you are to accept this coupon as \$2 first cash payment for same. If I am not pleased, you agree to accept the return of the machine without any expense to me, and I will be under no obligation to you.

I keep.....cows.

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## West Bend BARN EQUIPMENT

An improvement found only on West Bend Barn Equipment. One lever locks in or releases from 2 to 50 cows instantly, and also operates cow-stops. Saves thousands of steps. Simple, practical and indestructible. Used on the best dairy farms everywhere. Our steel stalls, mangers, pens, litter carriers, ventilators, water bowls and other dairy barn necessities are your best investment. Get our

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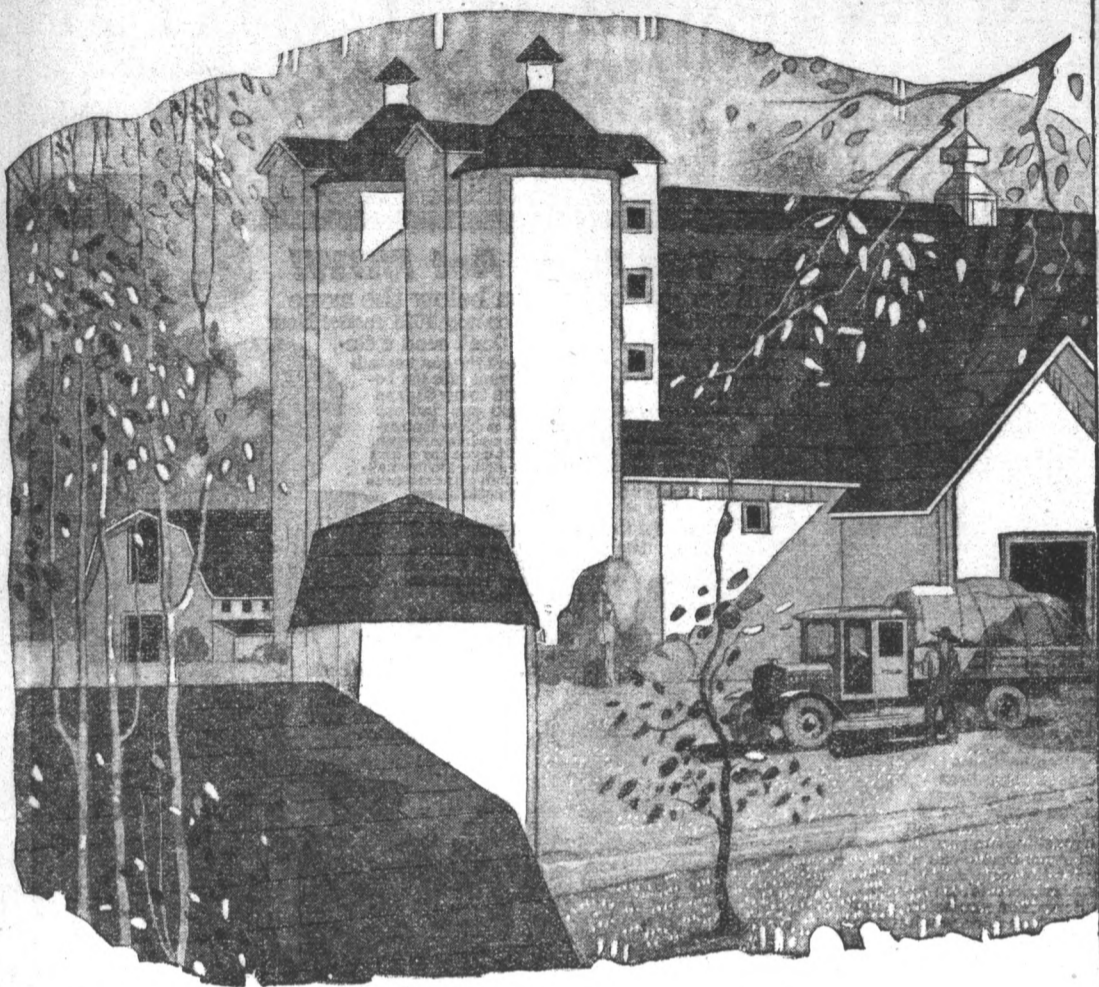
## HO! THERE

Are you doing anything? We want someone in your locality to write some auto insurance, part time. We write a full coverage policy. Have over \$3,000,000 worth of cars insured. Write:

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Graded No 1. Sir Walter Raleigh Seed Potatoes  
50c per bu. f. o. b. Sacks Included.  
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**FOR SALE** 20 complete cow stalls with 19 steel manger divisions, and 6 water bowls. Decided on no change at present.  
B. B. SMITH, Howell, Mich.



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The greatest danger of fire lies in its spreading from one building to another—particularly in the case of structures roofed with wooden shingles. If one building catches fire, sparks and burning embers falling upon nearby roofs may turn a small blaze into a serious fire.

Barrett Everlastic Roofings minimize this fire hazard. The popular low-priced, plain-surfaced form—Everlastic "Rubber" Roofing—is highly fire resistant. Falling sparks or hot cinders may char it in spots, but they cannot set it on fire.

The beautiful red or green Everlastic Single Shingles, Multi-Shingles and Slate Surfaced Roll Roofing have the additional protection of a surface heavily coated with real crushed slate. And yet they cost less than ordinary, inflammable wooden shingles.

Fire-resistant, waterproof, easy-to-lay. Durable, economical, beautiful. What more can you ask of a roofing?

It will pay you to look for the Everlastic name when you buy.

Illustrated booklets  
free on request



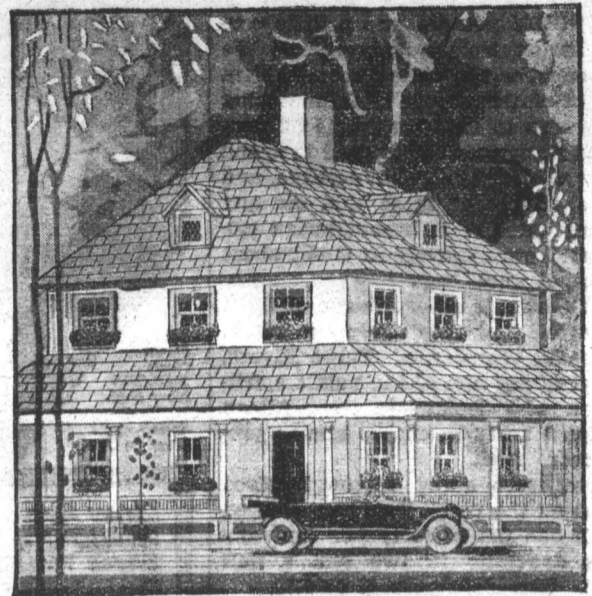
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Everlastic  
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*An attractive roof adds greatly to the appearance  
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### Everlastic "Rubber" Roofing



A recognized standard among "rubber" roofings. Famous for its durability. Made of high-grade waterproofing materials, it defies wind and weather and insures dry, comfortable buildings under all weather conditions. Nails and cement included.

### Everlastic Slate-Surfaced Roofing

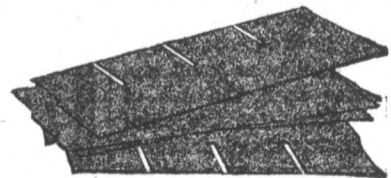
A high-grade roll roofing, surfaced with genuine crushed slate, in two natural shades, red or green. Needs no painting. Handsome enough for a home, economical enough for a barn or garage. Combines real protection against fire with beauty. Nails and cement with each roll.



### Everlastic Multi-Shingles

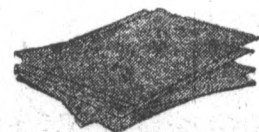
(Four-Shingles-in-One)

Made of high-grade, thoroughly waterproofed felt and surfaced with crushed slate in beautiful natural slate colors, either red or



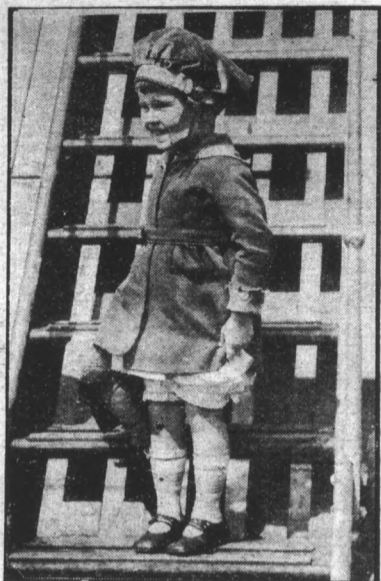
green. Laid in strips of four shingles in one at far less cost in labor and time than for wooden shingles. Give you a roof of artistic beauty worthy of the finest buildings, and one that resists fire and weather. Need no painting.

### Everlastic Single Shingles



Made of the same durable slate-surfaced (red or green) material as the Multi-Shingles, but cut into individual shingles, 8 x 12 3/4 inches. Laid like wooden shingles but cost less per year of service. Need no painting.

# WORLD EVENTS IN PICTURES



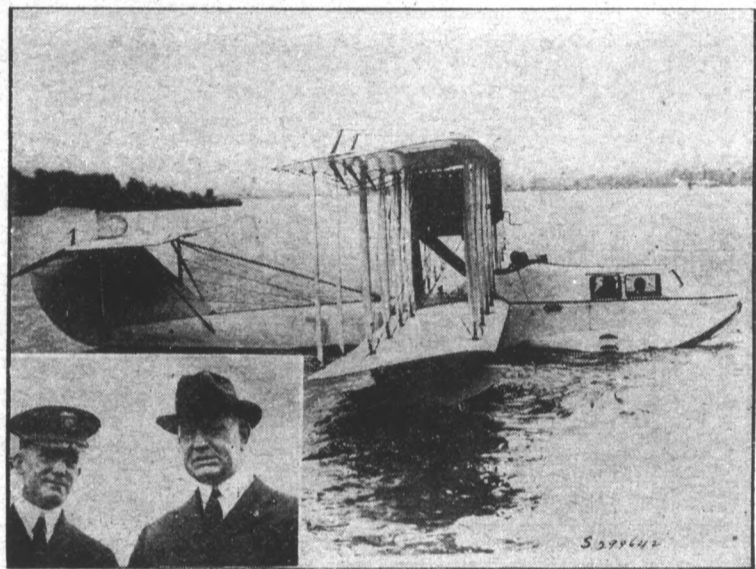
Phyllis Ruth Toque on second trip across the Atlantic alone.



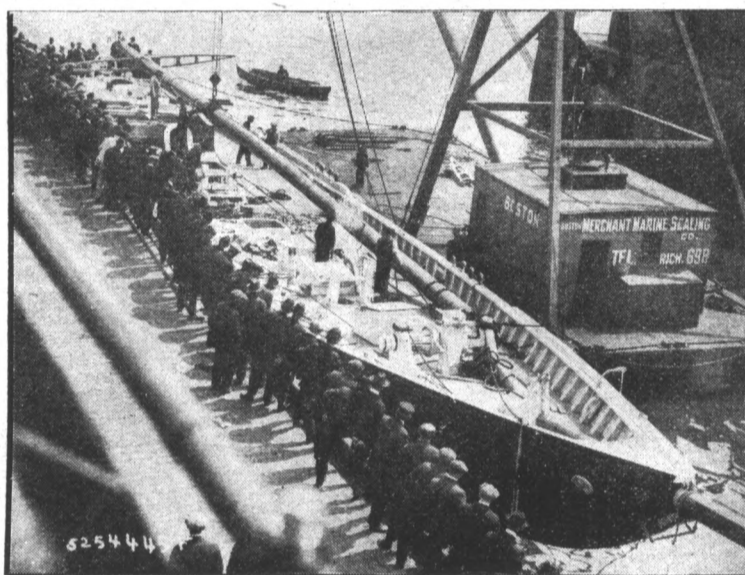
New U. S. Christie Auto Gun which recently made the trip from New York to Washington in seventeen hours.



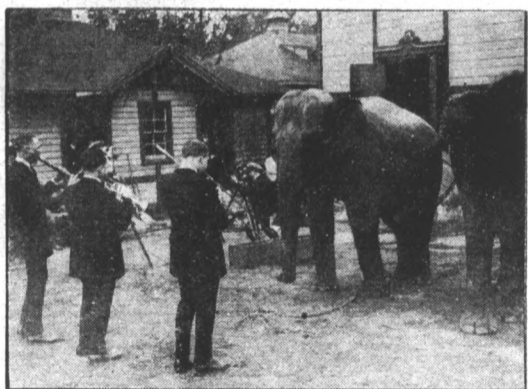
Mrs. Luther Burbank. Photo taken on Mr. Burbank's 72nd birthday.



A navy coast patrol flying boat converted into a six-seat passenger carrying flying limousine. Secretary of Navy Denby in insert.



Boat enthusiasts watching the placing of foremast on the Mayflower, the racing-built fishing schooner.



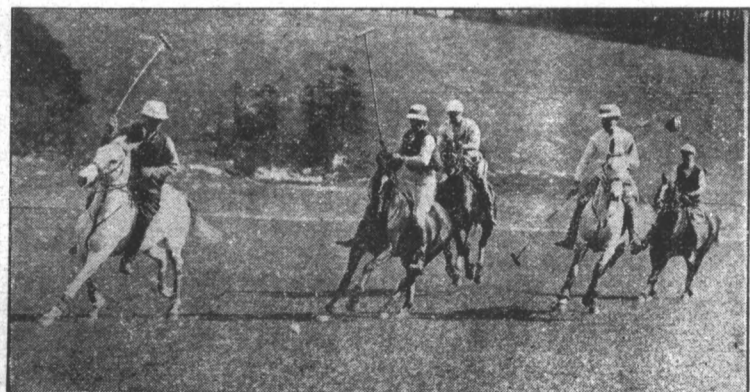
The effects of music being tried on Central Park, New York, Zoo animals.



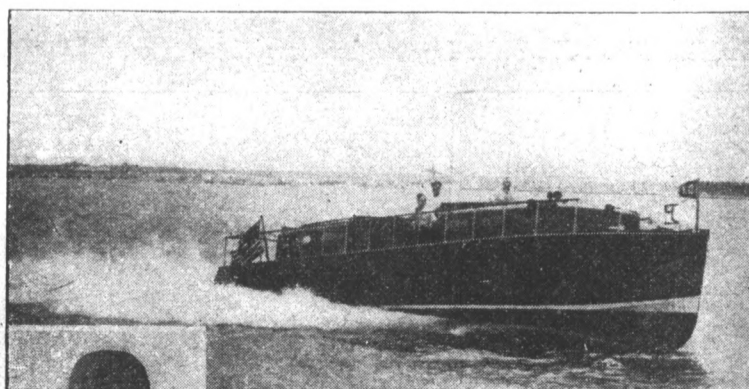
Dempsey starts training by doing farm work.



Judge K. M. Landis, supreme arbiter of base ball, greets Ty Cobb in Chicago.



American polo players practising for international contest with British team.



Gar Wood's speed boat races Havana special train from Miami, Florida, to New York.

# THE CLAN CALL

By HAPSBURG LIEBE

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## CHAPTER XI.

### A Signal Victory.

THE mining man Hayes, the major and John Moreland were waiting at the gate when Dale, accompanied by the moonshiner, returned to the cabin. Dale was the first to speak. He told briefly of that which had taken place at the blown-down sycamore, and at the last of it By Heck straightened proudly.

"I be dadjimmied ef I hadn't ha' pumped him so full o' lead 'at the' couldn't enough o' men got around him to tote off his corpst, ef he hadn't ha' drapped the cowardgun," By Heck declared as fiercely as he could. "'Cause maw she seed in the cup 'at Bill Dale was a-goin' to be a right pa'tickler friend o' mine, igod, and I has a habit o' takin' keer o' my friends. Now thar was my Uncle Bill, him what could jump a sixteen-rail fence—"

"It was a nine-rail fence, By," impatiently cut in John Moreland. "You've done told that so much 'at it's darn nigh worn out. S'posen ye go back thar to the orchard ahind o' the house and see what Cale and Luke's a-doin'; hey, By?"

Heck nodded and went toward the orchard. He knew they didn't want him to overhear what they were going to say, but it didn't offend him. It wasn't easy to offend the good-natured Heck.

Moreland turned to Dale. "Well?" Dale turned to Hayes.

"We're going to begin the building of the little railroad at the earliest possible moment. And because I don't know anything about the work, I'm going to ask you to take the lead. Now, there may be some fighting. I don't want you to go into this thing blindly, you see. If you're going to withdraw at all, do it now."

"I'm not a stranger to fighting," Hayes replied smilingly. "I've been through half a dozen coal strikes. I think you may count on me, Mr. Dale."

"Then lay out a plan for immediate action."

"I'd suggest," acquiesced Hayes, "that we send to the little town in the lowland for a supply of picks and shovels, axes and saws, hammers, drills, and explosives. In the meantime, you and I can stake out the way for the track."

It sounded businesslike, Dale thought.

Within the hour John Moreland and his son Caleb started for Cartersville on foot, and in the older man's pocket was money sufficient to buy the things that were needed.

Dale and Hayes set out for the north end of David Moreland's Mountain, and

each of them carried a hand-axe for making stakes.

It was not often that the quiet Hayes permitted himself to go into raptures over anything; however, he went into raptures over the Moreland coal. It was, he declared, one of the best propositions he had ever seen. It was no wonder that Henderson Goff was determined to get possession of it, he said.

Then they went to work.

By sundown two days later they had chosen the route for the narrow-gauge railroad and set stakes accordingly. Hayes told his general manager that with a good force of men the last rail could be put down within two months.

During those two days they had several times seen Henderson Goff in company with Black Adam Ball and some of his relatives. Once they had come upon Goff talking earnestly with Saul Littleford, the big, bearded, gaunt brother of the Littleford chief. Hayes reminded Dale of this, and said to him further:

"Goff will have the Littlefords on his side the first thing you know! Maybe some of the Littlefords, as well as some of the Balls, knew about this coal before David Moreland got his mountain by state's grant at a few cents per acre. If you'll take my advice, Mr. Dale, you'll make friends of these two sets just as quick as you can."

Dale thrust his hand-axe inside his belt and turned to the mining expert.

"D'you know, I was thinking of that same thing when you spoke," he replied. "And I believe I can manage it, now that Miss Littleford's accidental wounding has given the old feud such a blow. I'm fairly sure I can manage it so far as Ben Littleford is concerned; it's John Moreland that's going to be hard to bring to taw. He should be home this evening, if he's had good luck, and I'll tackle him as soon as he comes."

"Well, we'd better be going, Hayes. There's six miles before us, and it isn't long before night, and the trail is as crooked as a snake's track."

Together they started across David Moreland's Mountain, walking rapidly, with Dale leading.

Darkness came down on them when they had covered half the distance. The great hemlocks and poplars loomed spectral and gaunt in the early starlight. The almost impenetrable thickets of laurel and ivy whispered uncanny things, and their seas of pink and snowy bloom looked somehow ghostly. Now and then there was the pattering of some little animal's feet on the dry, dead leaves of bygone years. A solitary brown owl poured out its heart

in weird and melancholy cries to the night it loved. There was the faint, faroff baying of a hound, and the soft swish of a nighthawk's wings.

Men from the core of civilization must feel these things of the wilderness.

Suddenly Dale drew back and stood still. In the trail ahead, standing as motionless as the trees about him, was the tall figure of a man. It was almost as though he were there to par the way.

The two went on slowly. The figure didn't move. Dale spoke, and the form came to life. It was By Heck; he was leaning on the muzzle of his rifle.

"It's you, is it, Bill, old boy?" He yawned sluggishly. "I was a-waitin' here fo' you. I reckon I must ha' went to sleep a-standin' here on my feet! I've got news, Bill."

"Out with it."

"I've been a-trailin' Henderson Goff all day," Heck said in guarded tones. "He's shore got them lowdown Balls to believin' they're already million-hairs."

"I knew that," said Dale. "That's not news."

"But that ain't all," By Heck went on. "Goff's got Saul Littleford, too—lock, stock, bar'l, and sights. He owns Saul jest the same as I own my old spotted 'coondawg Dime. Saul he gits him a job a-bein' mine boss, and what other Littlefords 'at will stick gits jobs a-diggin' the black di'mont at two dollars a day. Asides, all of 'em is to have a big lot o' money when the dividin'-up time comes, says Goff."

"Much obliged to you, By," Dale acknowledged. "Let's go; 'bout face, By! I'm going to tie a hard knot in that villainous game of Henderson Goff's."

They reached John Moreland's cabin less than an hour later. Moreland and his son had just returned from Cartersville, and Dale learned through Hayes that the two hillmen had shown good judgment and some business sense in making their purchases.

When the evening meal was over, Dale drew John Moreland out to the cabin yard, where the many old-fashioned flowers made the night air sweet with their blended odors. For a moment Dale stood looking toward the very bright stars and thinking; then he told the big man at his side of Goff's plan concerning the Littlefords, and strongly urged the making of friendship between the two clans.

"The snake!" mumbled John Moreland.

He appeared to be worried about it. He folded his arms, walked to the gate and back to Dale without uttering another word. It was hard for him to

throw down completely the hatred of years upon years. Had it been any other person than Bill Dale, a fighter after his own heart, who had asked it, he never would have even considered it; he would have said quickly:

"We'll thrash the Balls and the Littlefords, too!"

The younger man read something of the other's thoughts.

"With the help of the law," said he, "we might whip them all. But it would mean a great deal of bloodshed at best. The Littlefords are Babe's people, y'know. I like Babe. You like her, too, or you never would have gone with her to the hospital—now don't you?"

"I reckon I cain't deny," the Moreland leader muttered, "at I like Babe Littleford. She ain't like none o' the rest of 'em, Bill."

Dale went on:

"All there is to do to ensit the Littlefords on our side is this: you go to old Ben and say to him: 'Let's begin anew; let's be friends, your people and my people, you and me.' He'll be glad you did it. Then it will be easy sailing for us. The Balls never would dare to attack such a force as the Morelands and the Littlefords combined. Don't you see? I admit it will be something of a sacrifice on your part. But a man like you can make sacrifices. Any man who is big enough to go down on his knees and ask the blessing of the Almighty on his enemies is big enough to make sacrifice. Come—let's go over and see Ben Littleford now; won't you?"

The mountaineer didn't answer.

"You won't throttle the cause born in David Moreland's good heart on account of a little personal pride—I know you won't!" Dale said earnestly.

Moreland straightened.

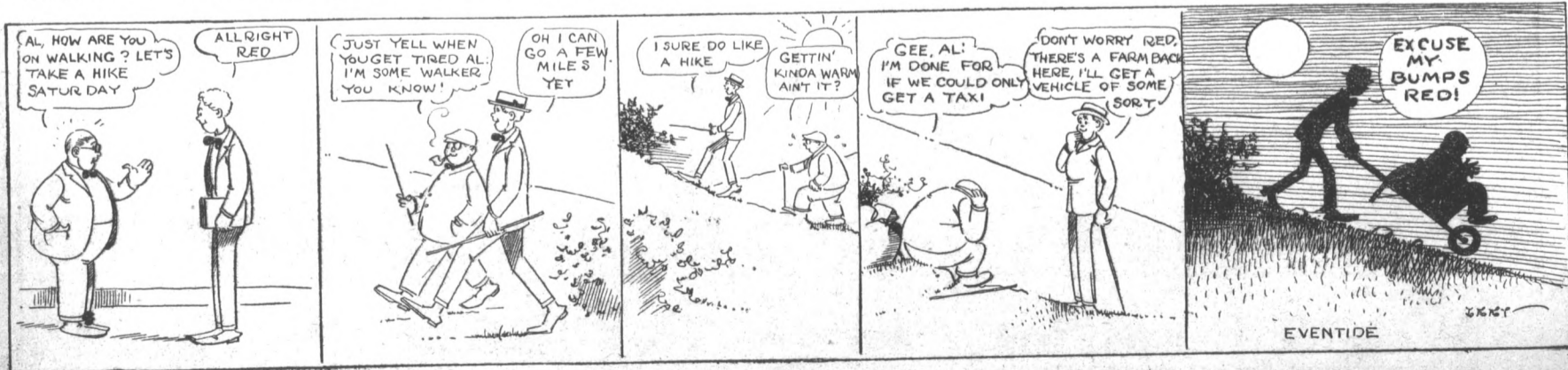
"You mean well," he said slowly. "I think you're one o' the very best men in the world, Bill Dale. You often make me think o' pore David hisself. But I'm afeard ye don't understand, Bill. I've seed my own son die from a Littleford's bullet. To go and offer to be friends with a man who might be the same one 'at killed my boy is a pow'ful hard thing to do. I'm afeard ye don't quite understand."

"It was a terrible thing, I know," said Dale. "But it was the fortunes of war. The Littlefords have endured the fortunes of war in exactly the same way. Come with me; let's go. I need your help; I can do very little without your help. Come, John Moreland!"

The hillman replied slowly: "Well, I'll go with ye over thar. But Ben he'll haf to make the fust break at a-bein' (Continued on page 621).

—By Frank R. Leet

AL ACRES—Al Finds that Legs and Leanness Count in a "Walkout".



*This illustration drawn from an actual photograph shows the effect of limestone on Corn. Each shock is the product of one-twentieth acre.*



### **This Book FREE**

This book which is now in the hands of thousands of Michigan farmers, and which has been highly complimented by the County Agents, the Agricultural College, and scores of other authorities, will be sent to you free for the asking. Just drop us a postcard or fill in this coupon.

Please send copy of AGRICULTURAL LIMESTONE to

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## **HAVE YOU LIMED YOUR LAND?** **A New View Point on an Important Question**

Our sale of limestone to Michigan farmers this spring has been enormous—by far the largest in our history.

But still there are thousands of farmers who are not using limestone—who have not even taken the trouble to even seriously consider the matter—who have not even sent for, or read, the booklet we are distributing free on the subject of limestone and its value.

If this is your case, what is the reason? Is it because you are classing limestone with the hundreds of devices and commodities of doubtful value which manufacturers are continually trying to force on the farmers?

This is not fair to yourselves or limestone. Limestone is not a patented product or a secret mixture controlled by us. It is nature's product and essential to plant life.

We believe this is the fair way to think about it. In the first place, you ought to know definitely whether or not your land needs limestone. 80% of Michigan land does.

To find this out, you ought to first get our booklet, which will tell you all about limestone. Then either make a few simple tests of your soil for yourself, or with the help of your county agent. Or send samples to us for testing. We will do this without charge. Then if you find your land is sour, the use of limestone is no longer a question but a necessity. For most crops won't do well in sour soil and there is no other known way of correcting sour soil conditions except by the use of limestone.

We would like to have Michigan farmers feel that our interests are vastly different from those of a concern attempting to sell a patented preparation.

The Solvay Process Company have really performed a distinct service to the farmers of Michigan by utilizing its immense facilities in preparing limestone in very finely pulverized form so that it is all available for plant use, and still selling it at a price almost as cheap as sand.

We believe that, if the farmers who are not now using limestone will think about the question as we have outlined it above, they will see that delaying the use of limestone is placing a handicap on their farms that they can ill afford.

It is not too late yet to buy and use limestone as a top dressing on many crops, such as corn, beans, etc., and derive the great benefits that will result this year.

Solvay Calcium Chloride packed in 350-lb. air tight steel drums either granular or flake form.

### **ARCADIUM SULPHATE OF AMMONIA**

Increases orchard profits by eliminating off-year bearing of apple trees—makes stronger fruit buds—is much more economical than any other ammonia fertilizer—20.75% actual nitrogen content equivalent to 25.25% ammonia.

**ARCADIUM SULPHATE OF AMMONIA AND U. S. POTASH**  
**SOLD BY WING & EVANS, INC. WRITE FOR INFORMATION.**

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## **PULVERIZED-AGRICULTURAL-LIMESTONE**

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Sales Agent  
For

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It's no longer necessary to maintain a dividing line at the breakfast table—tea, or coffee for grown-ups—no hot cup for the youngsters

## Serve INSTANT POSTUM

to each member of the family, and all will be pleased and benefited by this pure, wholesome cereal drink.

*"There's a Reason" for Postum*  
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### Pyramid of GROWTH

Losses Paid During	
1916	\$186.13
1917	\$2,157.50
1918	\$27,469.39
1919	\$52,583.61
1920	\$165,924.83

New Policies Issued		Current Assets	
for years		at end of	
1916	338	1916	\$173.78
1917	2,720	1917	\$5,714.29
1918	5,443	1918	\$7,832.79
1919	10,100	1919	\$37,459.73
1920	17,873	1920	\$104,039.42

**Write Quick Prices Slashed**

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## The Revival at Mud Valley

Our Weekly Sermon—By N. A. McCune

(Continued from last week).

THE farmers' institute came and went. Abreast was as good as his word, and the professors he went after were all there. Skimp was amazed at what he heard. He had formerly thought himself above the rural pastorate. But now he felt it was above him. He was not equal to the demands that would be made on a real, sure-enough rural pastor. He preached on the institute the Sunday following. His subject was, "The Preacher Learns from the Farmers." One fact had greatly impressed him. It was, that the fertility of the soil is God's gift to man. To impoverish the soil is a sin against its Creator. To leave a farm in lower fertility than when you took it, is a black deed, unworthy of any honorable man. And it was well known there were farms about Mud Valley that would not produce as they once did. When a farm is reduced in productivity it means that someone may go hungry in consequence. That is the opposite of the Master's command to feed the hungry.

The following Sunday the pastor of Mud Valley church began a series of sermons. It was called the "Getting Acquainted" series. The first one was, "Getting Acquainted with Your Farm." How many men have made a thorough survey of their farm and know what it is best suited to produce? he asked. How many have had the soil analyzed? The second was, "Getting Acquainted with Your Family." Many a farmer has sons who are born on the farm, but who never intend to stay on it. Has he ever tried to induce them to do so, by showing them the bright side of farm life? Does the boy own his own calf, or sheep, and get what is made from it? That was a sermon that went home. He heard from it afterwards.

NEXT, he preached on "Getting Acquainted with Your Neighbors." A family with a foreign name had recently moved into the neighborhood. How many had been to pay a friendly call? We talk against the foreigner, his old-country ways, his wife that works in the hay-field, and his endless kids. But how many make any attempt to make a real American out of him, or his numerous progeny? Of the three foreign families near Mud Valley, how many had been invited to come to the church?

Skimp next preached on getting acquainted with your school and your church. What do you know about your church? Is the church at Mud Valley the only basis you have of forming a judgment? What do you know about the work of the church in the south, among the highlanders? Of its great leaders in foreign lands? Did any one realize the fact that missionaries are frequently employed by the government, because of their intimate knowledge of foreign lands? Did you know that the Mud Valley church is connected with the entire Christian world enterprise? How would this church like the idea of helping support an agricultural missionary in India or China, who is showing the people how to grow big crops and fight off animal diseases?

AND next came a sermon that was a Kansas cyclone, on getting acquainted with yourself. Are you a farmer by accident, or intention? Do you plow and reap because you like it better than anything in the world, or because you haven't as yet been able to sell out? Do you see anything in farming besides the crops? Has the thought ever occurred to you that you are cooperating with God? If God

should knock off tomorrow where would the farmer be? Every crop in the field would shrivel up, and the world would face starvation in a few months. We keep going because God keeps going.

And the series wound up with "Getting Acquainted with God." By the time the preacher was done with this series he had so many other subjects in mind he wanted to present, that he hardly knew which to choose first. His trouble had always been, that he didn't know till Friday what he was going to talk about on Sunday. And the congregations? Deacon Trudge said he'd never seen so many at church since Abraham Grind's funeral. Then the people sat on the pulpit steps while the presiding elder preached the funeral sermon. But for several Sundays now, the people had crowded into the church so that chairs had to be placed in the aisles. The revival had begun, and no mistake. They had held more than one so-called revival in days past that was a revival only in name. Nobody was revived, and the few who attended were worn out by the time the meetings were over. This was a sure-enough revival. People were actually being revived.

BUT there were other signs of life. Mr. Abreast was as good as his name. He had taken Skimp off the probationer's list, and taken him into his heart. He said Skimp was all right, and he would back him to the limit. He used language that was more vivid than that, but that is what he meant. Abreast proposed that the Community Improvement Club should meet at his home and talk over some propositions. He would provide the place to meet, and they would have a barbecue. Each family would bring whatever dinner they wanted, but the wheat would be carved off the roasted ox. The proposal was too good to ignore. The preacher was ready for anything that had the forward look. The day was set, the handbills were passed out on all sides, and the crowd came. No such crowd had ever been gotten together before in that section. People still talk about it. Almost every variety of vehicle that has been known since the stone age was there. Breeds and types of farmers not known to exist appeared, each with a dinner basket as large as a wash boiler. A very successful country preacher from a neighboring state was the speaker. He told what had been done in his section, and it was agreed that his program was so sensible that it would do as a basis of work for the section about Mud Valley.

THE club was to keep its name, the Community Improvement Club. If any farmer wanted to join, he had to sign an agreement to do five things each year: He must do something to improve the soil, something to improve the live stock, something to improve the buildings and fences, something to improve the community, and something to improve himself. In addition to this, or, rather as a part of it, cards were passed out, asking if the people would not like to have a free lecture and entertainment course the following winter, at the church. All who did so could contribute whatever he could. A large flag was produced and four girls held it by the four corners, while money was thrown on it, Salvation-army fashion. Those who did not have money with them, could leave it at the general store. Two hundred dollars was necessary to guarantee the lecture course, and one hundred and seventeen was produced in cash the day

of the barbecue. There was a real revival on, at Mud Valley. Brothers Flat and Pinch had to admit it, and even Mrs. Firm confessed that perhaps good would come out of it. The church hadn't been rebuilt yet, but Skimp said that would come in time. The church folks said Skimp was to stay with them for at least twenty years yet. Skimp said he didn't know of any place he liked better.

THE END.

## The Clan Call

(Continued from page 618).

friends, 'cause I'm purty shore I never will. As soon as I git my hat, Bill."

He went to the front porch and took from a chair his broad-rimmed head-gear. Then the two set out.

They crossed an ox-wagon road, a sweet-scented meadow, the river by means of the blown-down sycamore, another sweet-scented meadow and another ox-wagon road, and entered the cabin yard of the Littleford chief. Here too, many old-fashioned flowers were in bloom; a cane fishingpole, slender and white, leaned against the porch; it made Dale think of Babe.

"You wait out here," whispered Dale, with a hand on his companion's arm. "I'll go in and see if I can persuade Littleford to make the advance. I'm pretty sure I can."

He started forward when a bound rose from the stone step and growled warningly. At that Dale halted and sang out:

"Hello, Ben!"

Immediately there was the sound of heavy footsteps on the cabin floor. The front door swung open, creaking on wooden hinges, and Babe's father, bareheaded and with a lamp in his hand, appeared in the doorway. He knew the voice that had summoned him.

"Come right in, Mr. Dale," he invited with the utmost cordiality. "Come right in!"

He scolded the dog away, and Dale entered the primitive home. Its interior, he noted, was a duplicate of the Moreland chief's home. He was shown into the best room, where he dropped easily into a roomy old rocker that was lined with an untanned sheepskin. Ben Littleford put the lamp on a crude table, drew up another chair, and sat down facing his visitor.

"I hope ye ain't jest happened over fo' a minute or two on business," he drawled; "I hope ye've come to spend the night wi' me, anyway."

"I'm here in the interests of peace," Dale began, looking at the hillman squarely. "I want you Littlefords to be on good terms with your neighbors, the Morelands. John is out there at your gate now: he is waiting for you to ask him in and say to him: 'Let's begin anew; let's be friends, your people and my people, you and me.' You want that, don't you, Ben? Babe did, I'm sure."

Littleford frowned, laced his big fingers together and twirled his big thumbs. Now that he was once more at home, with assurance that his daughter would entirely recover, he was no longer weak; he had all his old courage and all his old stubborn hill pride back.

"I'll ax John in," he finally decided, "but he'll haf to make the fust break at a-bein' friends. Me axin' him into the house is a purty durned good start towards friendship, ain't it?"

He arose, took up the lamp, walked to the front door and opened it, and called into the night:

"Won't ye come in, John?"

"I reckon I will, Ben," was the lazy answer. "Fo' a minute, anyhow. But I reckon I cain't stay long."

(Continued next week.)

# 20% Price Reduction on Goodrich Tires

## Endorsed By Users and Dealers

The decisive reduction of 20% on the prices of Goodrich Silvertown Cords, Goodrich Fabrics and Goodrich Inner Tubes, which took effect Monday, May 2nd, received the endorsement of both tire users and dealers throughout the country.

It was accepted at its full face value as a helpful economic move in tune with the times.

It conforms to present conditions and carries out in a straightforward way constructive merchandising methods.

Goodrich Tires have earned their reputation and standing with motorists by sheer quality of construction and complete dependability of service.

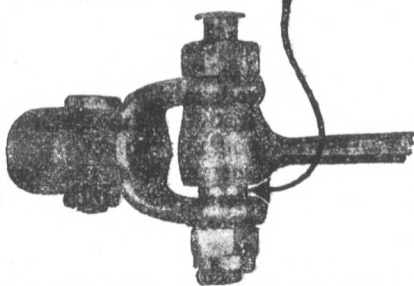
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**WANTED** one or more Milch goats Address **W. D. ALLEN** 2037 Geddes Ave., Ann Arbor, Mich.

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**COSTS ONE CENT A GALLON**

Bottle to make 75 gal. \$1.00; to make 300 gal. \$3.00. Comes as a powder—no loss from breakage, or freezing in transit, no heavy freight charges. Dissolve in water as you need it.

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## Woman's Interests

# Building the New Home

Furnaces—Woodwork—Conveniences



A STORY is told of a poor woman who suddenly acquired wealth and at once decided to build a new home. Having spent most of her waking hours in the kitchen, she ordered her architect to furnish her a house which had no such room. Later, finding that even people of wealth must have some place to prepare meals, she was forced to build the kitchen on, and connect it to the rest of the mansion by means of a hall.

In inspecting a large per cent of the houses in America, one is forced to believe that at least as little thought was given to sane planning, as the woman in the story gave to her home. Certainly the average home could be improved upon when it comes to conven-

And do not, unless you are blessed with help or the children are grown, plan for a sewing-room on the second floor. Have it down where you can step into it while the bread bakes and you'll accomplish twice as much in the way of sewing and mending. In planning your home consider your own family and your own needs, not what the neighbors have, or what some architect tries to tell you you want.

A wash-room through which help can come to clean up and prepare for meals before entering the house proper is almost a necessity. Make this large enough to be used as a laundry. It may also be used for a play room for the children on rainy days. If it has a concrete floor they can play almost any

ble to heat, the room, of course, being on the windy side of the house. If you choose hot air, see that the registers are set in the wall. Floor registers are dust catchers and often the carpet or rug must be turned back to avoid them.

Steam and hot water plants do not give heat quite so quickly as hot air, and cost more to install. They are usually considered to be cleaner, however, and to give a more constant heat once the fire is going. Hot water is said to give off heat with a lower fire than will steam.

For your woodwork and floors, of course you would like oak. But of late oak prices have been so high as to make them almost prohibitive. There are many other woods which are durable, and while they do not finish quite so satisfactorily as oak, owing to its beautiful grain, may be stained, or coated with white enamel. Southern pine for finish is extensively used and is very satisfactory. For floors maple is very durable. Birch, walnut, soft pine, fir, cypress and redwood are also used. Birch is chosen frequently for rooms to be finished in white enamel. White enamel woodwork for sleeping rooms, with mahogany doors, are always good. Mahogany and white stairways are always attractive, if other finishings correspond.

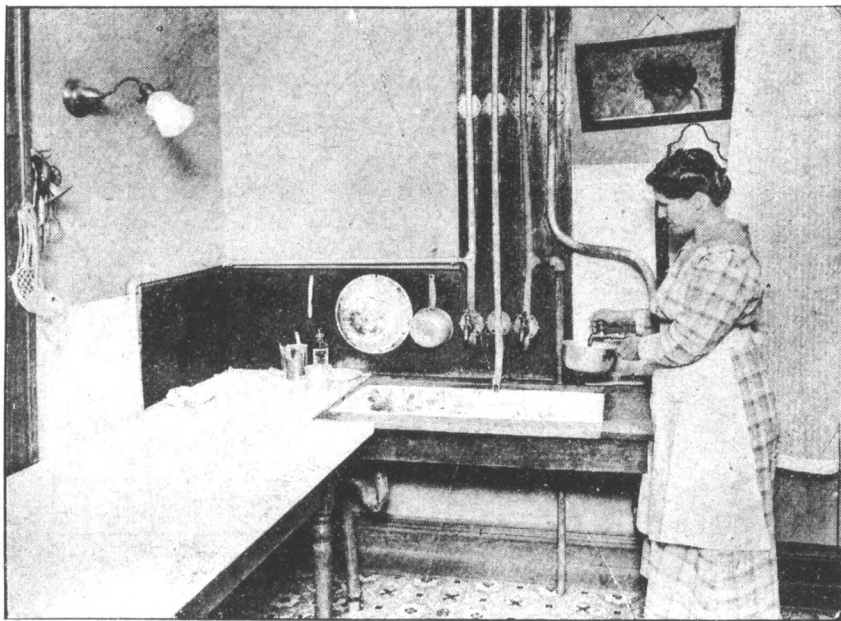
"How to Build It," by M. L. Keith, Minneapolis, gives the following table of relative hardness of woods, which may be of help in selecting your finish. He takes shell bark hickory as the highest standard of our trees and rates it one hundred per cent. With this base he rates the other woods as follows:

White oak, 84; white ash, 77; scrub oak, 73; red oak, 69; white beech, 65; black walnut, 65; black birch, 62; yellow oak, 60; hard maple, 56; red cedar, 56; yellow pine, 54; white birch, 43; white pine, 30.

Floors and woodwork may be either varnished or waxed. Wax is more satisfactory in many ways as it does not show marks quickly, and its beauty grows with its age. It is easily taken care of. Whatever finish is first applied can not be changed satisfactorily, so make up your mind to one or the other. Floors once varnished must always be varnished in future when repairing needs to be done, and floors waxed must always have wax. You can not apply a coat of either finish over the other with satisfactory results.

## COMMUNITY MEETINGS IN SHIA-WASSEE.

THE Bancroft farm women are very much alive, as evidenced by the enthusiastic meeting held in the store of C. E. Godfrey, Bancroft. There were about fifty women present, and it was decided to take up at future meetings the study of clothing and textiles, nutrition and poultry. Miss Helen Arms, clothing specialist from the M. A. C., met the women at a subsequent meeting and gave a demonstration in millinery. The officers in charge of the



A Well-lighted Kitchen with Hot and Cold Water is a Boon to the Farm Woman.

ience of arrangement and ease of doing work. In the old-fashioned houses, especially those built in the days when lumber was cheap, doesn't it seem as if the one idea was to see how many rooms of immense size one could get, without any regard to the steps women would have to take in keeping the house up? Don't you all know pantries large enough to be modern kitchens?

In planning your new home, or remodeling your old one, bear in mind the fact that the fewer the steps, the sooner you'll be through work. Get your working area all together in as compact a form as possible.

The model farm home should have living-room, dining-room, office, kitchen, pantry, laundry and wash-room on the first floor, bedrooms, bath and sewing-room on the second, and the bedrooms for help should be separate from those for the family. If you cannot afford a home of this size, however, combine living-room, office and sewing-room in one, but keep the dining-room. Many a woman has sat listlessly through a meal in the kitchen because the sight of the spot where she had prepared the meal robbed her of appetite. Plan your home so as to get out of the kitchen at mealtimes.

game without worry as to spilled water or scratched floors. Stairs to the help's sleeping room could go up from here.

Of course, you will have running water. This need not of necessity cost a great deal of money. The Michigan Agricultural College demonstrated a system at the farmers' congress which can be installed for around forty dollars. A small pump, a few feet of pipe, a sink and a little labor are all that is required. The department of farm mechanics of the college will give advice and help as to installing any water or power system you may select.

The method of heating the new home is a matter of pocketbook and personal choice. Every type of furnace, hot air, steam and hot water, has its admirers. Much depends upon installation, so be sure that only a competent workman installs your furnace for you. Hot air costs less in the beginning than either steam or hot water. Such furnaces are easy to operate, and if properly installed with an outside cold air intake, they give satisfactory heat and insure fresh air at the same time. On windy days, however, there is almost invariably one room in the house which it is impossi-

work in the Bancroft local are: Mrs. J. C. Corruthers, chairman; Mrs. C. E. Godfrey, Mrs. John Smith and Mrs. C. B. Baker.

The second meeting of the Henderson Farm Bureau local women was held at the home of Mrs. Amos at Henderson. Mr. Newton, from the poultry department of the M. A. C., gave a splendid talk to the women, on the care and breeding of poultry, which was much appreciated by all.

The women of the Durand Farm Bureau local held a poultry meeting at the home of Mrs. Saxton, of Durand, which was attended by eighty-five persons. An interesting talk on poultry, as well as a culling demonstration, was given by J. V. Sheap, county agricultural agent. —M.

#### DUTCH PEPPERNUTS.

Household Editor.—I notice a request for a recipe for "Dutch Peppernuts," or "Pffernussen," and will send a reliable recipe for these little cakes:

One and one-half cups of sugar, one cup of shortening, one cup of sour milk and one teaspoon of soda, (or one cup of sweet milk and one teaspoon of baking powder), one egg, one teaspoon of lemon flavor, one-half teaspoon of nutmeg or mace, one teaspoon of anise seed or one-half teaspoon of anise flavor.

The ingredients should be mixed well and flour added to make dough to roll. Roll the dough a trifle thick, and with a floured knife cut in half-inch strips, and cut these strips into half-inch squares. Bake in cookie pans, and when done they will be little brown, puffy, nut-like squares. Sometimes instead of cutting in squares the dough is molded with the hands into tiny balls like marbles, and these are much the same as the squares in appearance when baked.

The most important part of these cakes is the anise seed or flavoring. These are old country Christmas cakes and are made in large quantities at holiday time. No frosting or sugar is put on top of the cakes. This recipe has been used in our family for years, and is identical with recipes used by two excellent cooks, one Danish and one German.—Mrs. A. M. H.

Household Editor.—In The Michigan Farmer for April 9 I notice a recipe for "Dutch Peppernuts." My recipe is similar to M. J. T.'s, and I've made them several times. They certainly have "pep." The recipe makes about one hundred and thirty.

"Pfferneys."—Two cups of brown sugar, one and one-half cups of sour milk, one-half pound of raisins, six cups of flour, two egg yolks, one teaspoon each of the following: Cloves, soda, salt, cinnamon, nutmeg, essence of anise. Roll very thin, cut with small cutter. To ice use two cups of sugar, boiled, and poured over the two beaten egg whites. Put about a quarter of the cakes in a pan, and stir while pouring part of the icing on them. There are too many to ice all at once.—Reader.

#### GROWING ANNUAL FLOWERING PLANTS.

ONE of the latest Farmers' Bulletins of interest to farm women is No. 1171, which thoroughly covers the subject of Growing Annual Flowering Plants. It explains in detail the steps necessary in growing these desirable plants for flowers at a season of the year when blossoms on permanent plants are scarce. Most of these annual plants are valuable for supplying cut flowers for indoor decoration. Every farm woman, who is interested in establishing clumps or pockets among shrubs or borders of perennials which might otherwise be dull and uninteresting, should write to the Department of Agriculture, Washington, D. C., for a copy of Farmers' Bulletin No. 1171.

# Willys LIGHT JUNIOR

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more than fifty-fifty on price reduction NOW. Rock-bottom prices are here.

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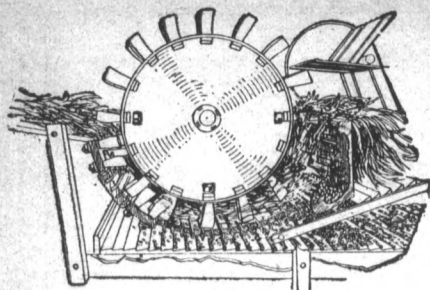
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Nasby Bldg. TOLEDO, OHIO.  
References: Any bank or business firm in Toledo

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# Our Boys' and Girls' Department

## The Local Club Leader

By Charles H. Chesley

PROBABLY no movement in connection with our agricultural development is of more importance or capable of producing more far-reaching results than the work being done in connection with local boys' and girls' clubs. I occasionally find a man or woman (old fogies is not severe enough to call them) who ridicule the whole idea. These are exceptions and do not stop to think that the young people

this club carried off several county and state prizes. Sometimes a young man or woman, returning from college, can be induced to take up the work. Many such, however, cannot find the time for the effort. Really, considerable time is necessary for best results. The minimum of time that the local leader ought to devote to his club is a half day each week. Garden projects are kept in much better shape if the

ifications call for. It has been difficult in my own case to get the boys and girls lined up for standard work. They want to be members of the club but father could not prepare them a plot just right, so they are going to have a couple of rows of potatoes across one end of the family patch. It is the same with pig-club and calf-club work. Father says the boy may call one of the family pigs his, or something like that. The local leader has to deal with such cases. Often a personal appeal to the parents will result in settling the matter right. Sometimes, however, the only thing to do is to let the lad come in and do the best possible under the circumstances. Perhaps next year the father can be convinced of the advantages of a standard project and will consent to the work.

I have found it best to concentrate effort on one line of endeavor and form a local club with a distinctive name. Besides winning the regular achievement pin, our boys and girls like to have a pin for their own club. Money for such expenses can be raised by holding one or two entertainments during the fall or winter season. The money to pay expenses of attending county rallies can also be raised in this way.

Local leaders should attend all rallies with the club and should look after the young people who make exhibits at the county fair and, of course, want to attend. This work is not irksome for the man or woman who gets really interested in boys and girls. It becomes rather a privilege than a task and the interested leader seldom wishes to give up the work.



Michigan Club Leaders Are Making Country Life Attractive to Young Folks.

now enrolled in this work are those to whom we must look to recruit the next generation of farmers. Unfortunately there is a good deal to discourage the boy or girl brought up on many farms and it is not strange that early ambitions often lead away from the rural path.

The club idea is intended to combat unfavorable impressions of the farm, in other words, it aims to show up the better side of rural life and offer an incentive to individual effort and attainment. I venture to predict that very few prize winners in club work will ever take up other lines of endeavor.

The writer has had several years of experience as a local leader and the aim of this article is to offer some suggestions gleaned from that work. In the first place, the local leader is the most important link in the whole chain. He is the link to which the club members must cling to unite them with the county, state and national organizations. The state or county leader may come once a month, but the local leader must be right there to advise all the time and see that the individual work is done and accounts properly kept.

No matter how good a county leader the boys and girls may have, there will be little accomplished unless the local man or woman shows a constant interest in the club. The local leader, then, must be a person capable of gaining and keeping the confidence of the young people. A young or middle-aged minister of the gospel almost always makes a good leader. The same can be said of a school teacher. I have in mind a locality which hired a young man to teach the grammar school. This man consented to take charge of the club work. At first the effort seemed doomed to failure but before the end of the summer, by holding weekly meetings and making constant visits to the garden projects, he had the whole membership worked to the highest point of enthusiasm. The second year

members know that the leader is expected around Saturday.

One trouble that the local leader will find in all communities, is the tendency on the part of parents to provide a plot similar to the standard required, rather than just what the spec-

## Making Tomatoes Pay the Way

THAT the time is not past when an enterprising girl or boy can gain a college education by personal initiative is amply proven by the experience of a young girl now a freshman at the Michigan Agricultural College.

Fired by a desire to secure training beyond that which the local high school could give, and with parents whose limited means must be turned to other purposes, she took stock of her own opportunities for making money. She lived within three miles of a lake port from which vegetables and fruit were shipped to Chicago daily during the season. There was usually a good demand for tomatoes. They were a clean crop—why not raise tomatoes? Some little planning and weighing were required but a decision once reached, arrangements were promptly made with the father for one and one-half acres of land, with a local greenhouse for starting plants, and with a commission merchant for selling the product.

The ground has been previously covered with barnyard manure. She hired the plowing done and did the dragging, smoothing and marking herself. Careful account was kept of all expenditures and income. Selected seeds were used, Isbell's Earlibell being the variety chosen. The plants were started in the greenhouse and when about three or four inches high were transferred to individual, bottomless, wooden boxes in hot-beds. About the first of June the three thousand plants were set out in the field about three and a half by five feet apart.

They were then about one foot to eighteen inches high. A small amount of commercial fertilizer was used in each hill. Cultivation was kept up by the girl herself until the plants grew too large to permit it. The ripening began about the last of July.

The tomatoes were carefully selected and graded, the first grade being put into six-basket crates, the weight averaging about forty-three pounds net. The second grade were put into "jumbos" with a weight of about twenty pounds net. Some of the poorest grade were sold from house to house in the town. The marketing and much of the labor incident to packing was carried on by the girl herself. An itemized statement follows:

Rent for 1½ acres of land....	\$ 20.00
Cost of starting plants.....	5.00
Cost of plant boxes.....	14.00
Cost of packages.....	216.45
Cost of labor .....	105.39
<b>Total expense .....</b>	<b>\$ 360.84</b>
<b>Total yield, tons .....</b>	<b>13</b>
Total amount first-grade shipped, tons .....	10
Total number crates shipped .....	434
Total number jumbos shipped .....	141
Gross sales .....	\$1,510.00
Freight, commission and cartage .....	310.00
<b>Net sales .....</b>	<b>1,200.00</b>
<b>Total expense .....</b>	<b>\$ 360.84</b>
<b>Total profit .....</b>	<b>\$ 839.16</b>

This girl will complete a very successful year at college this June and has the plants already under way for another harvest of tomatoes this year.

## Poultry Lessons

By R. G. Kirby

## Lesson XI.—Feeding for Eggs.

**E**XAMINE your hens when they are laying heavily. They will be a little fat but not too fat. They will appear healthy and vigorous. To keep up a profitable egg production it is necessary to keep the hens in the pink of condition and also give them the elements that make eggs.

During the spring the hen on the range gathers first, a bug or a worm and then a weed seed. Then she picks up a bit of tender green food. In the course of the day the hen eats the necessary materials to form eggs. They are abundant in the spring and that is the natural time for heavy egg production. To keep up a more or less steady egg production from our flocks we must strive to imitate the conditions on the range in the spring.

The grain can be given in a straw litter and consist of equal parts of wheat and corn in the spring and fall. During the winter give twice as much corn as wheat. During the hot summer give twice as much wheat as corn. The most simple dry mash recommended can consist of fifty pounds of wheat bran and one hundred pounds ground oats. To this mixture add thirty pounds of beef scrap for the lighter breeds, like Leghorns, or twenty pounds of beef scrap for the heavy breeds, like Plymouth Rocks.

The dry mash should be placed in a hopper where the hens will always have access to it. Then each bird will surely receive enough to keep her well fed and fit to lay if other conditions are all right. We find sour milk a wonderful help in making hens lay. If this is produced at home, be sure and make arrangements for a supply for your hens. They like sour milk and buttermilk and it is good for their digestive system as well as a producer of eggs.

The beef scrap in the dry mash can be reduced depending upon the amount of sour milk you have to feed. Furnish the sour milk in crocks and keep the crocks clean by an occasional scouring. Water forms a large portion of an egg. The hens need lots of water to keep them in health. Galvanized pails make good water fountains. The hens will drink to within a few inches of the bottom and this leaves enough water to rinse the pail before refilling. In the winter empty the pails each night so they will not freeze before morning and spring leaks.

Green food is a great tonic and help in egg production. When on the range it need not be supplied. During the winter it is very necessary. Clover chaff, mangels and cull fruit and vegetables help to furnish green feed. Sprouted oats are fine but take more work and are more expensive than mangels. We often split pumpkins and place them in the poultry houses and the birds will eat the pulp and seeds clear to the ring. Oyster shells are necessary to help the hens place strong shells on every egg that is laid. Keep a hopper of shells in the poultry house at all seasons.

## VALUE OF EDUCATION.

**T**HE most important thing you acquire in school is not the information you get but the habit of study you establish. With a mind trained to study you have the ability to work at the solution of the problems which come up in life. Without an education you would be in a quandary as you do not know the methods of solution. Education gives you comprehension while lack of training causes bewilderment.

The mid-west conference of presidents and secretaries of State Farm Bureaus will be held at Huron, South Dakota, May 24.



## Reduce Your Hay Making Costs

**YOU** will be able to handle your hay crop quickly and easily without extra labor with our combined side rake and tedder, and with our hay loader. You will not only save money in the making, but you will get a bigger crop and a better price.

## Combined Rake and Tedder

Our "Giant" combined steel side rake and tedder pays dividends in better quality of hay and in labor saved. When tedding it lifts the hay from the ground separating and leaving it loose so it can cure evenly.

When used as a rake its motion is slow which prevents the threshing out of seed and leaves from ripe hay, or the shelling of beans when raking beans—for which it is especially adaptable. It will rake eight rows of beans.

The "Giant" rake and tedder being steel construction is light, yet strong and durable. It can be thrown in and out of gear and changed to either rake or tedder, and the angle of the teeth can be altered, and the reel raised or lowered by shifting levers within easy reach of driver. Rear castor wheels are equipped with cushion springs to relieve strain due to unevenness of ground. The rake is equipped throughout with anti-friction roller bearings, thus insuring light draft.

## Cylinder Hay Loader

The "Hayes-Dayton" Steel Frame Cylinder Hay Loader under ordinary conditions will reduce the cost of loading hay from 30% to 50% from pitching the load on by hand forks. It is designed for loading from windrow, yet it can be used to load directly from the swath. Its design and construction is light yet strong and durable, and is made simple to avoid complicated parts getting out of order. The height of the loader from the ground to where it discharges hay is ten feet, allowing you to build a large load.

The forecarriage of the loader carries a portion of the weight and adjusts itself to uneven ground by a universal joint. It can be easily coupled to the wagon and uncoupled by the driver by rope connection. Wide shields are provided to prevent hay from wrapping around ground wheels.

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To your door Prepaid by us. Guaranteed live delivery. All our stock is of the Standard and free range and of heavy egg production at the price to meet times. And they are all No. 1 only



S. C. White Leg. }  
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Broiler chicks 10 cents each.					

Superior Poultry Farms and Hatchery, Box 203, Zeeland, Mich.

Additional Poultry Ads. on Next Page

## Spring Poultry Work

By E. I. Farrington

THIS is a good time to hatch turkeys and guinea chickens, both of which are delicate when small, although robust enough later. May is usually a month in which there are several cold rains, and if the youngsters escape this, they have a better chance of reaching maturity. It is most important that they should be kept free from dampness and draughts.

### Poultry Needs Shade.

With the coming of warm weather it will be necessary to have shade for the chickens. Even more susceptible to the heat of the sun are ducklings. On commercial plants low shelters covered with boards or burlap are provided, if there are no trees or shrubs to give protection. Some such plan may be followed on a small place, but often it is quite possible and more satisfactory to furnish natural shade, which can be done by growing artichokes, sunflowers, or something of that kind. The artichokes can be allowed to grow right in the hen yard if protected until they get well started, for the hens will not eat the leaves. Of course, the Jerusalem artichoke is meant, the so-called French artichoke being an entirely different plant.

Jerusalem artichokes provide good shade when planted rather closely and once started will come up year after year. In fact, there is some danger that they will multiply and spread so fast as to become a nuisance. At least some should be dug out each season.

The sunflower has special merit in the fact that the seeds make excellent poultry food. Truth to tell, the sunflower is not appreciated as it should be, but of course the Russian or mammoth variety should be grown. These tall sunflowers standing close together make a good summer hedge and screen the poultry yard as well as providing shade in the fall.

### Fresh Water Necessary.

Fresh water is needed as much as shade. It is best renewed several times a day, but if this requires too much labor, a barrel may be elevated on blocks and a small hole bored near the bottom. A plug with a groove in one side can be driven into the hole, thus allowing water to drip slowly into a basin underneath. There are patented drinking fountains on the market which will hold enough to supply a large flock all day.

Vermin are not a pleasant subject for discussion, but they must be reckoned with when warm weather comes, for then they multiply with almost unbelievable rapidity. This is especially true of the red mites which collect on the fowls at night and fill themselves with blood. They are harder to fight than common lice because they leave the hens or chickens in the morning, hiding under the perches or in cracks in the walls. The simplest way to deal with these pests is to use carbolineum or some such thick mixture on the under part of the perches, and to spray the walls with a prepared lice paint, which can be put on easily with a common spray pump. Even if the house becomes badly infested, all trace of vermin may readily be done away with by this plan, without an excessive amount of labor.

### Good Green Food Crops.

The hens and chickens will need green food all through the summer. If they have range, of course, the owner need not trouble about this matter, but if they are confined it will be necessary to grow something for them. Dwarf Essex rape is to be recommended, as it grows quickly and renews itself if only parts of the leaves are removed. Oftentimes rape can be sown in the sweet corn, where it will occu-

py no extra ground. New Zealand spinach and Swiss chard are also good greens for the hens, although perhaps not eaten quite so readily. They are easily grown, and as they, too, produce new leaves as fast as the first growth is removed, it isn't necessary to make a large planting to keep the hens supplied with greens.

If you have more hens than you are likely to need for your own table, you will be wise to sell or can them rather than to keep them along until you want them to eat. In this way you will save the feed which they otherwise would consume.

Remember that the secret of getting your pullets to lay early in the fall is to keep them growing rapidly all through the summer. If they are fed irregularly, allowed to go without water, or kept in the hot sun, they are likely to receive a setback from which they will be slow to recover. Give them all the range possible, and be sure that they are not crowded at night. Even well grown chickens are often killed because the pen is too full, for the birds pile up in the corner when the night gets cold.

### RABBIT WITH SORE EYES.

We have a young rabbit six weeks old that has a sore eye. A white scum appears to cover the eye. Have been washing it out with boric acid daily, but it appears to be getting worse. What had I better do for it?—H. G. E.

A disease called ophthalmia sometimes affects the eyes of rabbits, making them very sore and inflamed. Exposure to draughts and damp hutches may cause it. Try bathing the eyes with warm water and then with milk. If this does not help, bathe the eyes four times a day with a solution of one ounce of white copperas in a pint of water. Keep the rabbit in a clean hutch where there are no draughts but plenty of ventilation.—K.

### POULTRY TROUBLES.

Please tell me what to do for hens that get lame. They look well, their combs are red, then they get lame. Others act dumpish then become lame. Would the chickens be fit for food when in the first stages of this lameness? Also tell me what to do for white diarrhea.—J. C. H.

Lameness in hens, accompanied by rapid emaciation, is a sign of tuberculosis and there is no cure for that disease. Lameness in a fowl that appeared otherwise healthy might be due to rheumatism. Sometimes it is due to bumble foot. That is an abscess on the foot due to a bruise caused by jumping from a high place to a hard floor or stepping on some sharp material which has caused an infected cut. In such cases the abscess must be drained, the wound washed with a disinfectant and the foot bandaged until healed.

Whether a lame chicken would be fit for food when it first became lame would depend on whether the bird was diseased or the lameness was caused by a kick from some farm animal. An examination of the carcass would probably tell. If the bird was tubercular it would not be fit for food. If there were many birds in that condition it would certainly pay to have a veterinarian inspect them and pass on their value as food.

White diarrhea among chicks can be controlled by giving buttermilk as the first drink. Then keep buttermilk and sour milk before the chicks at all times. Vigorous breeding stock and good feeding and brooding conditions help to prevent white diarrhea. Many cases of digestive disorders caused by chilling and wrong feeding are not due to the white diarrhea germ.—K.

## DAIRYMEN HOLD CONFERENCE.

(Continued from page 606).  
establishing the validity of its contracts in the courts.

Mr. Ayres stressed the importance of adequate financing when starting a cooperative organization to engage in manufacturing because of the fact that producers want cash while the returns on sales, especially of cheese, may not come in for several weeks.

The Dairymen's Cooperative Sales Company of Pittsburgh, and the Interstate Milk Producers' Association in Philadelphia territory act primarily as bargaining associations, the price of milk being established in conference with the distributors and with Dr. Clyde King as arbitrator. Milk manufacturing is a small feature in both sections and advertising campaigns to increase milk consumption are expected to reduce the quantity of milk to be manufactured still more. So long as distributors restrict themselves to a reasonable handling charge there is no effort on the part of the producers to enter the retailing field although the charter of the Pittsburgh organization would permit such activities.

Professor Oscar Erf stated that cooperative distributing organizations in Ohio had not been a success on the whole as a result of small scale operations and faulty management and small scale operations also had caused the downfall of many of the cooperative creameries of the state.

The problem of organizing the milk producers around the cities of 10,000 to 50,000 inhabitants, and the country cream seller were discussed and the need for suitable organization plans which could be recommended to groups of such producers who wished to organize was pointed out.

A. J. McGuire stated that the cooperative creameries of Minnesota would like to cooperate with those of Wisconsin and Iowa for the marketing of their products since all of them produced extra high quality butter as a result of the fact that each creamery obtained its cream from nearby territory. Combination with creameries unable to produce high-quality butter or with centralizers would be difficult.

The growth of the Wisconsin Cheese Federation from forty-four factories to one hundred and twenty, and the conduct of a business of \$3,360,000 by the federation on a capital of \$1,320, was discussed by L. G. Foster. This organization is extending its activities to warehousing in addition to selling, is branding its cheese and developing a special market. Eventually it is the hope that sixty per cent of the cheese produced in the two thousand seven hundred factories in Wisconsin will be under contract and amalgamation with cheese producers of Minnesota and Michigan is desired.

A. J. Glover, discussing the use of whey and skim-milk, pointed out that in the emphasis upon the price of milk products, the producer should not lose sight of the function of the dairy cow as a conservator of fertility, a utilizer of rough feeds and the value of dairy by-products; that farmers often punished themselves more by failing to appreciate the feeding value of skim-milk than they were punished by unfair distributors.

R. C. Potts, chief of dairy marketing of the department of agriculture, outlined the eight fundamental principles of successful cooperative marketing as follows: The proper control by the producers of the supply, ownership and operation of the country plants, the control of the product while in the channels of distribution, organization on a sound business basis especially proper financing, efficient management to keep down overhead, national market news service, stimulation of maximum consumption by advertising and standardization to put production on a quality basis so that the consumer would be protected.



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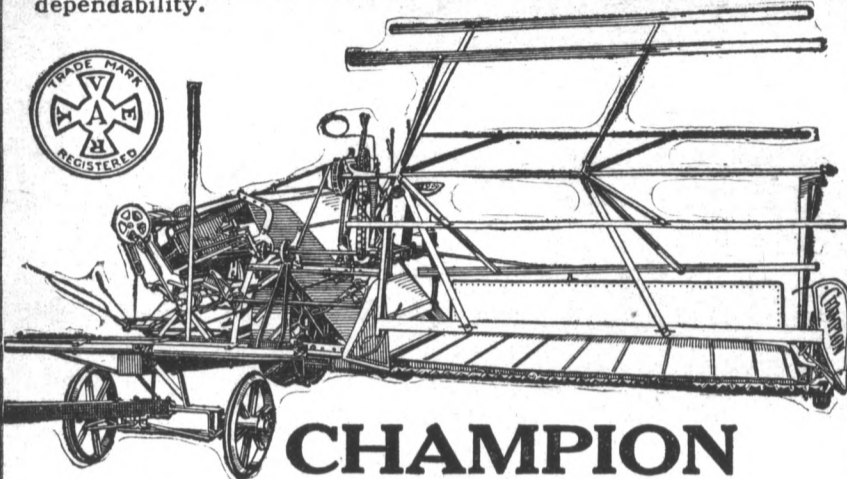
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Additional Poultry Ads. on Page 633

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## Dairy Farming

### Feed Markets All Askew

*Some Lines Firmer, Others Lower Says Sanders Sosland*

**A** FEW feedstuffs are looking up in price, and the market as a whole is developing firmness. For the immediate future, at least, it is quite safe to conclude that the tendency of values will be upward and that on a majority of feeds the bottom has temporarily been reached. Economic conditions suggest that the trade in virtually every line should "steer clear" of the bull side, and there is, therefore, a strong tendency against assuming a friendly attitude toward values for corn and oats, cottonseed and linseed cake and meal, bran and shorts, alfalfa and molasses feeds and similar commodities. While most feeds already have undergone such a radical downward readjustment that a bulge of material proportions is only natural, feeders should not become enthusiastic about accumulating large stocks for deferred requirements.

#### Corn Values Somewhat Erratic.

Action of the corn market serves to temper bullish sentiment as to the position of feedstuffs values. While corn has fluctuated in an erratic course, having recorded occasional gains in prices in recent weeks, the definite trend of the market has continued downward. It is very improbable that feedstuffs will enjoy material advances in prices at the same time that corn moves downward or even remains around its current level. Of course, the leading coarse grain could easily turn from its weak position, around forty-five to fifty-eight cents a bushel on middle west markets, including Chicago, at the present time; in fact, observers of the trade express the belief that corn may develop strength and share in a late spring and early summer bulge. The market is now practically the lowest on the crop.

#### Oat Market Offers Little for Encouragement.

Oats are in a position almost identical to that of corn, if possibly not in a weaker state. The time is not far distant until new oats will become available in commercial channels, with the growing crop conditions excellent as a rule. But the old crop stocks of oats are of enormous proportions, the visible and farm holdings of the United States, together with the record supply still available in Canada, are large enough to make a good-sized crop. The country faces the prospect, therefore, of two crops of oats on its hands. Demand for oats is extremely light, the human rolled oat food manufacturers as well as feeders manifesting an almost total lack of interest in offerings. The only strengthening influence in the market is the slow movement of both corn and oats from farms, the result of dissatisfaction over prices, poor condition of roads, rush of spring field work and a tendency to delay marketings until there is some assurance of another large corn crop. The corn acreage is expected to be practically up to the average of recent years, and there is little doubt but that another large out-turn of the coarse grain will mean further demoralization of the market for this cereal and other feeds.

#### Cottonseed Favored.

Readers of The Michigan Farmer will recall that the writer urged against the purchase of linseed cake and meal and at the same time manifested a friendly attitude toward the accumulation of supplies of cottonseed feed. Some considered this as inconsistent, and under normal conditions this

would be true. However, the flaxseed by-product was abnormally high and the product of the cottonseed at the lowest level of any protein feed. The theory has worked out as expected, a break of about \$12 to \$13 a ton having been recorded in linseed cake and meal from its high point within a period of a few weeks, while cottonseed cake and meal have advanced \$3.00 to \$4.00 a ton. Linseed feed has possibly not yet reached bottom, now selling around \$30 a ton for carlots at Minneapolis, and about \$32 a ton in New York or Buffalo. Still, further declines will be slow.

#### Cottonseed Cake.

Cake and meal of forty-three per cent protein content are bringing around \$25.50 a ton in Texas, the basic state on this feed, around \$26 in Oklahoma and about \$27.50 in Little Rock, Arkansas, and surrounding territory. Mill production of cottonseed feed is light, yet the seed stocks on hand still are large, which promises increased activity of the crushing plants. Caution is now advisable in the purchase of cottonseed feed around current price levels. The withdrawal of speculative or foreign demand might bring an easier tone to the market, possibly an abrupt downturn, and the speculative trade, which recognizes that its buying power is the strengthening influence, cannot be expected to maintain its present schedule of purchases while seeking to accumulate stocks.

Bran and shorts also have strengthened in price, though the rally has been slow. Bran is about \$2.00 a ton above the bottom, selling around \$15 a ton in Kansas City, \$15 to \$16 in Minneapolis, \$17 to \$19 in St. Louis and \$18 to \$19 a ton in Chicago territory. Gray shorts are bringing about \$20 to \$21 a ton in Minneapolis, about \$1.00 to \$2.00 a ton higher than a month ago, about \$18 to \$19 in Kansas City, and \$21 to \$22 in St. Louis and Chicago. About the middle of April the market for bran had declined to around \$13 a ton, basis the leading western milling centers, the lowest price since the fore part of 1906, more than fifteen years ago. While neither mill offal can be considered as in a strong position, the prospects of further sharp recessions are not bright. Some of the large speculative millfeed operators in the east have recently been in the market for "season bran," that is, bran for shipment at any time during the remainder of 1921, around \$10 a ton in Kansas City, and \$13.50 in St. Louis, and about \$10 to \$11 in Minneapolis. So far as could be learned, not a single sale of bran for season shipment has thus far been made, millers and distributors in the west considering the bids of the eastern trade far below a working basis.

#### Production Reduced.

Reduced production of bran and shorts is probable the remainder of the crop year. Even at the present time flour milling plants are operating at hardly thirty to forty per cent of capacity, owing to a dearth of demand for the better grades of flour. Many mills, which in recent weeks have been grinding actively, accumulated the flour in their warehouses and loaded up as much as possible before shutting down. The millfeed was worked off into consumptive channels. Now, with many mills entirely down, flour already ground must be worked off, which

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doubtless will be reflected in scant offers of millfeed. This is bullish, of course, yet demand is extremely light in most sections of the country, and dealers are doubtful whether the reduced production will be felt. The latter half of May might record some strength in bran and shorts, but easier quotations are probable before the close of the crop year.

#### Hay Not Wanted.

Insignificant marketings from the west serve to maintain prices for alfalfa, tame and prairie hay at an abnormal level in the consuming sections of the country, yet the western producer argues that he cannot afford to ship because of the low prices offered for his surplus. At any rate, the market for alfalfa is at too high a level to suggest purchases, and the feeder in Michigan or surrounding states, as well as in other sections of the country, is unwilling to buy forage at a delivered price figuring almost twice as high as corn or oats. And, so long as this condition prevails, a narrow hay trade, with an extremely light demand, is probable. Only a few cars, less than forty each day, are being received in Kansas City, the world's largest distributing market, but more or less difficulty is being experienced in disposing of this insignificant quantity.

#### REDUCED FARES TO BIG SALE.

REDUCED fares to the biggest Holstein sale of the year, have been granted by railroads in certain territories. Breeders coming to the Second National Cooperative Sale of the Holstein-Friesian Association of America, to be held from May 31 to June 4 in Syracuse, N. Y., in connection with the annual meeting of the association, will effect a twenty-five per cent saving.

States included in the reduced fare area are Michigan, Indiana, Ohio, Pennsylvania, West Virginia, Maryland, Delaware, New Jersey, New York and the portion of Illinois bounded on the west by a line drawn from Chicago to St. Louis. Breeders coming from beyond these states can secure reduced fares while within the area.

When buying tickets to Syracuse, breeders within the states listed should ask for reduced fare certificates. These will be stamped at the sale and count for one-half the cost of the return ticket. Certificates will not be granted on fares into Syracuse costing less than sixty-seven cents.

Members from beyond the reduced fare section can secure a certificate when entering the territory and the reduction for that part of the trip. Officials of stations not having certificates will furnish information as to where they can be secured. It will necessitate a change in both cases, but will mean a saving.

#### TO CLEAN UP DAIRY HERDS.

PROSPECTS grow better every day for the bringing to Saginaw county of a state and federal approved veterinarian to test county dairy herds for tuberculosis and to supervise the care of local herds in the interest of the milk supply. About one hundred and fifty farmers have signed applications for the state and federal supervision and many others have signified their intentions of doing so. If three hundred dairy herd owners of the county agree to cooperate, the testing and supervision of the herds can be done at a slight additional cost of production for milk.—M.

#### STATE TO DEMONSTRATE USES OF LIGHT SOILS.

AT the solicitation of Secretary Marston, of the Northeastern Michigan Development Bureau, who is also a member of the new state conservation board, the state board of agriculture has agreed to give special attention this year to demonstrations of the possibilities of the light soils of central and northern Michigan. This means that the demonstration farm near Grayling, owned by the development bureau, will be the scene of a large part of these demonstrations, which will be carried on under the direction of Dean Shaw, who is at the head of the extension service of the Michigan Agricultural College, and Dr. McCool, of the soils department.—M.

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R bulls from eight to fourteen months. Best of  
breeding, the growthy kind that make good. Reason-  
able. Inquire F. J. WILBER, Clio, Mich.

### CLOVERLY ANGUS

Cows and Heifers Bred to  
Blackcap Brand of Woodcote 2nd  
For Sale  
GEO. HATHAWAY & SON, Ovid, Mich.

### Reg. Aberdeen Angus

bulls and heifers of the very best of breeding, from  
12 to 15 months of age. For next 30 days will price  
bulls at \$100.00. Real bargains. Inspection invited.  
RUSSELL BROS., Merrill, Mich.

Registered Guernseys a Three yr. old  
heifer, her heifer  
calf born Feb. 1, for \$350. An 8 mo. old bull calf  
no relation to above for \$100. The three for \$400.  
J. M. WILLIAMS, North Adams, Mich.

**GUERNSEYS**—REGISTERED  
BULL CALVES  
Containing blood of world champions.  
HICKS' GUERNSEY FARM, Saginaw, W.S. Mich.

Guernsey Bulls of May Rose Breeding  
Their dams have records  
420 to 650 lbs. fat also a few cows and heifers are  
offered. H. W. Wigman, Lansing, Mich.

FEDERAL Inspected Guernsey Bulls. Priced to sell.  
Nine sold in 10 mos. A fine Masher Sequel 3 yrs.  
old, sure, sound and right \$125.00. Four grandsons  
of Ex-Champion A. A. cow, under 8 mos. old from cows  
on test. G. W. & H. G. RAY, Albion, Mich.

For Sale 5 young imported Reg. Guernsey cows  
for \$250 each. Also May Rose herd  
bull; his 5 nearest dams average 725 lbs. fat, \$300.  
E. A. BLACK, Howard City, Mich.

Reg. Guernsey bulls for sale cheap. State T.B. test-  
ed and from good producing and A. R. cows. Age 1  
to 12 mo. C. E. Lambert & Sons, Linwood, Mich.

FOR SALE Guernsey bulls, old enough  
for light service.  
L. J. BYERS, Coldwater, Michigan

I Have one yearling Guernsey bull left; May Rose  
breeding; cheap if taken soon; write or come.  
John Ebels, R. 2, Holland, Mich.

A Good Note accepted in payment of finely bred reg-  
istered Holstein bull calves. Quality  
of the best, and at prices within reach of all. Write.  
GEO. D. CLARKE, Vassar, Mich.

Holstein Friesian heifer and bull calves, purebred  
registered and high-grade. Price \$20 up.  
Splendid individuals and breeding. Write us your re-  
quirements. Browncroft Farms, McGraw, N. Y.

Reg. Holstein Bull Calf \$60 Reg. and Del.  
Born in Dec.  
J. R. HICKS, St. Johns, Mich.

### Blythefield Farms

Settle your Herd Sire problem now by getting a  
thirty pound record pure bred Holstein bull calf  
from Blythefield Farms. Address  
JOSEPH H. BREWER, Grand Rapids, Mich.

Holstein or Guernsey calves, practically pure,  
7 weeks old, \$25.00 each, crated for ship-  
ment anywhere. Satisfaction guaranteed. Bonds  
Accepted. Edgewood Farms, Whitewater, Wis.

For Sale 8 reg. Holstein cattle, 5 cows, 3 heif-  
ers. Price \$1200. For information write  
HENRY BAILEY, Wyandotte, Mich.

## WinnWood Herd Registered Holstein-Friesian Cattle

We breed them to sell. If you  
are looking for seed stock, we  
have it.

John H. Winn, [Inc.]  
Rochester, Mich.

## Our Consignment of the Lansing Sale May 23rd

consists of a 4 months old son of the State  
Champion jr. 2 yr. old of Michigan for 1920.  
A 19 lb. 3 yr. old daughter of a 31 lb. cow.  
Two daughters of "Alcartra Pontiac Butter  
Boy" whose daughters are making such splen-  
did records. A heifer calf sired by Judge  
Joh. Lyons.

SINDLINGER BROTHERS  
Lake Odessa, Mich.

## A Proven Blood Line

KING SEGIS transmitted to his sons the power to  
transmit to their daughters the greatest of produc-  
tion over long periods. It is his offspring that has  
recently made the greatest yearly production ever  
dreamed of 37,381.4 pounds of milk in a year.  
We have for sale at moderate prices.  
Beautiful individuals of show type KING SEGIS  
BULLS.  
GRAND RIVER STOCK FARM,  
315 N. East Ave., Jackson, Mich. C. J. Spencer, Owner,  
Under State and Federal Supervision

## Livingston County Holstein Association

## Quality Sale

At Howell, Mich., Wednesday, May 18, 1921

At 10:00 O'clock A. M.

THE HOME OF HEALTHY CATTLE From herds under FEDERAL SUPERVISION 60-90 day retest privilege.

## 90 HEAD REGISTERED HOLSTEINS

Two-thirds either have A. R. O. records or are from record cows. 5 cows with records from 25 to 29 lbs. 1 daughter of a 32 lb. cow. 9 bulls whose dams have records from 25 to 32-lbs.

JAY B. TOOLEY,  
PresidentJ. G. HAYS,  
SecretaryFor catalogs (ready May 6th) Address  
F. J. FISHBECK, Howell, Mich.

Registered Holsteins--bulls, heifers or cows always for sale. Priced reasonable. Satisfaction guaranteed. Write or come, B. B. Reavey, Akron, Mich.

## "Top Notch" Holsteins

Buy a "milk" Bull of Quality from the Breeders of the world's only cow to produce 800 lbs. milk in 7 days, having an 800 lb. daughter.

Our herd is rich in the blood of Colantha 4ths Johanna, the only cow that ever held all world's records in every division from one day to one year at the same time. She produced 651.70 lbs. milk in 7 days. We are offering for sale a bull, whose dam exceeds this record by over 7½ lbs. in 7 days.

His dam's records are:  
Milk 1 Day 100.1 lbs.  
Milk 7 Days 639.3 lbs.  
Butter 7 Days 26.31 lbs.His name is KING VALE CORNUCOPIA WAYNE, No. 312599  
Born February 6, 1920

His dam and sire's two nearest dams average

Butter 7 Days 33.02 lbs.

Milk 7 Days 607.3 lbs.

Handsomely marked about one third white.

McPHERSON FARMS CO., Howell, Mich.

All herds under U. S. Supervision.

## Registered Holstein Bull.

Sired by a son of King Ona and from a 22 lb. cow. \$90 delivered your station. Write for pedigree.

EARL PETERS, North Bradley, Mich.

## The Traverse Herd

We have what you want in BULL CALVES, the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dam's records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

TRAVERSE CITY STATE HOSPITAL  
Traverse City, Mich.Third  
Michigan State Sale

75 of Michigan's Choicest Holsteins, selected from thirty of the best herds in the state.

Every entry inspected and passed on by one of the best judges of Holstein cattle in Michigan.

Every herd represented is under State and Federal Supervision and Fully Accredited or has passed one or more clean tests without reactors.

The sale includes heifers bred to the following sires:

Seven to Judge Joh. Lyons, 34-lb. grandson of King Segis.

Five to King Ona Champion, 33-lb. son of King Ona.

Four to King Flint, 33-lb. son of Maplecrest Korn-dyke Hengerveld.

Three to Echo Sylvia King Model, 36-lb. grandson of May Echo Sylvia.

Two to King Pontiac Segis DeKol Lad, 40-lb. grand champion bull at the Brentwood Show.

Two to Carnation King Segis Hope, son of Carnation King Sylvia and from a sister to Segis Pietertje Prospect.

Twenty-four others bred to bulls whose dams have records above 30 pounds.

At Grand Rapids, May 27, 1921

Send for Catalogue.

## The Michigan Holstein-Friesian Association

H. W. Norton, Jr., Secretary,  
Old State Block, Lansing, Michigan

## Fourth Central Michigan Breeders Sale

May 23, 1921, at Michigan Agr. College,  
East Lansing, Mich.

## Sixty Head of Selected Holsteins

FEMALES will include a 26.4 lb. cow, a 22 lb. heifer, a daughter of a 31 lb. cow with 19 lb. at 3 years 4 days, and many others over 20 lbs. bred to such bulls as a son of King Joh. from a 34 lb. daughter of King Segis, King Lansing a son of Sir Korn-dyke Veeman Hengerveld from Dora DeKol Oosterbaan with 32 lbs. from 745 lbs. milk at 10 years.

BULLS: There will be a son of a 31.77 lb. four year old sired by a 30 lb. son of Sir Ormsby Banostine Champion ready for heavy service.

There will be a four months son of Judge Joh. Lyons from a 24 lb. two year old that took first prize in Michigan in 1919-1920.

A son of a 31 lb. cow that milked over 96 lbs. in a day sired by a son of Glista Erica 35.29 lbs. by a son of King Segis.

A son a Sycamore Stella Johanna with 27 lbs. butter and a milk record of 772 lbs. and over 3000 lbs. in 30 days sired by the son of Glista Erica ready for heavy service.

You can buy these cattle with the assurance that they are healthy.

Sixty to ninety day retest privilege. Guaranteed breeders.

For catalog address

Albert E. Jenkins, Sale Mgr.,

Eagle, Mich.

M. D. Buth Dispersal Sale  
Thursday, May 26, 1921

on Creston Stock Farm, Comstock Park, Mich.

## 65 HEAD

including 20 head of the Maryland Farm Herd. Dudley E. Waters, Owner

4 cows with records from 30 to 38.9 lbs.; 7 sons and daughters from cows with 30 to 38.9 lbs.

5 cows from 25 to 30 lbs. and their daughters; 8 sons and daughters from 38-lb. sire, several sons and daughters from 43-lb. sire, 40 females in calf to Glen Alix King De Kol, his Dam, and Gr. Dam 43 and 42 lbs. His get are the show ring type.

16 daughters of the great show sire, Colantha Sir Korn-dyke Clothilde, with records as high as 22 lbs. 2-year-old, and up to 29 lbs. at 4-year-old, three with records of better than 600 lbs. of milk in 7 days.

This will make the best sale held on a farm in Michigan as to healthy condition and the large number of show type animals to be offered. Will allow 60 to 90 day retest.

Autos will meet street cars at Comstock Park out of Grand Rapids.

Central Mich. Sale

May 23

J. M. Robin

May 24

M. D. Buth

May 26

Mich. State Sale

May 27

## We Now Offer for Immediate Sale

Flying Fox of Glenburnie 145949, a son of Oxford Daisys Flying Fox 83284 who has 34 tested daughters. Dam Signals Fair Dagmar 225156 in R. M. This is an opportunity to secure an exceptionally good breeding and show bull at a very low price, considering his breeding. Very good dairy conformation and beauty. Herd on accredited list.

Glenburnie Jersey Farms

R. 2, Washington, Mich.

Additional Stock Ads on Next Page

A Complete Dispersal Sale of  
40 Head of Reg. Holstein-Friesians

(Herd Federal tested with a clean test). Sold subject to 60 to 90 day retest. Many creditable A.R.O. Records in Herd. 25 Head fresh or safe in calf to our Young Herd Sire—Sir Ormsby Lilith Segis whose dam made 30 lb. butter and over 600 lbs. milk as a 4 yr. old.

Sale Saturday, May 21, 1921 at 1 o'clock

Rain or Shine to be held under cover

Catalog ready May 1st. Terms to responsible buyers. Bring Bank references.

WM. GOTTSCHALK, New Haven, Mich.

Stop Fairchilds. Electric Cars Leave hourly from Detroit to Pt. Huron. Free transportation from Cars at Fairchilds. Location of farm 8 miles northwest of Mt. Clemens, 4 miles southwest of New Haven 1½ miles southeast of Meade.

Albert E. Jenkins,  
Sales ManagerCol. D. L. Perry,  
Auctioneer

## Veterinary.

CONDUCTED BY DR. W. C. FAIR.

Advice through this column is given free to our subscribers. Letters should state fully the history and symptoms of each case and give name and address of the writer. Initials only are published. When a reply by mail is requested the service becomes private practice and \$1 must be enclosed.

**Weakness—Azoturia.**—I have eight-year-old mare that tires when doing hard work, but seems to stand light work all right. Another mare had a milk attack of azoturia some four weeks ago; since then she does not thrive. Do you recommend sulphur as a remedy for horses? If so, what is the dose for a horse? C. H. N., Milan, Mich.—Your mare lacks condition, her heart and muscles of body are weak. Feed her all the oats and good mixed hay she will eat and avoid exhausting her. It will require time to put her in good condition. Give your mare two tablespoonfuls of bicarbonate of soda in feed or in drinking water three or four times a day. Exercise her daily. No, don't give sulphur.

**Scours.**—Brood mare due to foal some time soon, occasionally scours and I am told that she has lost more than one colt. What can be done for her? A. S., Bad Axe, Mich.—The less exercise she has the fewer the bowel movements. However, if she is fed oats, some wheat bran and timothy hay her bowels will not act too freely.

**Sore Neck.**—My horse is troubled with sore neck, caused by the collar. His mane is heavy and after sores heal a hard scab forms. I need him for work. J. S. M., Onesick, Mich.—Freeze the sore parts with an ethyl chroide spray, this will terminate the infection and irritation of the skin.

**Preventing Heat.**—I have mare that comes in heat every three weeks. Can I do anything to prevent it? W. F., Mt. Clemens, Mich.—Spaying is the only preventative remedy, but if not vicious, why have it done?

**Indigestion.**—I feed my twelve-year-old mare fourteen quarts of oats and all the timothy hay she will eat, but she fails to lay on flesh. She urinates often, strains some and hind legs stock. Had teeth floated. O. K., Northport, Mich.—Oats and timothy are not fattening, feed equal parts of corn and oats, also give her some roots and mixed hay.

**Mammitis.**—My cow came fresh two weeks ago; since then her udder has been badly swollen and her milk is of poor quality. J. L. T., Mason, Mich.—Apply one part fluid extract of poke and six parts petrolatum or lanolin to udder twice a day; give her a tablespoonful of fluid extract of poke three times daily. Milk her clean three times daily.

### COMING LIVE STOCK SALES.

- Holsteins.**—May 18, Livingston County Holstein Association, J. G. Hays, Secretary, Howell, Mich.
- Holsteins.**—Holstein-Friesian Association of America, May 31 to June 4, Syracuse, N. Y.
- Holsteins.**—May 23, Central Michigan Breeders' Sale, M. A. C., East Lansing, Albert E. Jenkins, Sale Manager, Eagle, Mich.
- Shorthorns.**—May 10, Central Michigan Shorthorn Breeders' Association, Greenville, Mich. M. E. Miller, Secretary, Greenville, Mich.
- Holsteins.**—May 27, Michigan Holstein-Friesian Association, Grand Rapids, Mich. H. W. Norton, Secretary, Lansing, Mich.
- Holsteins.**—May 26, Creston Stock Farm, Comstock Park, Mich.
- Holsteins.**—May 20, G. E. Bench, Plymouth, Mich.
- Aberdeen-Angus.**—September 23, Eastern Aberdeen-Angus Breeders' Association Sale, Eastern States Exposition, Springfield, Mass. F. W. Burnham, Greenfield, Mass., Secretary.
- Aberdeen-Angus.**—October 12, Indiana Aberdeen-Angus Breeders' Association Sale, Indianapolis, Ind. Prof. C. F. Gobble, Lafayette, Indiana, Secretary.
- Holsteins.**—May 21, Wm. Gottschalk, New Haven, Mich.
- Guernseys.**—October 19, Michigan State Sale, Lansing, Mich. F. E. Fox, Waukesha, Wis., Sales Manager.
- Aberdeen-Angus.**—June 9, Michigan Aberdeen-Angus Breeders' Association Sale, East Lansing, Michigan. Ward Hathaway, Ovid, Mich, Secretary.
- Aberdeen-Angus.**—June 22, Ohio Aberdeen-Angus Breeders' Association Sale, Fair Grounds, Columbus, Ohio. C. D. Littleton, Kenton, Ohio, Secretary.

## Combination and Dispersal Sale

of Wood-Crest Farm & Fisher Farms, at Wood-Crest Farm, Plymouth, Mich.  
FRIDAY, MAY 20, 1921

### 55 Head of Holstein-Friesian Cattle

Both herds under State and Federal test.

There are five grand daughters of King of the Pontiacs with records as high as 18.81 butter at two years old. Five daughters of a 32 lb. son of Johan Hengerveld Lad. Seven daughters of a son of King of the Pontiacs Segis. A 25.70 lb. cow that milked 581.5 lb. granddaughter of Laura Posch that we expect will make 30 lb. before sale. A 19.55 lbs. 2 year old with two of her daughters.

**BULLS:** A two year old son of King Korndyke Sadie Vale from a 32.12 lb. four year old daughter of Sir Veeman Hengerveld. A three year old grandson of King of the Pontiacs from a 24 lb. 11 year old cow. A two year old grand son of Johan Hengerveld Lad from a 25.70 lb. cow.

All cows and heifers old enough to be bred are bred to King Korndyke Sadie Hengerveld a 32.12 lb. son of King Korndyke Sadie Vale.

60 to 90 day guarantee for tuberculosis. Wood-Crest Farm is located on the Plymouth Road 8 miles east of Plymouth and 14 miles west of Detroit. Sale will be held under cover.

**Auctioneer Harry Robertson;** **Sale Manager S. T. Wood**  
For catalog address Geo. E. Bench, Wood-Crest Farm, Plymouth, Mich.

A three unit Perfection Milking machine will be included in the sale.



## HOLSTEIN CATTLE

Mr. Datus Clark, Member Farm & Market Council, Albany, N. Y., writes: "Twelve years ago, my Holstein start cost \$1,100. The thinking farmer can decide as to the financial end. I now have eighty head and have sold as many dollars worth of cattle as I have bought and have made much more in milk than I would have with scrub or grade cattle." Send for free booklets.

The Holstein-Friesian Association of America  
164 American Bldg., Brattleboro, Vermont

## O. I. C. HOGS

all ages sired by Callaway Edd 1918 world's grand champ. boar and C. C. Schoolmaster 1919 world's grand champion also Wonder Big Type and Giant Buster. Write your wants, all stock shipped on approval.

CRANDELL'S PRIZE HOGS,

Cass City, Mich.

### CATTLE

## Cluny Stock Farm

Offers

Cluny Konigen Colantha Silver 326205  
Born May 29, 1920

A white bull with a few black spots. His sire a 30 lb. son of King Segis Pontiac Konigen. Sire's 7 nearest dams average 32.301 lbs. butter 624.1 lbs. milk in 7 days.

His dam has a Jr. 3 year old record of 17.583 lbs. butter from 418.7 lb. milk and is a granddaughter of Colantha Johanna Lad.

2nd dam—a 21 lb. cow that our barn records show milked over 145,000 lbs. in 14 milking periods producing 15 calves.

Pedigree on application. Price \$250.00. Federal Accredited Heifer.

R. Bruce McPherson, Howell, Mich.

### Here Is a Good One

Born June 2nd, by Maplecrest De Kol Hengerveld, a sire having three sisters each having records of over 2500 pounds of butter in a year. Two of them former world champions, calf's dam by an own brother to Highland Hartog De Kol yearly record of 1247.95 pounds. This combination of breeding will give results. HILLOREST FARM, Kalamazoo, Mich.

3 goddaughters (2 yr. olds) of Maplecrest Korn. Hengerveld bred to 32 lb. son of King Korn. Sadie Vale. T. B. tested, good size, good individuals. Terms \$150 a year. M. L. McLartin, Redford, Mich.

**Reg. Holsteins** for sale at all times either sex. Bulls or heifers, prices reasonable. Write or come and see them. HENRY S. ROHLFS, R. 1, Akron, Mich.

## HEREFORDS

Cows with calves at side, open or bred heifers of popular breeding for sale. Also bulls not related.

Allen Bros. Paw Paw, Mich.

616 So. Westnidge Ave., Kalamazoo, Michigan

**Thumb Hereford Breeders Association** now offering some excellent young males and females of choice breeding. Can furnish one or a carload. Priced right. Your inspection solicited. Jas. R. Campbell, Secretary, Bad Axe, Mich.

## HEREFORDS

Two high class, registered bulls, nearly a year old, for sale. One double standard, and one with horns, good size, color, and markings. Both the making of show bulls.

COLE & GARDNER, HUDSON, MICH.

**BUTTER BRED JERSEY BULLS** FOR SALE  
CRYSTAL SPRING STOCK FARM, Silver Creek, Allegan County, Michigan.

### The Wildwood Farm

Jersey Cattle, Majesty strain, Herd on State accredited list. R. of M. testing constantly done. Bulls for sale. ALVIN BALDEN, Phone 145-5, Capac, Mich.

**Thorbred Jersey Bull Calves** Hood Farm breeding, State and Federal accredited list, \$35.00 each. Also one yearling bull ready for service. Pedigrees on request. L. W. JAYNE & BEN BRAWT, Fenton, Mich.

**JERSEY BULLS** Ready for Service. Raleigh—Oxford and—Majesty breeding. Meadowland Farm, Waterman & Waterman, Packard Rd., Ann Arbor, Mich.

**Lillie Farmstead Jerseys** Bull calves from R. of M. cows. COLON C. LILLIE, Coopersville, Mich.

**Meridale** Interested Owl No. 111311 heads my herd bull calves from this great sire and out of R. of M. dams for sale. Leon E. Laws, R. 6, Allegan, Mich.

**Registered Jersey Bulls** ready for service from high producing dams. R. B. FOWLER, Hartford, Mich.

**Jersey Bulls** For Sale ready for service from R. of M. dams. T. B. tested. Will give time. SMITH & PARKER, R. 4, Howell, Mich.

**Registered Shorthorns.** Bulls and heifers. prices within reach of all. G. R. DESHETLER, R. 4, Tecumseh, Mich.

**Milking Shorthorns,** bulls and heifers 5 mo. to 1 year old for sale at reduced prices to make room for younger stock. E. H. KURTZ, Mason, Mich.

## BIDWELL SHORTHORNS

that will put weight on your dairy calves—the difference will soon pay for the bull. Now selling good Scotch and Scotch-topped yearlings, reasonably priced. We guarantee every animal to be a breeder. Federal Test. One hour from Toledo, Ohio. N. Y. C. R. R.

**BIDWELL STOCK FARM,** Box D, Tecumseh, Michigan

## Richland Shorthorns

We offer a few choice Scotch heifers with calves at foot. This is good foundation stock and the calves are all from top sires. Prices reasonable. Write your wants and see the cattle.

C. H. PRESCOTT & SONS, Office at Tawas City, Mich., Herd at Prescott, Mich.

## The Maple's Shorthorns

Kirklevington Lad, by Imp. Hartford Welfare, in service. Stock for sale.

J. V. WISE, Gobleville, Mich.

**Shorthorns.** Bull calves for sale from the best milking blood obtainable. ROSEMARY FARMS, Williamston, Mich.

**Huron County Shorthorn Breeders Ass'n.** offer for sale Scotch and Scotch topped males and females of all ages. 300 head to select from. For information address Jas. R. Campbell, Secretary, Bad Axe, Michigan.

**BUY SHORTHORNS** of Central Michigan Shorthorn Breeders' Association at farmers' prices. Write for sale list to M. E. Miller, Sec'y, Greenville, Mich.

**Reg. Red Potted** cattle choice young bulls from 6 to 18 mo. old for sale. FRANK KEBLER, R. 1, Grand Lodge, Mich.

We now have **FIVE BRED HEIFERS** that we will sell cheap if taken at once. Inquire about them or better come and see them. CARR BROS. & CO., Bad Axe, Mich.

## Francisco Farm Shorthorns

and BIG TYPE POLAND CHINAS. Now offering 3 heifers, 2 bulls, all Scotch. Sows to farrow in Aug. and Sept. Spring pigs. 60 head to choose from. POPE BROS. CO., Mt. Pleasant, Mich.

Reg. Red Potted bull calves, from 3 mos. to 1 year old, sired by Famous Charming, 75% same blood as Charming 1919 International Grand Champion. Our herd State and Federal tested. Westbrook Bros., Ionia, Mich.

### HOGS

## Place Orders NOW

for BERKSHIRE boars or sows 6 to 8 weeks old Reg. and Trans. and delivered any where in Mich. for \$15, or a fine large bred sow at \$40.00. I also have an exceptionally fine 400 lb. boar for sale at \$40.00. He is a dandy and anybody in the market for him should never pass this up. He is a good one. C. H. WHITNEY, Merrill, Mich.

**Berkshire Bred Sows** and Gilts \$50 and up, for April, May and June farrow. Have a few good fall pigs at reasonable prices for sale. M. G. MOSHER & SONS, Osseo, Mich.

**Berkshires** spring pigs. A few bred gilts and sows. A few young boars. After May 1st Duck eggs \$1.50 setting postpaid. Chase Stock Farm, Marquette, Mich.

## Brookwater Duroc Jerseys

FALL BOARS OPEN GILTS

All of the right type and the best of breeding.

Prices reasonable. Mail orders a Specialty. Satisfaction guaranteed.

**BROOKWATER FARM,** Ann Arbor, Mich.  
H. W. Mumford, Owner J. B. Andrews, Mgr.

### DUROC JERSEYS

Bred gilts, service boars and fall boar pigs at Bargain prices. Your correspondence or personal inspection is cordially invited.

RUSH BROS., Oakwood Farm, Romeo, Mich.

**Duroc Boars** at bargain prices large growthy hogs 15 months old at \$30. Will send O. O. D. and register in the buyers name. Orders booked for Apr. pigs to deliver June 1st. W. E. Bartley, Alma, Mich.

**Write Me** at once I have just what you want heavy bone registered Duroc Jersey boars ready for service. W. H. MAYES, L. B. 505, Durand, Mich.

**DUROC Jerseys.** Boars for spring service, heavy boned type, from the most popular blood lines at reasonable prices. Partridge Rock eggs from best laying strain \$2 per lb. Dredt & Berns, Monroe, Mich.



Spring pigs by Walt's Orion, First Sr. Yearling Detroit, Jackson, Cd. Rapids and Saginaw 1919

## Phillips Bros, Riga, Mich.

**DUROC SOWS** and gilts bred to 3 year old. Orion King No. 16925 Son of the \$10,000 boar owned by Longview Farm, Le Summit, Mo. also young boars ready for service out of good sows. Apply THE JENNINGS FARM, Bailey, Mich.

**Duroc Jersey Sows** and Gilts bred for March, April, May farrow. Also a few spring boars. Best of blood lines and splendid individuals. Satisfaction guaranteed. Write for pedigree and prices, or better come and see, visitors welcome. Thos. Underhill & Son, Salem, Mich.

**Buy good hogs now,** from one of the largest herds of Duroc Jerseys in the state. Open fall gilts at \$25. Sows and gilts bred for summer and fall farrow. Booking orders for spring pigs. Will accept a few sows to be bred to good sons of Great Orion Sensation and Duration. Michigana Farm, Pavilion, Mich.

**Chester Whites** Spring pigs from a combination of Wildwood Prince and Big Sensation breeding. George D. Springer, R. 6, Grand Rapids, Mich.

**A FEW CHOICE** Bred gilts for sale. Carey U. Edmonds, Hastings, Mich.

**DUROCS** Bred sows all sold. A few choice fall boars for sale. W. C. TAYLOR, Milan, Mich.

**Duroc Jerseys** Am booking orders for spring fall pigs. E. D. HEYDENBERK, Wayland, Mich.

**DUROCS** A few choice, ready for service, boars for sale. HARRY FOWLER, Sturgis, Mich.

**O. I. C. Swine** Strictly Big Type with quality. A few gilts bred for last of April, and May farrow. A few Sept. and Oct. fall pigs either sex. Extra good ones. Of our State Fair prize winning blood lines. Will ship O. I. C. and record them free. NEWMAN'S STOCK FARM, R. 1, Marlette, Mich.

**Write for Prices** on O. I. C. pigs of March and April farrow. Both sexes, Sire O. C. Callaway Boy. Good long ones the kind that fills the Pork bbls. Some good Jersey bull calves of the Albertas Jubilee kind. All stock reg. in buyer's name. VILLAGE STOCK FARM, Jeddio, Mich.

**O. I. C.'s** Choice gilts for April and May farrow, also fall pigs. Booking orders for spring pigs. A. J. BARKER & SON, Belmont, Mich.

**O. I. C.'s** 8 last spring gilts due to farrow in Mar. and Apr. some tried sows service boars and last fall pigs, not akin, big growthy stock. Registered free. Citz. Phone 124, Otto B. Schulze, Nashville, Mich.

**O. I. C.'s** 2 sows for May farrow. Orders booked for March pigs. J. O. THOMPSON, Rockford, Mich.

## Central Mich. O. I. C. Swine Breeders Ass'n.

Hogs of all ages of popular blood lines. Every sale guaranteed by association.

**DR. H. W. NOBLES,** Sales Mgr. Coral, Mich.

**O. I. C.** Big type serviceable boars, weigh from 150 to 250 lbs. Gilts bred for May and June farrow. Write for prices. G. P. Andrews, Mason, Mich.

**Saginaw Valley Herd.** Prize winning O. I. C.'s. Jan. and Feb. pigs, priced reasonable. J. Gibson, Fosters, Mich.

**O. I. C.'s** choice boars and spring pigs at farmers prices. CLOVER LEAF STOCK FARM, Monroe, Mich.

**O. I. C. GILTS** Bred for June and July farrow. H. W. MANN, Dansville, Mich.

Additional Stock Ads on Page 633

# LATEST MARKET REPORTS

## GRAIN QUOTATIONS

Tuesday, May 10.

### Wheat.

Detroit.—Cash No. 2 red \$1.48; May \$1.46; July \$1.26; No. 2 white and No. 2 mixed \$1.46.

Chicago.—No. 2 hard \$1.45@1.47½; No. 2 mixed \$1.40½.

### Corn.

Detroit.—Cash No. 2 yellow 66c; No. 3 yellow 65c.

Chicago.—No. 2 mixed 60¼@61c; No. 2 yellow 61@61½c.

### Oats.

Detroit.—Cash No. 2 white 41c; No. 3 white 39½c; No. 4 white 36½c.

Chicago.—No. 2 white 37@37½c.

### Beans.

Detroit.—Immediate and prompt are lower at \$3.35 per cwt.

Chicago.—Market is unchanged and steady. Demand fair. Hand-picked beans choice to fancy at \$3.60@4.25; red kidney beans \$8.75@9.50 per cwt. New York.—The market is steady. Choice pea \$4.25@4.40; do medium \$5; red kidney \$9.75@9.85.

### Rye.

Detroit.—Cash No. 2 rye \$1.36.

### Seeds.

Detroit.—Prime red clover, cash at \$13.50; alsike \$14; timothy \$3.15.

### Hay.

No. 1 timothy \$19@20; standard and light mixed \$18@19; No. 2 timothy \$17@18; No. 1 clover mixed \$16@17; No. 1 clover \$14@15; rye straw \$13@14; wheat and oat straw \$12.50@13 per ton in carlots at Detroit.

## WHEAT

During the past week the scarcity of cash wheat became especially conspicuous and at the same time the outlook for a big crop of new wheat has been modified by the reports of damage to winter wheat and estimates of a decrease of two million acres in spring wheat planting. The result has been a sharp advance in cash wheat prices. Old crop reserves will be entirely cleaned up by the time new wheat arrives if the present rate of disappearance continues. The strong statistical position of old crop wheat in this country has suddenly become prominent and has improved the price outlook for the new crop. Spring wheat seeding is not yet complete but advanced reports point to a reduction of 2,000,000 acres compared to last year, or around 30,000,000 bushels. Conditions for planting have been favorable for the most part.

## CORN

The demand for corn has shown a marked improvement during the past two weeks. With growers selling only moderate quantities, stocks in terminal markets are being depleted, rapidly and the visible supply has decreased one-third with further shrinkage highly probable. The domestic demand is broader and export buying has been a feature. Reports upon the acreage of the new crop show but little change compared with last year.

## OATS

Recent cold weather and frosts have damaged the oat crop to some extent in sections of large production. Drouth in the southwest has also caused some deterioration. No official report is available upon the acreage of oats but some increase is expected. Cash demand for oats has improved but not as much as for corn and stocks in terminals remain large.

## RYE

With a small visible supply, big export shipments during the past ten months and additional export sales not yet shipped, the rye situation closely resembles that of wheat and may be even more acute. The carryover is likely to be extremely small. Prices remain unusually close to the level of wheat.

## FEEDS

Linseed oil meal continued its precipitate decline during the past week and is now quoted as low as \$28 per ton in northwestern markets. Cottonseed meal, on the other hand, has been firm. Wheat feeds show but little change compared with a week ago. Middlings are slightly stronger than bran at most markets. Latest quotations per ton (100-lb. bags) in carlots were: Detroit.—Bran \$27; standard middlings \$25; flour middlings \$29;

coarse cornmeal \$30; cracked corn \$31; chop \$26.

## BEANS

The market for Michigan beans is firm, prices holding practically all of the advance scored late in April. Around \$3.60 to \$3.70 is the f. o. b. price for choice hand-picked with \$3 paid to growers for beans in the dirt. Holders are waiting for tariff legislation while wholesale grocers are only buying beans on a limited scale.

## SEEDS

Higher prices for grains, together with reports of frost damage to young clover caused an advance in prices during the past week in spite of a slow cash demand. Quotations upon clover seed for October delivery are about \$4 below the cash market while cash timothy is slightly lower than the future delivery.

## WOOL

The wool markets report a slight increase in demand during the past week with prices firm. Mills are buying more extensively against future needs and the demand for woolen goods continues healthy. Sales of the new clip in the west have not been extensive as growers are more confident as to the future. Foreign sales show advances of five to ten per cent with cross-breds stronger than merinos. Tariff legislation still hangs fire with the "emergency" practically passed. Imports during March were around 100,000,000 pounds or about one-third of the annual clip for this country. The Boston market is quoted as follows: Ohio and Pennsylvania fleeces, delaine unwash

ed 40@41c; fine unwashed 30@32c; half-blood combing 32@34c; three-eighths blood combing 29@30c. Michigan and New York fleeces, delaine unwashed 36@38c; fine unwashed 30@31c; half-blood unwashed 31@32c; three-eighths blood unwashed 28@29c.

## APPLES

Apple markets advanced another 50c per barrel during the past week, A-2½ Baldwins bringing mostly \$6.50@7 per barrel. Stocks are large but the outlook continues favorable for holders of sound stock.

## HAY

With light receipts in distributing markets, limited consumptive demand, and prices high compared with feed grains, the hay situation shows practically no change. Compared with a week ago values are slightly lower.

## EGGS AND POULTRY

Egg prices apparently have reached a stable level as changes have been slight for the last two weeks. The receipts are large but storage buyers have been absorbing them without difficulty. Poultry markets remain high compared with other meats and a decline appears likely before many weeks have passed. At Detroit current receipts bring 24½@25c and in Chicago 22@22½c. Detroit's poultry prices are: Spring chickens 28@30c; heavy hens 30c; roosters 15@18c; geese at 18c; ducks 32c; turkeys 40c.

## POTATOES

Old potatoes declined to 60@70c per hundred pounds at northern shipping

points and 70@85c at Chicago, the lowest on the crop. New potatoes were irregular, the eastern markets being strong while middlewestern cities declined.

## BUTTER

Butter markets turned upward for a brief period during the past week and closed only a shade lower than a week ago. Dealers were endeavoring to clean up stocks entirely from day to day and a scarcity of offerings suddenly developed. Off-grades of butter have been abundant and exceedingly hard to sell at prices ranging from 15@25c. Grass butter is common but there is no surplus of that grade. The closing tone was unsettled with the course of prices dependent almost entirely upon the volume of receipts. Prices for 92-score fresh butter are: Chicago 31c; New York 36c; Boston 36c; Philadelphia 37c; Detroit, fresh creamery in tubs 29c; pound prints 29½c.

## CHEESE

Further declines in both country and distributing markets for cheese occurred last week with a still lower level highly probable. Prices are now slightly below the pre-war basis. Export demand was liberal both at Chicago and in the east and absorbed most of the supply of twins, flats and double daisies. White cheese brought a premium over colored until near the close of the week. Quality shows marked improvement, many sections sending full grass cheese.

Detroit.—Flats 15@15½c; Twins 15c; Daisies 15½c; Longhorns 16c; Brick 17c.

## FURTHER DECLINES IN HORSE MARKETS.

Prices for horses declined \$10@15 because of a moderate increase in receipts. Demand is irregular, occasional buyers for wagon horses, loggers, drafters or farm chunks putting in an appearance but there is no persistent demand from any quarter. No pronounced change is likely for several months but there is nothing in the situation to point to a higher market. Chicago.—Good and choice heavy drafters \$200@250; common and medium drafters \$130@165; farm mares \$100@150; farm chunks \$110@155; wagon horses \$135@175.

## CHEAP STOCK CATTLE WANTED.

Country demand for thin cattle is limited mostly to cheap steers, cows and heifers to be placed on grass. Values of such grades are not low, compared with the price of finished steers but there is a distinct effort to economize on the amount of the investment. Such cattle if to be sold in the fall will compete with range cattle, although they may have made satisfactory gains on grass. On the whole, demand for stock cattle remains limited, indicating that the country is not yet increasing beef production so that the position of growers already in the business is becoming better rather than worse.

## Live Stock Market Service

Wednesday, May 11.

### BUFFALO

On this hog market today heavies sold at \$9@9.25. Others at \$9.25@9.75; lambs brought \$11.50 and calves \$11.50.

### DETROIT

#### Cattle.

Market active and 10@15c higher. Best heavy steers ..... \$7.50 @ 8.25  
Best handy wt bu steers ..... 7.50 @ 8.65  
Mixed steers and heifers ..... 6.75 @ 7.65  
Light butchers ..... 6.50 @ 7.25  
Best cows ..... 6.00 @ 6.50  
Butcher cows ..... 4.00 @ 5.00  
Common cows ..... 3.50 @ 4.00  
Canners ..... 2.50 @ 3.00  
Best light weight bulls... 6.00 @ 6.50  
Bologna bulls ..... 5.50 @ 6.00  
Stock bulls ..... 4.00 @ 5.50  
Feeders ..... 6.00 @ 7.35  
Stockers ..... 5.00 @ 6.75  
Milkers and springers...\$ 45 @ 95

#### Veal Calves.

Market steady.  
Best ..... \$11.00 @ 11.50  
Others ..... 6.50 @ 8.50

#### Hogs.

Market steady.  
Mixed hogs ..... \$ 8.75  
Roughs ..... 6.75  
Heavy ..... 8.50  
Pigs ..... 8.75  
Stags ..... 5.00 @ 5.50  
Boars ..... 4.00 @ 4.50

#### Sheep and Lambs.

Market steady.  
Best lambs ..... \$10.50 @ 10.75  
Fair lambs ..... 8.00 @ 9.50  
Light to common ..... 5.00 @ 7.00  
Fair to good sheep ..... 5.50 @ 6.00  
Culls and common ..... 2.00 @ 3.00

### CHICAGO

#### Hogs.

Estimated receipts today are 18,000; holdover 9,579. Market is active and steady to 10c lower, mostly steady. Bulk of sales \$8.40@8.85; tops \$8.90; heavy 250 lbs up medium, good and choice \$8.35@8.65; medium 200 to 250 lbs medium, good and choice at \$8.55 @8.85; light 150 to 200 lbs common, medium, good and choice \$8.60@8.90; light lights 130 to 150 lbs common, medium, good and choice at \$8.40@8.90; heavy packing sows 250 lbs up smooth \$7.50@8.10; packing sows 200 lbs up rough \$7.25@7.50; pigs 130 lbs down, medium, good and choice \$8@8.75.

#### Cattle.

Estimated receipts today are 9,000. Market steady. Beef steers medium

and heavy weight 1100 lbs up choice and prime \$8.90@9.75; do medium and good \$7.75@8.90; do common \$7@7.75; light weight 1100 lbs down good and choice \$8.40@9.50; do common and medium at \$6.75@8.40; butcher cattle heifers, common, medium, good and choice \$5.75@8.75; cows common, medium, good and choice at \$5.25@7.75; bulls bologna and beef at \$5.50@7.25; canners and cutters cows and heifers \$2.75@5.25; do canner steers \$3@4.50; veal calves light and handyweight medium, good and choice at \$7.50@9.50; feeder steers common, medium, good and choice \$6.75@8.35; stocker steers common, medium, good and choice at \$5.75@8; stocker cows and heifers, common, medium, good and choice at \$3.75@6.25.

#### Sheep and Lambs.

Estimated receipts today are 15,000. Lambs and yearlings 10@25c higher; spring lambs 25@50c higher. Lambs 84 lbs down medium, good, choice and prime \$10.50@12; do 85 lbs up medium, good, choice and prime \$10@11.75; do culls and common \$8@10; feeder lambs medium, good and choice \$10.50 @13.15; spring lambs medium, good, choice and prime \$8.25@9.75; ewes, medium, good and choice at \$6@7.50; ewes cull and common at \$2.50@5.50; yearling wethers medium, good and choice \$7@8.50.



## Record Holders

Wood Silos - Tile Silos - Silo Fillers

The Kalamazoo is the only wood silo made that holds record of 30 years service without a flaw. We make both wood and tile. Special construction keeps silage in most nutritious condition; no waste. Kalamazoo Cutters are the world's standard. None better in any way.

## Kalamazoo

Facts FREE. Write TODAY

Send for these silo and cutter books. They are an education in such matters. Don't buy a silo or cutter until you have read them. Read about the matchless Center Shear cut 'em Kalamazoo Ensilage Cutters. It's all in the free books. Write today.

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Dept. 323 Kalamazoo, Mich.

Send Name For These Silo and Ensilage Cutter Guides

## INTERNATIONAL GRAIN AND HAY SHOW.

THE Third International Grain and Hay Show will be held at the Union Stock Yards, Chicago, November 26 to December 3, in connection with the International Live Stock Exposition. The Chicago Board of Trade has announced that it will again contribute \$10,000 in premiums as it did for the first two shows.

In order to give exhibitors equal opportunities, the United States and Canada have been divided into six regions or districts. Several changes in regional boundaries were made this year, dividing the regions as follows:

Region 1.—Washington, Oregon, Montana, Idaho, Wyoming and North Dakota; western halves of South Dakota and Nebraska; northern two-thirds of Minnesota; northern halves of Michigan and Wisconsin; all of Maine, New Hampshire, Vermont and Massachusetts; northern half of New York, and all of Canada except that south of Toronto.

Region 2.—Eastern half of South Dakota; southern third of Minnesota; southern halves of Michigan and Wisconsin; Canada south of Toronto; southern half of New York; Connecticut and Rhode Island.

Region 3.—Eastern half of Nebraska, Iowa, northern halves of Illinois, Indiana and Ohio; Pennsylvania and New Jersey.

Region 4.—Kansas and Missouri; southern halves of Illinois, Indiana and Ohio; Kentucky, West Virginia, Virginia, Maryland and Delaware.

Region 5.—Texas, Oklahoma, Arkansas, Louisiana, Mississippi, Tennessee, Alabama, Georgia, Florida, North Carolina and South Carolina.

Region 6.—California, Nevada, Utah, Arizona, Colorado and New Mexico.

Classes for corn, oats, barley, wheat, soy-beans, cowpeas, field peas, rye, kafir, milo and small seeds will be continued.

Grain that is clipped, scoured, bleached, etc., is objectionable and any sample of oats or barley clipped or scoured so that the endosperm is exposed, will be disqualified at the discretion of the judges.

At the suggestion of George S. Bridge, of the Chicago Board of Trade, classes have been made for members of boys' and girls' clubs and suitable prizes will be awarded the junior grain and hay growers.

The plan of judging exhibits by a committee of five will be continued. The judging will start Saturday morning, November 26.

Educational exhibits from the agricultural colleges and experiment stations which have been a prominent feature of the last two shows will be a big feature this year and the United States Department of Agriculture also will be represented by an educational display.

Premium lists will be ready in the near future and may be obtained by writing the International Grain and Hay Show, Union Stock Yards, Chicago, Illinois.

## HOLSTEIN BREEDERS TO COMPLETE ORGANIZATION.

Holstein breeders of Oakland, Macomb and Wayne counties will meet at the Rochester High School building at two p. m., Saturday, May 14, to complete their organization, according to announcement of C. W. Melick, temporary secretary. Every Holstein breeder interested is urged to be present and participate in the final steps necessary to bring to the breeders of this district the advantages coming from cooperative effort.

## LARGE ACREAGE FOR SUGAR BEETS.

THE Caro plant of the Michigan Sugar Company has reported that 11,500 acres of beets are under contract for the present year, the largest acreage ever secured in the history of the plant, and a big beet slicing campaign is certain. A good supply of laborers is assured, the first to arrive from Detroit on April 27, to be followed by a number from Cleveland.

The Holland-St. Louis Sugar Company reports that they have just completed their contracts with beet growers in the vicinity of St. Louis, arranging for about 7,000 acres of beets to be grown this year, which will keep the local plant busy for nearly one hundred days next fall and winter.

Feed well the old hens that you intend to sell when they are through laying. Watch the market, and sell them just before the rush sale of poultry begins in the fall. Get all the eggs you can from them this summer, but sell them while the price is still good.

## SILO BUYERS

Here's where you get pre-war value for your after-war dollar. A silo that simply can't be beat—everlasting, indestructible. Just the silo for the man who wants the best in construction, business, appearance and lifetime service. The silo that is 100% right.

Back to 1918 Pre-war Prices

Get a real silo while you're buying. A silo you can be proud of. Better than your neighbor's—in fact, the silo that will match the finest farm improvements. Silo perfection at pre-war prices. Shipped knock down and crated, saving you on freight. Saves time hauling to farm.

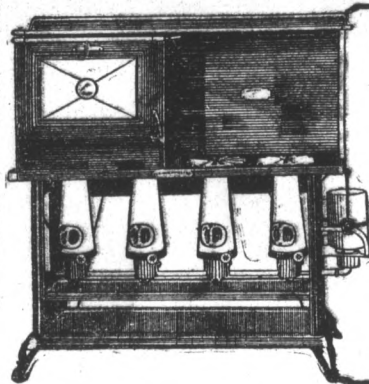


## LOOK!

Made of galvanized metal. Can't rust, rot, burn or collapse. Keeps ensilage better than any other. The silo that grows with the herd. Build the size you need now and add another section when you need more space. All sections securely bolted, making a rigid, one-piece construction. Many other patented features on the

## ROSS INDESTRUCTO METAL SILO

You must have some silo if you're going to make farm profits. Grain feeding costs too much; the 40% feed value in cornstuffs put into ensilage must be fed. Cattle and dairy herds, fed through a silo, mean money because you feed more and carry less. Settle the silo question for all time by getting the Ross In-de-struc-to. Write us today for money-saving PRE-WAR PRICES. THE E. W. ROSS CO. Dept. 214, Springfield, Ohio



## SAVE 1/4 the Price Cook in Cool Comfort

Here is where you can save on a work-saving oil range—one that will do all your cooking and baking—a beauty in design and appearance. Prices have hit the bottom.

\$37.95 for this KALAMAZOO Wick Oil Range

Write today—Get our special summer offer. Cash or easy payments—quick shipments—unconditional guarantee. Ask for catalogue No. 1113.

Kalamazoo Stove Co., Mfrs. Kalamazoo, Mich.

## Quick Work!

On the morning of April 12th Arthur H. Harrison D.D.S. of Davison, Michigan, wired us: "Policy No. 74064 Buick Coupe total loss by fire. Send adjuster."

April 13th our adjuster was in Davison, saw Dr. Harrison and agreed with him on a settlement.

April 14th our check of \$1725, the full amount of the insurance carried by Dr. Harrison, was in his hands.

If you should have a loss isn't that the way you would want it adjusted?

## CITIZEN'S MUTUAL AUTOMOBILE INSURANCE CO.

Howell, Mich.

## R. K. TIRES The Utmost in Tire Value

The ability of these tires to stand up under the most rigorous conditions and yield a mileage per dollar far in excess of that expected of a new tire makes them the most economical buy on the tire market. R. K. Double Tread Tires are skillfully retreaded, cemented, and double chain stitched, making them as good as new, although the price is but half. And we guarantee satisfaction.

Size	Price	Size	Price
30x3	\$4.50	34x4	\$10.00
30x3 1/2	7.50	34x4 1/2	10.50
32x3 1/2	8.00	34x4 3/4	12.00
32x4	10.00	36x4 1/2	12.00
32x4 1/2	10.00	36x4 3/4	13.00

2 per cent off for cash with order, 10 per cent deposit required with all O. O. D. orders.

## R. K. Tire Company

837 No. Broad St., Dept. C, Phila. Pa.

Send for descriptive booklet and price list. Good Territory Open for Live Agents.

## Bee Hives, Section Boxes

Smokers, Comb Foundation, Etc. Everything for the bees, including Beginner's Outfits. General agents in Michigan

for The A. I. Root Co. supplies. Send for catalog. Special booklet for beginners if requested.

M. H. HUNT & SON, Box 525, Lansing, Mich.

## U. S. Officers' Silk Poplin

OLIVE Drab SHIRTS 2 for \$3.75 Regular U. S. Officers' Silk Poplin Olive Drab Shirts. 2 for \$3.75. Only two to a customer. They cannot be duplicated at \$3.00 a piece or money back, and are warranted to be fast color. Two large pockets with buttons and flaps.

Pay the Postman Send no money. Just send your name, address and size. Your shirt will be sent by return mail. Pay postman \$3.75 and postage on arrival. Sizes 14 to 18. U. S. Blanket Co., Dept. 74, 45 W. 34th St., New York

## Holmes, Stowe Co., 2429 Riopelle St.

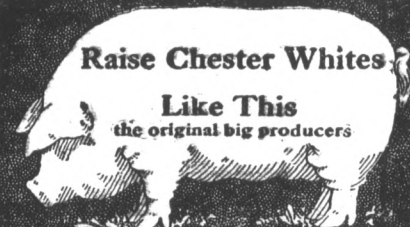
Commission Merchants. Dressed Beef, Hogs, calves, Poultry, Live & Dressed. Provisions, etc. Correspondence Solicited. Ref. Wayne County & Home Savings Bank. Bradstreet. Detroit, Mich. Cad. 2387

## HAY Ship to The Old Reliable House Daniel McCaffrey's Sons,

623-625 Wabash Bldg., Pittsburg, Pa.

HAY Apples, Potatoes Wanted Highest prices paid. The E. L. RICHMOND CO., Detroit, Mich.

## HOGS



I HAVE started thousands of breeders on the road to success. I can help you. I want to place one hog from my cross-bred in every community where I am not already represented by these fine early developers—ready for market at 8 months old. Write for my plan—More Money from Hogs. G. S. BENJAMIN, R. F. D. 10, Portland, Michigan

## SPOTTED POLAND CHINAS

Our herd bears Rio Grand Giant, a litter mate to the \$21000 Marshall Giant boar, his dam Arb Osa, the largest sow of the Spotted breed. King Onward known as one of the greatest back and color breeders. English Back Builder, a wonderful breeder. 50 Last spring gilts bred for July and August farrow. \$50 per head while they last. Fall pigs either sex, \$35. With take orders for spring pigs for June shipment, either sex, \$25. Cholera immunized Satisfaction guaranteed. SAMUEL GERBER, R. 4, Bluffton, Ind.

Big Type Poles. Some very choice fall bears, ready for spring service for sale. They are sired by The Clansman; dam, the \$1025 Miss Columbia, a littermate to the \$40,000 The Yankee. Also a few choice boars by The Clansman, son of The Clansman. WESLEY HYLE, Ionia, Mich.

## L. T. P. C.

Spring boar pigs \$15 to \$25. Fall gilts sired by Harts Black Prince, \$30 to \$50. Also have two gilts which are granddaughters of The Yankee and were bred to Harts Black Prince March 24th. They will go quick at \$50. HART, FULMER & OLIVE, address F. T. HART, St. Louis, Mich.

P. C. Bred sows. Fall pigs singly or in pairs. Also S. C. Minorca cockerels all big type of the best of breeding. Satisfaction guar. R. W. MILLS, Saline, Mich.

Big Type Poland Chinas. Choice spring boar pigs \$15 each when 8 weeks, sired by Clansmen Buster and their dam being a prize winner at the State Fair. Also gilts bred for Sept. Farrow for \$40 and up. Guarantee Satisfaction. DOUGLAS HOVER, Akron, Mich.

L. S. P. C. a few choice boars at farmers prices, bred gilts all sold. Also a grandson of The Clansman and Harrison Big Bob. H. O. SWARTZ, Schoolcraft, Mich.

Leonard Farm BIG TYPE P. C. boar pigs at weaning time, \$25 from Mich. Champion herd. Satisfaction guaranteed. Call or write. E. R. LEONARD, R. 3, St. Louis, Mich.

Pig Type P. C. some very choice boars double-immune, out 1100 lb. sires and mammoth sows from Iowa's greatest herds. R. J. Mathewson, Burr Oak, Mich.

Big Type Poland Chinas at lowest prices. Both sexes, all ages, and bred G. A. BAUMGARDNER, R. 2, Middleville, Mich.

Large Type Poland Chinas. Nothing for sale at present. A. A. FELDKAMP, R. 2, Manchester, Mich.

L. T. P. C. If you are looking for something good, in bred gilts at a right price. Write W. J. HAGELSHAW, Augusta, Mich.

Sows bred for spring litters all sold. Have some Scholee gilts bred for Aug. litters, also some Sept. boars for sale. Clyde Fisher, R. 3, St. Louis, Mich.

## PINE GROVE HAMPSHIRE

We are offering a few tried sows bred for March and April farrow. These sows are all closely related to our winning show herd and of popular blood lines, and the price! Way Down! Geo. Coupar & Sons, Marlette, Mich.

Hampshires Bred gilts all sold. Spring and fall boar pigs at a bargain. JOHN W. SNYDER, R. 4, St. Johns, Mich.

## SHEEP.

Wool-Mutton Shropshire Rams. Good strong individuals, royally bred, priced right. A. H. FOSTER, Allegan, Mich.

## HORSES

Percheron Stallions and mares at reasonable prices; inspection invited. F. L. KING & SON, Charlotte, Mich.

## POULTRY

## Summer Prices on Nye Bros. Superior Quality Day Old Chicks

From purebred free range stock of excellent laying qualities. Good Leghorns a specialty. Give them a trial. S. C. White and Brown Leghorns in June, 10c; July, 9c each. S. C. Buff Leghorns, Anconas, S. C. and R. C. Reds, Barred Rocks, June 12c; July, 11c each. White Wyandottes June 13c; July, 12c each. Odds and ends, 9c each. Order at once from this ad, as they are going fast at the prices. June prices to go into effect May 23d. We pay parcel post and guarantee live delivery. These chicks are full of life and hatched right.

## May Chicks Buy 'em Near Home

May 15, 19, 23 and 26. Brown Leghorns \$75 per hundred. Rocks and Reds \$75. Wyandottes \$75. Add 50c for half and quarter hundreds. Write for other varieties. Prepaid and guaranteed live delivery.

Washtenaw Hatchery, Ann Arbor, Mich.

ANCONAS Shepherds strain at summer sale prices. Eggs \$5 per 100; chicks \$17 per 100. Safe arrival and satisfaction guaranteed. Manning's Ancona Farm, Coldwater, Mich.

Useful Anconas. Send for my booklet (Useful facts about Useful Anconas) it is free. Hogan tested layers, beauty and utility combined, reduced prices on hatching eggs for the balance of the season 15c-25c; 50c-60c. 100-150.00. Specialty breeder S. C. Mottled Anconas, COLLEGE VIEW FARM, R. 3, Hillsdale, Mich.

Baby Chicks and eggs for hatching. Reduced prices after May 25th. Leghorns 11 cents. Rocks and Reds 16 cents for May and June, 15c for June and July. Get your order in early at these prices. Hatch every Tuesday. Interesting catalogue free. Brummer's Poultry Farm, R. 3, Holland, Mich.

Reduced prices on Barrons S. C. W. Leghorns and S. C. W. Anconas chicks for May and June. Send your order now for 8 week old pullets and cockers. Byron Center Poultry Farm, Byron Center, Mich.

Chicks At Reduced Prices for June and July. S. C. Leghorns \$2.00 per 100. Barred Rocks \$2.00 per 100. Faresels post paid 100% safe arrival. Circulars free. SUNNYBROOK POULTRY FARM, Hillsdale, Mich.

Chicks S. C. W. English Leghorns \$11 per 100, by parcel post. Order from this ad. HENRY WATERWAY, R. 4, Holland, Mich.

For Sale Eight-week-old S. C. White Leghorns and S. C. Anconas. Pairs now ready for shipment. Write for prices. Selected pure bred stock. A. VanKoeveering, Zeeland, Michigan

BRED-TO-LAY S. C. White Leghorns from pedigreed Bred mated with hens selected by M. A. C. export as extra heavy layers. Selected cockerels at a bargain. Pulleta. The Ferguson Co., R. 4, Ann Arbor, Mich.

CHICKS Single Comb White Leghorns \$2.00 prepaid. Order today. ROY L. DRUKER, R. 6, Grand Rapids, Michigan

CHICKS Barron strain W. Leghorns 10c; Faresels post paid 100% safe arrival. The best strains in the world for eggs. Robt. Christophel, R. 4, Holland, Mich.

RHODE ISLAND WHITES win over all breeds at the egg laying contest. 30 eggs \$5; 50 \$8; 100 \$15 order from this ad. Some chicks. H. H. JUMP, R. 5, Jackson, Mich.

S. C. Brown Leghorns Barron S. C. White Leghorns 232-278 strain. Eggs \$5-11.25; \$2.20; 50-\$3.25; 100-\$5, prepaid. V. Fulton, Canton, O.

S. C. Black Minorca cockerels exhibition and utility. Northrup Strain. Exclusively hatching eggs single settings or quantity. C. J. Dredelick, Vassar, Mich.

S. C. W. Leghorn Eggs Barron Strain stock from V. O. YORK, Box 405, East Lansing, Mich.

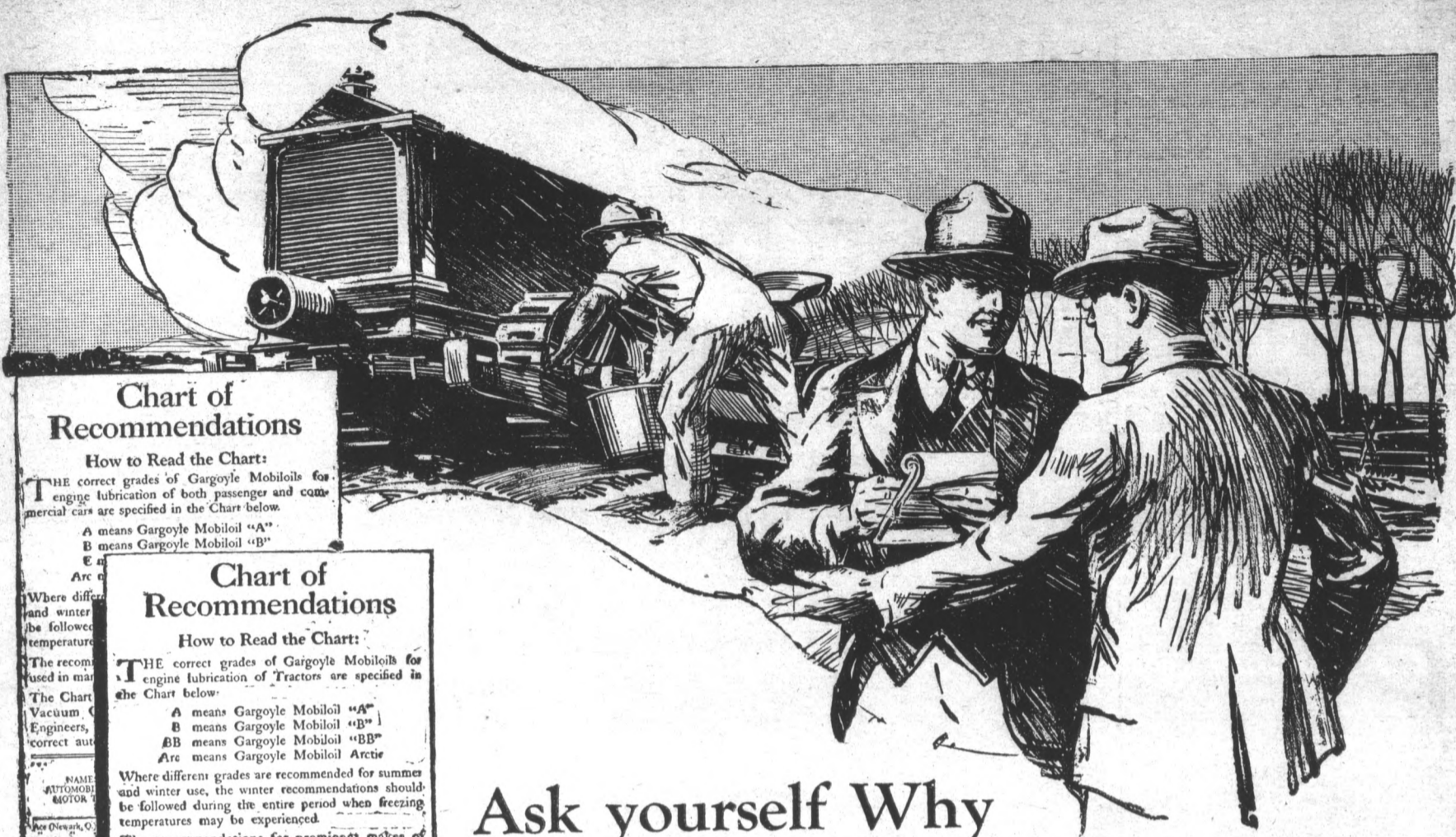
Single Comb Buff Leghorn Baby Chicks. Good strong ones from good layers. WILLARD WEBSTER, Bath, Mich.

Quality Chicks Black Minorca, Light Brahma, 2c each. Burned Rock, R. 1 Med. 12c each. Tyrone Poultry Farm, Fenton, Mich.

White Wyandottes: 27 eggs average \$2.00 per 100. Baby chicks 23 cents each. Cockerels, hens and pullets. FRANK DELONG, R. 3, Three Rivers, Mich.

Whittaker's R. I. Reds, Both Combs. Michigan's Greatest Color and Egg Strain. CHICKS, Grade "A", \$25 per 100. Grade "B", \$15 per 100. Broilers, \$10 per 100. EGGS, \$12.50 and \$8 per 100. \$4.50 and \$3.25 per 30. Interlakes Farm, Box 38, Lawrence, Mich.

White Wyandottes BARRED ROCKS bred to lay Eggs \$2.50 per 15; \$4.50, 30, Baby Chicks. HOWARD GRANT, Marshall, Mich.



## Chart of Recommendations

### How to Read the Chart:

THE correct grades of Gargoyle Mobiloils for engine lubrication of both passenger and commercial cars are specified in the Chart below.

A means Gargoyle Mobiloil "A"  
B means Gargoyle Mobiloil "B"

Where different grades are recommended for summer and winter use, the winter recommendations should be followed during the entire period when freezing temperatures may be experienced.

The recommendations for prominent makes of engines used in many Tractors are listed separately for convenience.

The Chart of Recommendations is compiled by the Vacuum Oil Company's Board of Automotive Engineers, and represents our professional advice on correct tractor lubrication.

NAME OF TRACTOR

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## Ask yourself Why the mass of expert testimony favors Gargoyle Mobiloils

THERE is an old saying that one swallow doesn't make a summer. It is equally true that one tractor owner's experience with a lubricating oil means little.

The facts that count are facts in the mass. Such as these:

(1) The State of Nebraska officially tests all makes of tractors sold within its borders. These tests are conducted at the University of Nebraska.

Out of 64 tractors (representing 38 different makes) successfully demonstrated at these State tests, in 1920, 49 were lubricated with Gargoyle Mobiloils. 39 of these tractors used no other oil. 10 of them used Gargoyle Mobiloils for part of the test. The greatest number of tractors lubricated with any other brand of oil totaled 7. Ask yourself why.

(2) Practically every tractor manufacturer approves the use of

Gargoyle Mobiloils. Ask yourself why.

(3) Where a tractor manufacturer recommends one oil exclusively it is nearly always Gargoyle Mobiloils. Ask yourself why.

(4) Tests which have proved the striking superiority of Gargoyle Mobiloils are not to be numbered by the dozens, but by the hundreds. In hundreds of tests the use of Gargoyle Mobiloils as specified in our Chart of Recommendations has shown fuel savings of from 17% to 25%. Oil consumption has frequently been lowered from 50% to 70%.

The Vacuum Oil Company Charts of Recommendations for tractors, trucks and automobiles are the result of expert engineering analyses combined with actual field experience.

If you are interested in savings like these—make the chart your guide.



# Mobiloils

A grade for each type of motor

In buying Gargoyle Mobiloils from your dealer, it is safest to purchase in original packages. Look for the red Gargoyle on the container

DOMESTIC BRANCHES:

New York (Main Office)  
Kansas City, Kan.

Philadelphia  
Pittsburgh

Detroit  
Chicago

Minneapolis  
Indianapolis

Boston  
Des Moines

# VACUUM OIL COMPANY