

ELECTRICITY PUMPS WATER AN HOUR FOR 2c

Observation of Meter Shows How Good the New Hired Man Is

Rural electrification is literally embarrassing Michigan farmers and farm women, says D. L. Runnells, agricultural editor of the Grand Rapids Press on this week's farm page. County agricultural agents report farmers are finding they have been spending hours and hours doing many jobs around the house and barn that now can be done for a few cents an hour by their new hired man.

In terms of electrical energy, farmers are reported to be astounded upon discovering how cheaply electricity is willing to work for them. The prize report comes from C. P. Milham, Gratiot county agricultural agent.

"One farmer has informed me," said Milham, "that he had been pumping water an hour and a half a day for more than 30 years. He recently obtained electric service and turned the water pumping job over to an electric motor and pump jack.

"Out of curiosity the farmer watched the meter while the water was being pumped and found it required only half of a kilowatt hour of electricity to pump as much water as it formerly took him an hour and a half by hand. He said he never again would work for two cents an hour pumping water."

Appliances Are Metered

Other farmers have been helped by Charles L. Crasper, Midland county agricultural agent, and Grace Mitchell, home extension agent, to appreciate how cheaply they can get their farm and home work done by the new electrical way. They induced local appliance dealers and the Consumers Power Co. to arrange farm demonstrations. Each electrical appliance or service was metered in order that accurate figures on costs might be obtained.

Three farmers co-operated in the project. Arthur Thayer of Freeland, one of the co-operators, has a 1,200 colony apiary on his 130-acre farm. Ross Thayer, also of Freeland, found the new hired man would work very cheaply on his 130 acre sugar beet, bean and livestock farm. Electricity was the cheapest hired man that Ernest Williams of Merrill employed on his 320-acre general farm.

Here's what Arthur Thayer found his yearly operating costs were for the following appliances: Electric range, 1,343 kilowatt hours, \$28.27; water heater, 951 kwh, \$20.02; electric refrigerator, 329 kwh, \$6.93; radio, 96 kwh, \$2.06; washing machine, 101 kwh, \$2.12; electric iron, 57 kwh, \$1.20; water pumping, shallow well, 111 kwh, \$2.34.

Only a Few Cents a Day

Ross Thayer found his yearly costs to be as follows: Water pumping, deep well, 339 kwh, \$5.98; electric range, 1,311 kwh, \$34.72; washing machine (four months record), 15 kwh, 40 cents; ironing, 75 kwh, \$1.99; barn lights, 265 kwh, \$7.02; brooder heating, (two months), 80 kwh, \$2.11.

Ernest Willman found his operating costs for nine months were as follows: Milking machine, 149 kwh, \$4.25; poultry house lights, 60 kwh, \$1.72; poultry water heater, 108 kwh, \$3.08; washing machine and cream separator, 54 kwh, \$1.54; barn lights, 87 kwh, \$2.48; lathe, 65 kwh, \$1.86; drill press, 6 kwh, 17 cents; deep well pump, 65 kwh, \$1.80; cistern pump, 86 kwh, \$2.45.

On each farm farmers and farm women found they could pump the water, milk the cows, light the barns, and hen houses, cook the meals, do the ironing, refrigerate the foodstuffs, wash the clothes, separate the milk and do a lot of other odd jobs the new way for only a few cents a day.

Plant Food In An Acre of Corn

The rapidity with which an acre of corn grows and the amount of plant food found in that acre of corn is shown by the following figures:

Dry matter per acre	Potash
July 24	730 lbs.
Aug. 6	2,224
Aug. 28	4,745
Sept. 24	8,104
Oct. 1	8,929

The weight of Nitrogen, Phosphorus and Potash found in the acre of corn in late July and October 1 in this instance was:

N.	P.	Potash
July 24	23.9 lbs.	4.3
Oct. 1	105.2 lbs.	35.7

Application of 100 lbs. of 4-16-4 fertilizer to corn at planting time starts the crop off with 2 lbs. of Nitrogen, 16 of Phosphoric acid and 2 lbs. of Potash for a quick start for the young plants. When the soil warms up, these plant foods become available in accordance with the type of soil and its management.

Frog Rearing Is A Poor Business

Frog rearing as a business isn't so good, according to the State Conservation Dept. Many people have concluded that advertisements promising great are of dubious character. Some who didn't think so in the past have since raised a bigger racket than even the frogs themselves make at night. There are fewer persons who feel inclined to take up any promotion plan such as those which claimed that by buying breeding stock, a client could take a course in frog rearing, receive a "diploma" and be launched on the road to riches.

Livestock Man



E. L. BENTON

New member of the Extension Service of Michigan State College is E. L. Benton, formerly county agricultural agent in Tuscola County. He succeeded D. H. LaVol as extension specialist in animal husbandry.

Farm Bureau Active In Special Session

(Continued from page 13)
ing more than \$2,500,000 of his original cut in the school aid fund.

School officers, the Michigan Education Association and the Farm Bureau were united in their opposition to any tinkering with the school aid laws at this time. When Supt. of Public Instruction Eugene B. Elliott advised Governor Murphy that it would require at least three weeks to prepare such a plan, the Governor consented to withhold any proposal along this line and to grant an additional \$1,000,000 to the schools.

This concession, coupled with the restoration of certain sums which previously had been lopped off of old-age pensions by executive order contributed largely to weakening the opposition to the welfare appropriation in the senate.

Farm Bureau intervention also proved effective in securing the release of the crop insurance bill from the agricultural committee of the house of representatives, after original efforts to have it reported out had failed. This bill authorizes insurance companies to insure losses on agricultural commodities upon which Federal loans have

been made on the basis of the unpaid balance of the loan even though the actual value may be less. It was proposed by Governor Murphy so as to give Michigan farmers the full benefit of the loan provisions of the present Federal laws.

Legislators also took cognizance of the Farm Bureau board's warning that any future extension of a mortgage moratorium should be limited to homes and farms. An energetic movement to so limit the measures was attempted in the senate, but Attorney-General Starr pointed out that such a limitation effort might invalidate the entire measure.

Rubber Tires On Spray Rigs

Each year more farmers are interested in equipping their spray rigs with rubber tires. These rigs do not get stuck in the mud as often, less jar and vibration result, and they go faster to and from the water supply.

Railroads in this country began to place steel rail in general use about 1867.

In 1830 there were only 23 miles of railroad in the United States.

Farm Efficiency Hits High Peak

A half century of change has removed millions of acres from farm production in New York state, but the total production from the remaining acres is still 20 per cent greater than fifty years ago.

Men, animals, and land, all are more efficient. More and better fertilizer and lime are used, varieties of crops have been improved, insects and diseases are better controlled, more legumes are grown, cows and hens produce more, livestock receive better care, and crop yields have increased.

A shift has taken place to the more intensive crops, such as corn silage, vegetables, and truck crops, he says. Higher crop yields are due in part to the use of more fertilizer; since 1924, for example, more than twice as many tons were used as in 1899.

Rabbits

The cottontail rabbit's nest is placed in a shallow hollow and arranged so that the top is even with the surface of the ground. The nest is lined with soft hair which the mother tears from her own breast. The mother visits the nest only during darkness.

Farmers Incorporated Lists Its Undesirables

Michigan's newest farm organization, Incorporated Farmers, has been organized. It held its first meeting at Owosso, Aug. 31.

According to the by-laws of Farmers Incorporated, no one is eligible to membership who does not operate at least one farm, or derive three-fourths of his income from agriculture.

The by-laws are reported to bar from membership "radicals, agitators, factists, communists, officers of corporations, lawyers, doctors, priests, preachers, county agents and public officials."

Convention officers were L. W. Churchill, Gladwin, president; F. H. Rayburn, Sparta, vice president; Herbert Service, treasurer and secretary.

The apple blossom was designated as Michigan's official state flower by joint resolution of the legislature in 1897.

House cleaning in preparation for pullets should be done carefully, especially if disease has been present.

The first locomotive whistle was installed in England in 1833.

Radio Sparking Helped This Romance

A romance of the radio has flowered in messages transmitted between a station on lonely Isle Royale and one on the Keweenaw peninsula.

Radio Station W9PCU and Radio Station W9EXT are, figuratively speaking, merging—which means that Miss Vivian Johnson of the Isle Royale Johnsons is being married to Ray Klemetti of Marquette.

Miss Johnson is the "VI" half of the radio team of "VI and Vee," who for several years operated the only medium of communication between Isle Royale and the mainland. Mr. Klemetti, now the state conservation department's radio service engineer for the upper peninsula, is the former operator of a station at South Range.

Miss Johnson and Mr. Klemetti first met at an amateur radio convention in Marquette in June of 1935. From then on the romance was carried on over the air, as messages between Station W9PCU on the island and Station W9EXT on the peninsula increased in frequency.

Gold fish are classified as belonging to the carp family.

CO-OP FRUIT CANNING PLANTS' 1938 RECORD

Hart Cans 2 Million Pounds of Cherries; Tomatoes At Bay City

The Bay Co-operative Canneries, Inc., a new division of the Farm Bureau Fruit Products Co., is canning an average of 75 tons of tomatoes daily for 140 members of the Ass'n residing in the neighborhood of Bay City.

The group was organized by the Farm Bureau and members. This spring the Farm Bureau Fruit Products Co. and the Bay City Co-operative Canneries, Inc. built a new vegetable canning plant at Barton avenue and the P. M. tracks in Essexville, a suburb of Bay City. It has space for 120 workers at the peeling tables for tomatoes, or other produce. The plant has a capacity of 120 tons of tomatoes daily. It began operations August 19 and expects to continue on the tomato crop until frost.

At Hart in Oceana county, the Farm Bureau Fruit Products Canning plant canned some 2,000,000 lbs. of cherries in the period between July 5 and August 3. The 1938 pack was the same size as the 1937 pack, but was put up in two weeks less time. Plant Manager Wilson Beam reported one of the nicest packs of cherries he has ever seen. Cherries were in splendid condition this year.

The Coloma plant, Berrien county, of the Fruit Products Company and associated fruit co-operatives has not been operated this year, largely because of the disastrous late spring frost which practically ruined the local cherry crop.

The Hart plant may can pears and other fruit later this season.

Farm Bureau members at both plants deliver their tomatoes or cherries as the case may be on a co-operative basis. They receive a cash advance on the crop, which is processed and merchandised through the season by the Fruit Products Company. Further settlements are made during the marketing season.

Champion Binder Handles 37th Harvest

Robert H. Addy of the Farm Bureau Services says in his machinery meetings that men are using Champion mowers that their fathers and grandfathers used before them, mowers that give excellent service.

So that Mr. Addy may have another string to his bow, we quote a letter received from the owner of a Champion grain binder at Onawa, Iowa.

Onawa, Iowa
July 17, 1938

Dear Sir:

I thought it would be of interest to you to know that I have a Champion Binder that has been run and is still in use for 37 years. In this length of time I operated a 160 acre farm for two years and 240 acre farm for three years and for the last 31 years a 120 acre farm of which I own and the binder had been run two years before I got it on a farm sale.

The past week I have just finished cutting five acres of wheat and 17 acres of oats that was down. Still have 10 acres of wheat and rye.

I am enclosing three pictures of the binder that was taken in the 17 acre out field, July 13, 1938.

I have bought the second set of canvasses, the third drive chain and next year will have to have another drive chain. Have bought the second bull wheel chain, new tongue and other parts and it still does perfect work in decent grain.

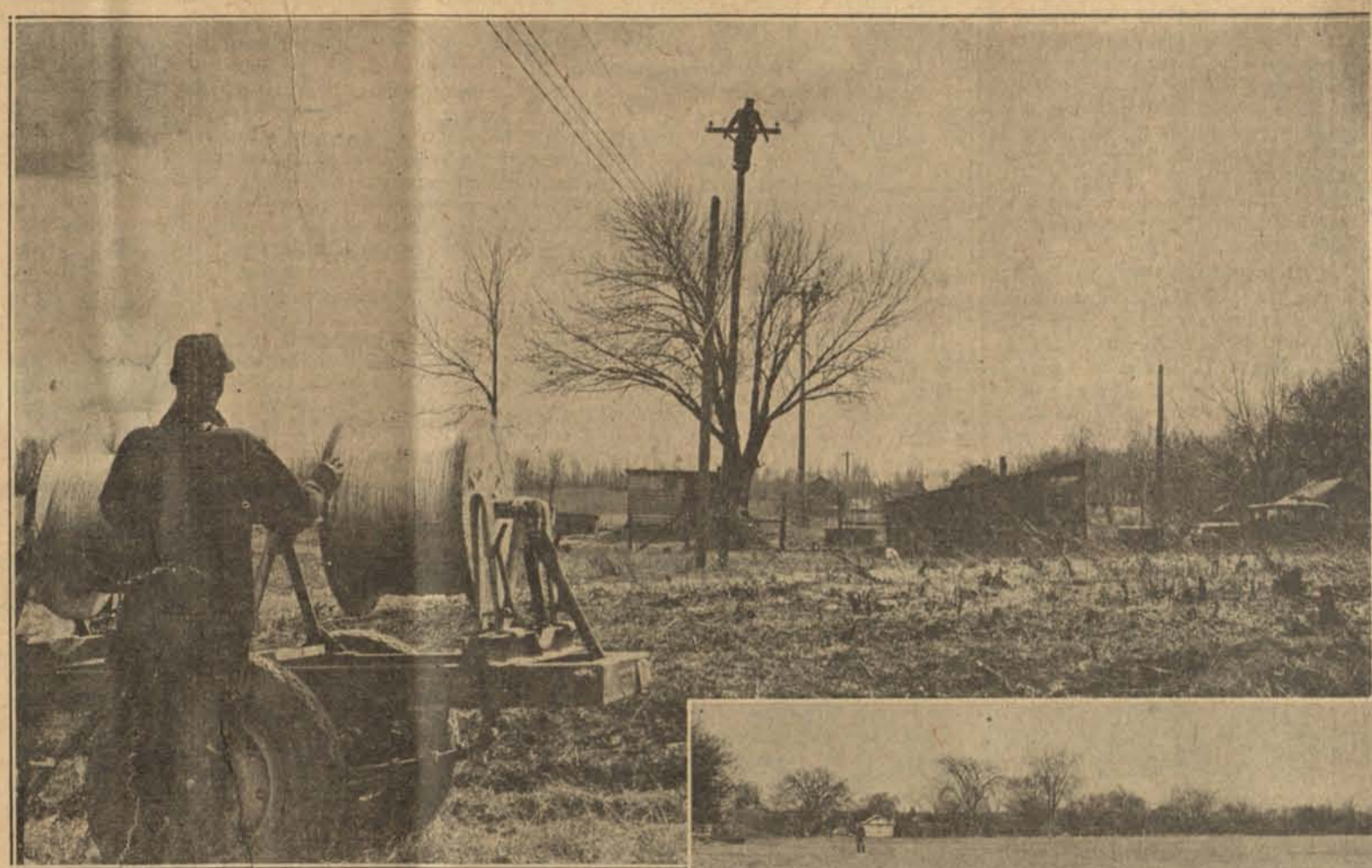
I have never allowed it to stand out only while in use, and to the contrast in this modern age, while I was using my old binder last week, there were in operation all around me combines and modern binders. Guess I am a back number but just can't wear the old Champion out.

I might add here that Monona County is the banner winter wheat county in the state.

J. R. BEDFORD.

"Yes sir, Zeke, as sure as I sit here now, I shot that old double-barrel in that flock of ducks and I bring down five of them."

Zeke (unconcernedly): Didn't I ever tell you about me huntin' frogs the other night, fired at one, and 500 croaked."



RURAL ELECTRIFICATION

Charts a New Course

with a

NEW PLAN -- SIMPLE RATE SERVICE TO ALL

NOW IT CAN BE DONE! Service to all farms in all quarters. Consumers new LIBERALIZED rural power line construction requirements do away with the old "five-to-the-mile" plan. A guaranteed income to the Company of \$12.50 a month per mile of line is now the only requirement.

Yes, Rural Electrification CHARTS A NEW COURSE — electricity for every farmstead in Consumers territory. The new LIBERALIZED PLAN means the passing of another barrier — opening the door to a greater and more profitable Michigan agriculture.

There's a new future in farming.

Low Rate

"Consumers Rates Reduced—Simplified . . ."—cry newspaper headlines. Effective September 16, Consumers inaugurates a

schedule of ONE SIMPLE RATE. Easy to understand — so simple a child can figure your bill for electric service. Your money for electricity buys more and does more things than ever. Electricity, cheapest in history, will more than "earn its keep" on your farm. And Consumers service is **DEPENDABLE, ADEQUATE.**

Free Service

Consumers Power Company's farm relations don't stop with stringing wires and turning-on-the-juice. Day in and day out a PERMANENT Organization of Rural Service Engineers stand by to help with your farm electrification opportunities — trained men who welcome an opportunity to serve you; to show you how to make farm electrification pay. Their advice and suggestions are **FREE.** Get acquainted with the Rural Service Engineer in your locality TODAY.

(1937 Winner of the Martin Rural Electrification Award)

CONSUMERS POWER COMPANY

New Orleans in December

American Farm Bureau Convention Goes South

IN recent years the American Farm Bureau Federation has held every other annual convention at Chicago in early December. On the off years the convention has accepted invitations from the east, the west, and the south. This December it goes to New Orleans in the "deep south" as they call it down there.

The Michigan State Farm Bureau has been invited by the New York Farm Bureau and the New England States Farm Bureaus to take part in a tour to New Orleans for Farm Bureau members at reduced railroad rates for the large party, and with stops at national points of interest, on the going and on the returning trip.

The trip will be an "all expense" tour from Michigan to New Orleans and return, for the period December 8 to December 23 inclusive, except for the four days that the visitors are at New Orleans. All other transportation, meals and sleeping or Pullman accommodations are provided for in the \$99.50 ticket per person. A side trip of a week in Florida can be had for an additional \$50.

The Michigan State Farm Bureau membership relations dept. has complete descriptive folders for the trip, and will supply them to members on request.

The Michigan group will leave Dec. 8 for Cincinnati, and join the eastern section of the train there. Stops will be made at Mammoth Cave, Kentucky, and at the Wilson Dam, at Muscle Shoals, Alabama, en route to New Orleans for four days. Returning, Dec. 15, the Michigan party members may take the direct trip home by way of Chattanooga and a stop at Lookout Mountain, arriving in Michigan Dec. 17. Or they may take a four day train and bus trip through Florida, and return by way of Lookout Mountain and Chattanooga, to arrive in Michigan Dec. 23.

History of New Orleans

When Farm Bureau members from throughout the United States gather in New Orleans next December for the annual convention of the American

Farm Bureau Federation, writes John L. Lacey of the AFBF, they will be in a city that has lived through more than two centuries of exciting history under the flags of four nations.

From the little French settlement of 1718, New Orleans has developed into a modern city of over half a million people, with billions of dollars invested in business and industry. But a peculiar reverence for the past has led to the preservation, practically intact, of the landmarks of her early history. And pride in her long and varied career has kept alive traditions of the years gone by.

In 1718, when Jean Baptiste le Moyne, Sieur de Bienville planted the flag of France about 110 miles from the mouth of the Mississippi, which he called Fleuve St. Louis, all he could see was a dreary expanse of marsh. But ten years later, under the direction of a royal engineer, the blocks which now comprise the city's French

quarter had been laid out and construction had begun on la Nouvelle Orleans, first settlement upon the Mississippi.

New Orleans did not grow up as a scattered community but as a carefully designed city. A town square, the Place d'Armes, was laid out facing the river, with space behind it for public buildings. The rest of the old city was laid out in blocks, divided into small plots which were granted on request to prospective builders. Heart of the old city was the square, known today as Jackson Square. There in 1727 landed Les Filles Cassees, young girls sent over by the French king to become the wives of Louisiana colonists. There in 1766 Governor Ulloa took over the city in the name of the King of Spain. And in 1804, the flag of the United States was raised there when the infant republic purchased the entire Louisiana territory from the Emperor Napoleon.

New Orleans remained under the French flag from 1718 until 1762, when it was ceded to Spain. The Louisianians resisted the new government in the Rebellion of 1768 which failed and the Spaniards took full control over the city the following year. Spanish and French influences combined during the next 20 years to develop the famous Creole architecture which is typical of old New Orleans. During the Spanish regime was built the St. Louis Cathedral, which still stands on Jackson Square. Still standing also is the Cabildo, the old Spanish government building, which, like the Cathedral, was constructed in 1794. The Cabildo was the scene in 1803 of the biggest real estate deal in history, as the papers were signed which turned over the Louisiana territory to the

United States.

New Orleans in 1814

New Orleans' career under the young American government was just as checked and colorful as it was under the continental powers. When the war with England broke out in 1812, Great Britain decided to attack through the Mississippi Valley and a British fleet appeared off Barataria Island in 1814. The Island was then inhabited by Pierre and Jean Lafitte, notorious pirates with prices on their heads. Because he was such an able seaman and knew the coast so well, Jean Lafitte was offered a captaincy in the British navy. He declined and instead offered his services to the Americans. Governor Claiborne refused and finally Lafitte went direct to General Jackson, the American commander. In the historic battle of New Orleans in 1815, Lafitte's smuggling sloops attacked the British war vessels while Jackson, aided by Lafitte's pirates, mowed down the attacking army.

General Jackson was publicly feted in the city square, which was later named for him and a Thanksgiving service was sung in St. Louis Cathedral. The pirates were granted a full pardon by the government in appreciation of their services.

With the growing power of the United States and the expansion of the West, the commerce of the Mississippi valley grew rapidly and New Orleans became an important shipping center. By 1840 New Orleans was one of the richest cities in the United States and among other things boasted more and better theatres than any other city in the country. The year 1827 saw the inauguration of the famed Mardi Gras, which has continued annually as the

gayest festival of the country.

Under the Confederacy

In 1861, Louisiana seceded from the Union and a fourth flag, that of the Confederate States of America, was raised over New Orleans. In 1862, Captain Farragut's Union navy sailed into the city to find thousands of bales of cotton and many ships set afire by the inhabitants. The residents also attempted to destroy their beautiful homes, but General Butler soon occupied the city and set up a military government. A memory of that rule exists today in the motto: "The Union must and shall be preserved" carved on the base of General Jackson's statue in the square by order of the Union general.

Also in memory of the Civil War are numerous monuments about the city, such as the Robert E. Lee monument and a statue of New Orleans' famous General Beauregard. There is also a statue of Jefferson Davis, president of the Confederacy. Memoir of the terrible days of the Reconstruction is the Liberty Shaft, at the foot of Canal Street, marking the spot where in 1874 the citizens exchanged shot for shot with the soldiers and police of the reconstruction government.

Today New Orleans remains the Queen City of the South, and second port of the United States in value of foreign commerce. In the face of typhoid and yellow fever epidemics, she evolved a healthful, sanitary city with a remarkably low death rate, and made from the muddy Mississippi a source of the purest water possible. The Mississippi has been tamed by means of levees and by such projects as the Bonnet Carre Spillway. New Orleans is a city with an illustrious past and an indomitable fighting spirit.

Good Time to Sow Rye and Vetch

This year vetch brought farmers about as much as they got for a bushel of clover seed, which presents an idea for fall seeding, says the Farm Bureau Services.

This is a good fall to put a field into rye and vetch. The rate of seeding is 1½ bushels of rye and 10 lbs. of vetch per acre. Seed before September 20 if possible.

You have three options on the resulting stand:

1. It will make fine pasture next spring, and be good maybe until the last of June.
2. It will provide a lot of green manure for turning under in the spring for corn or potatoes, etc.
3. You may harvest it as a grain crop. The rye and vetch may be sold

together as a mixture, or you may have it separated to dispose of the rye and the vetch seed as separate lots.

An average of 117 pounds of coal were required to haul 1,000 tons of freight and equipment one mile on the railroads of the United States in 1937.

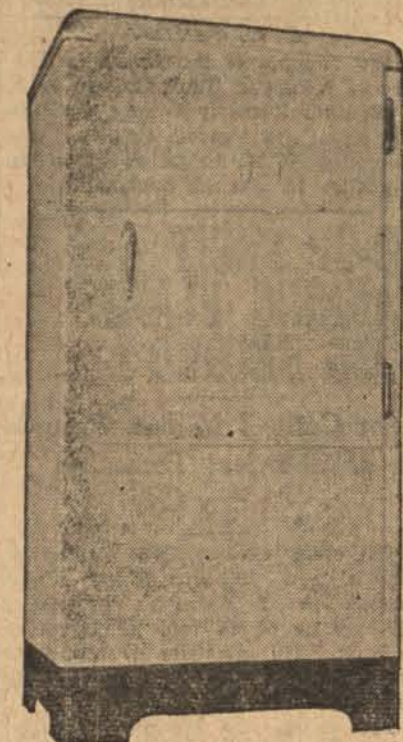
Orchid seeds are among the smallest in existence. They are so small that hundreds of them can be put on a pin-head with ease.

Two of the biggest problems connected with the lowering of the costs of milk production are better breeding and the control of disease.

Calves do not like to eat out of a little box; they waste more feed eating from a small box than from a good-sized one.

Own a Co-op Refrigerator

7 Freezing Speeds



A great value in all popular sizes. Has three coat porcelain interior, acid resisting bottom, Deluxe exterior finish. Fine hardware. Steel construction. Overload protector, and temperature indicator.

Double Value in Co-Op Vacuum Cleaners

The Co-op vacuum cleaner is upto the minute in cleaning ability and ease of handling. Has high and low speeds, exact nap adjustment, other good features. Three models are offered.



Buy at Farm Bureau Stores and Co-op Ass'n's

Ford Exhibit to Show Roads of Tomorrow

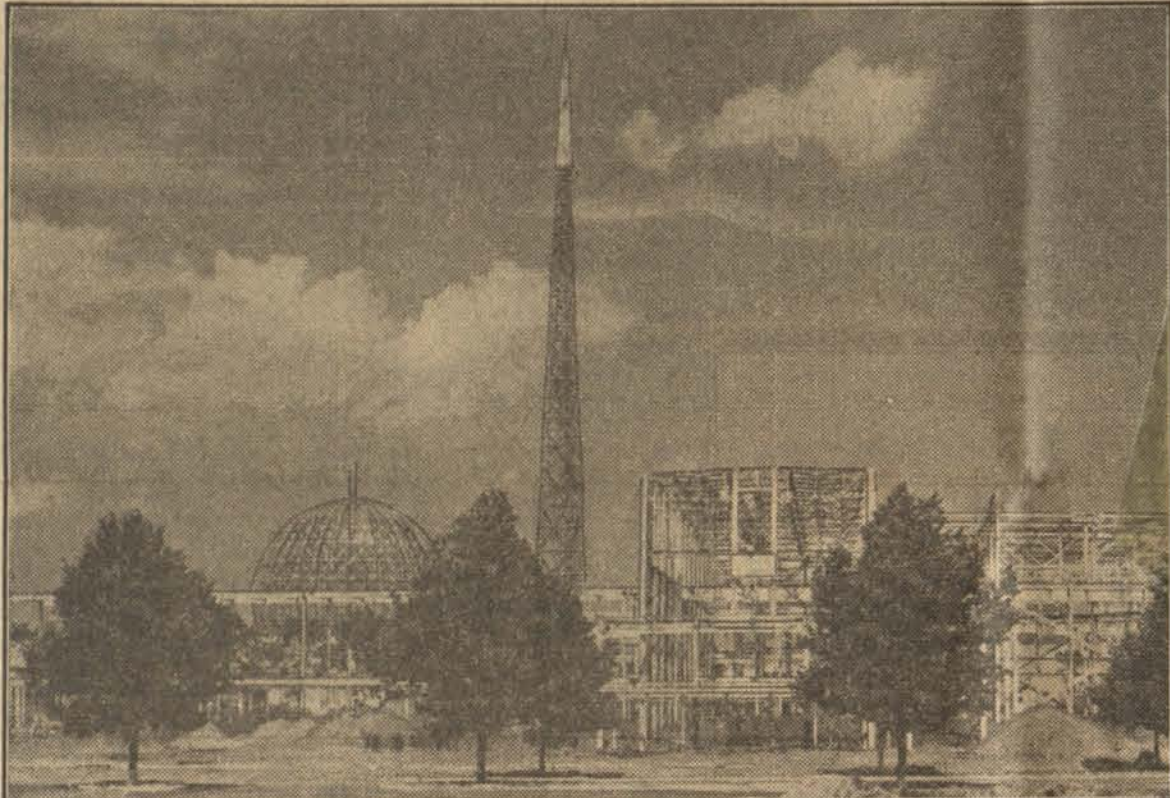


Photo shows the completed steel-work for the high Ford Motor Company exhibit building at the New York World's Fair, in 1939, against the background of the towering Trylon (center) and the giant Perisphere (left), the two structures which will form the theme center of the "World of Tomorrow" exposition.

In harmony with this keynote, the Ford exhibit will be climaxed by the

"Road of Tomorrow", an amazing elevated highway half-a-mile long built prophetically.

Winding up huge spiral ramps, the roadway will circle the top of the exposition building as well as an adjoining patio, at two points actually passing through the building itself.

Visitors will ride on this roadway in Ford and Lincoln-Zephyr cars, and will

be able during the ride to enjoy a commanding view of the entire grounds from the highest levels around the topmost setback of the building.

At the World's Fair at Chicago in 1933 and 1934 the Ford exhibit included historical replicas of the roads of yesterday, dating from earliest recorded history.

BORDER PATROLS TO STOP CULLS

Michigan, Ohio, Indiana Act To Prevent Being Dumping Grounds

Following announcement by Commissioner E. H. Hanefeld of Ohio Department of Agriculture that border patrol was to be established on Ohio-Michigan and Ohio-Indiana borders to stop shipment of inferior farm produce in that state, Commissioner John B. Strange of the Michigan Department of Agriculture pledged the co-operation of the Michigan inspection staff in preventing inter-state shipment of undergraded and unwholesome fruit and vegetables. Officials of the departments of Ohio and Michigan agreed that there should be no restraint upon free movement of quality farm produce.

"Unscrupulous truckers and producers," said Hanefeld, "have been bringing into Ohio cull fruits and vegetables, unable to sell this merchandise in Michigan and Indiana. In establishing this patrol, the Ohio Department of Agriculture is determined to protect the Ohio producer and the Ohio consumer. The border patrol will be made up of inspectors who know fruit and vegetable grades and will go over every load, despite the fact that they may have Federal-State inspection certificates because we have found instances where these certificates have been changed or transferred to another load. We are not attempting to establish a barrier against Michigan but we will protect Ohio producers and consumers."

Commissioner Strange pointed out that Michigan, earlier this year, experienced similar difficulties with Ohio producers but they were barred from

PREVENT STINKING SMUT OF WHEAT

Easily Prevented by Treating Seed Wheat Before Planting

By J. H. MUNCIE
Michigan State College

The stinking smut of wheat annually costs Michigan farmers thousands of dollars. Smutted wheat heads not only are a total loss, but also carry the disease to healthy kernels during the threshing process.

Stinking smut on wheat is easily prevented by treating the seed wheat before planting. Wheat seed treatment is a cheap form of insurance against stinking smut losses.

SEED TREATMENTS

(1) **New Improved Ceresan.** This material has had thorough trial in test plots at the Michigan Agr'l Experiment station and on many Michigan farms.

Use new Improved Ceresan at the rate of ½ ounce per bushel of wheat. A heavier dose of the chemical may injure germination and is not necessary to kill the stinking smut spores. Treat the seed in a rotary or gravity type treating machine or a cement mixer. Be sure that every wheat kernel is covered with the chemical dust. (Clean grain before treating to remove unbroken smut balls). The dust may be mixed with the seed wheat by shoveling but results are not so satisfactory.

After treating, the wheat may be held several weeks in open bags without injury. New Improved Ceresan is poisonous. Do not inhale dust while making the treatment. A handkerchief tied over the mouth and nose will prevent inhaling dust.

Keep this material out of reach of children. Do not feed treated wheat to animals.

(2) **Copper Carbonate Treatment.**

Use 2 to 2½ ounces of full strength (about 50% copper) copper carbonate to each bushel of seed wheat. Clean seed wheat before treating.

If low test copper carbonate must be used (18 to 20% copper) add 3 to 4 ounces per bushel of seed. Mix the seed and copper carbonates in a dust light mixing machine so that each kernel is completely covered. Seed treated with copper carbonate may be stored indefinitely without injury to germination if kept in a dry place.

Seed treated with copper carbonate often causes caking in the drill when standing overnight, especially in moist or wet weather. To prevent breaking of the drill shaft it is advisable to rock the drill wheels back and forth before starting drilling. The drill should be cleaned thoroughly after seeding to prevent corrosion of the metal parts. Treated seed should not be fed to farm animals.

Canvasser: "You pay a small deposit, then you make no more payments for six months."

Lady of the House: "Who told you about us?"

Buckwheat was introduced into Europe from Manchuria and Central Siberia during the Middle Ages, and is at present grown in Russia, Britain, Holland, and the United States.

Depending on food and water conditions, a muskellunge usually attains legal size in from five to seven years.

LITTLE HOPE FOR RAW SILK IN U.S.

Would-Be Producers Discouraged; Interest Reflected In Inquiries

Ithaca, N. Y.—Little or no success is in store for would-be producers of raw silk in the United States. So says the New York state college of agriculture, on the growing of mulberry trees and the feeding of silk worms, in response to many persons, who ask if this is a field of opportunity.

The opportunities are not there, according to college specialists. Recent interest is attributed possibly to silk-boycotts and to the belief that silk could be produced here. "Our native mulberry, and several other species, have been tried for feeding silkworms, but with little success in America," says Professor M. B. Hoffman of the promology department at Cornell University.

Three Centuries Ago
"No greater effort was ever made in the history of the country to develop any branch of agriculture than was made to start a silk industry. It started about 1630. Hundreds of trees were imported from China; some little silk was produced, but the whole venture proved to be a failure.

"Those mulberry trees on which the silk worms fed were not hardy in the northern part of the United States, and all winter-killed. In the south, the trees lived, but the worms did not seem to thrive and failed to produce silk in anything like satisfactory quantities. The attempts to build a silk industry lasted about 200 years. Fortunes of many thrifty men were wrecked in bankruptcy."

According to Professor Hoffman, the climate in some parts of Japan and China must be much more suited

both to growing mulberry trees and to the silk worm. They get higher production and have great quantities of cheaper hand labor, which are necessary.

Some of the problems that would face the would-be producer are suggested: the need for a number of mulberry trees of the best varieties; the trouble in growing them; selection of the proper leaves in sufficient amounts to support the silk worms that are being raised; the control of silk-worm diseases (which are not, for some reason, serious in the Orient); the difficulty of competing with China and Japan; and the slim returns that growers may expect.

Need Uniform Quality
To have a market for raw silk in this country, it is stated, uniform satisfactory quality must be produced in about 10-bale units; each bale has about 135 pounds of raw silk. A single Chinese family, as an example, is able to produce only about one-half bale of 135 pounds of raw silk a year, and this is worth, in New York, about \$1.75 to \$2.00 a pound of good, typical, usable quality.

It takes more than 2,000 cocoons to make one pound of raw silk. To produce a bale, 300,000 worms must be brought to maturity to form cocoons. Commercially, raw silk is divided into about ten different grades, depending on its evenness, cleanliness, neatness, tenacity, elasticity, cohesion, loopings, and other characteristics.

"Madam," said the policeman kindly to a little old lady who persisted in crossing the street, anywhere but at the corner, "you are jay walking again."

"No such thing," she snapped. "It's rheumatism!"

When potatoes are stored at any temperature lower than 40 degrees Fahrenheit, they become sweet and lose their mealiness.

Co-op's Oil & Gas Business Growing Fast

The fastest growing farmers co-operative business today is the oil and gasoline business, handled through special co-operatives for that purpose, or in connection with established co-operative businesses.

One in every three farmers' co-op purchasing ass'ns in the country sells gasoline and oil. About a thousand farmers co-operatives in the nation deal primarily in petroleum products.

The typical farmers gasoline and oil co-op has a membership of several hundred farmers and does a business of \$50,000 to \$100,000 annually. Farmers profit by running these businesses. Three out of every four ass'ns paid a patronage dividend in 1937.

Trade Commission Spots Farm Tool Monopoly

The American Farm Bureau at Washington reports that the Federal Trade Commission in its report to Congress, dated July 6, charges that since 1914 from 4 to 6 companies have come to "dominate the manufacture and sale in the United States of leading farm implements and equipment."

The commission declares that the International Harvest Company and the John Deere Company "were able to establish and actually have established the price levels for the great majority of agricultural implements and machinery."

Many of the substances in eggs are present in such amounts as to be of material assistance in making the human diet more adequate and more complete.

DEAD ANIMALS COST MONEY



SHEEP-HOGS-POULTRY-DOGS AT DRUG AND FARMER'S STORES

KILL RATS WITHOUT POISON

YOUR MONEY BACK IF RAT'S DON'T DIE

K-R-O won't kill Livestock, Poultry, Pets, etc. Every Time K-R-O is made from Red Squill, a ratcide recommended by U.S. Dept. Agr. (Eal 1533). Ready-Mixed, for homes, 35¢ and \$1.00. Powder for farms, 75¢. All Drug and Seed Stores. Damage each rat does costs you \$2.00 a year. K-R-O Co., Springfield, O.

K-R-O KILLS RATS ONLY

CREDITS ON PURCHASES Help Pay Farm Bureau Dues!

NOTICE TO MEMBERS: Purchases of Farm Bureau Brand dairy and poultry feeds, seeds, fertilizers, fence, paint, farm machinery, harness, and other Farm Bureau Brand supplies from your local dealer, are eligible to membership credits when declared.

MAIL YOUR DEALER SALES SLIPS to the Michigan State Farm Bureau, Membership Dept., 221 North Cedar Street, Lansing, about every three months.

BE SURE Farm Bureau brand goods are entered on slip as "Farm Bureau" brand, "Merchandise," "Millmaker," etc.

\$10 annual dues mature life memberships; \$5 annual dues do not, but participate in Membership Credits, which reduce the amount of dues payable.

Life members receive their Membership Credits in cash once a year.

We furnish addressed, postage pre-paid envelope for this purpose on your request

MICHIGAN STATE FARM BUREAU
Lansing, Michigan

Farm Bureau and Co-op Exchanges School Group at Waldenwoods



DURING the last week in August and the first week in September two groups of young people from Michigan farms were gathered at Waldenwoods Camp, near Hartland, Livingston county, where the Michigan State Farm Bureau and its Junior Farm Bureau, together with co-operative marketing exchanges in Michigan are conducting a school.

The group pictured above are the young people attending the first camp. This is the third annual camp, which has been organized into classes for first, second and third year students.

In addition to becoming informed regarding the purposes of the Farm Bureau, the Junior Farm Bureau, and the milk, livestock, potato, sugar beet, grain and bean, and other marketing exchanges, the students learn how to conduct group meetings, to entertain groups, and to organize their efforts. College instructors and men interested in young people give lectures on developing character and personal resources.

Forty-two counties are represented at the 1938 school. Speakers on character building subjects include Mr. R. A. Waite of the American Youth Foundation, Dr. David Trout of the Central State Teachers College.

Boyd A. Rainey of the Farm Bureau Services, Roy D. Ward, of the Downstate Farmers Co-op Ass'n, G. S. Coffman of the Coldwater Co-operative Creamery, Mr. E. J. Ryger of the Mid-West Producers Creameries, Inc., and Merle Crandall of the Howell Co-operative Company were there to give first hand information on the operation of farmer owned businesses.

C. L. Bolander of the Michigan Milk Producers Ass'n, Mr. M. J. Bueschlein of the Farmers & Manufacturers Beet Sugar Ass'n, and Jack Yaeger of the Michigan State Farm Bureau described the work of these organizations.

General assemblies of the students were addressed by Mr. J. Robert Crouse, sponsor of the Hartland area; Ralph Tenny, director of Michigan State College short courses; Mr. George Wheeler of the Central State Teachers college, and Mr. E. E. Gallup, supervisor of vocational agriculture in the agricultural high schools.

Mrs. Frank Gingrich, formerly a director of young people's groups in recreational classes, presented work of that nature. Nick Musselman, principal of the Okemos agr'l high school, directed athletics.

Behind the Wheel

(Continued from page 1) those that haven't enough and takes away from those who have too much. A parity price and parity of income has become a necessity, not only for the farmers, but also to keep our national economy in balance and to get rid of poverty in the midst of plenty."

—Mr. Harold Harper, Beardley, Kansas.

IF . . .

"If the American Farm Bureau Federation fails, agriculture will fail; if agriculture fails, democracy will fail . . . stupidity, superstition and human selfishness are the three greatest obstacles to progress . . ."—Dr. E. C. Elliott, President of Purdue University.

MOST IMPORTANT

Under the leadership of L. F. Warburg, director of organization, Ohio State Farm Bureau, the assembly broke up into small discussion groups. In answer to the question, "What is the most important problem facing our organization today?" they said, "The need of more members better informed as to the objectives of the organization!"

Warning

"If the AAA program fails, the next thing will be price fixing, and that will mean regimentation with a vengeance . . . What we need today is unified action with sectionalism and all other 'isms' forgotten. Take the AAA program and make it work . . . amend it if necessary but by all means see that it does not fail."—Mr. E. A. O'Neal, president A.F.B.F.

Reaction

"When a real problem is faced by you or me, one of three things will happen: (1) we look around to find a way of escaping a decision . . . say that the problem is not there . . . that no need for thought actually exists, (2) we hope . . . we hope that the problem will pass, that everything will be as it was before, that time alone will solve the problem. (3) we think the problem through and act . . . we take the sane path of understanding just why conditions are as they are

Resolutions

1. Membership should be the most important Farm Bureau project.
2. Adequate finance through membership fees.
3. Uniform co-operative agreement setting forth the relationship between County Farm Bureaus and State Farm Bureau.
4. Improved working relationship with Extension Service.
5. Recognizing Farm Bureau membership as fundamental in the relationship with affiliated commodity organizations or commercial activities.
6. The name Farm Bureau be held inviolate.
7. We recommend the action taken by the Midwest Presidents and Secretaries relative to their recommendations for a definite uniform co-operative agreement between County Farm Bureaus and State Farm Bureau.
8. We believe consideration should be given in the establishment of fair and equitable quotas for each state in the American Farm Bureau Federation and that all states should actively strive to foster and promote the quota system on membership within their state.

Hay silage can be substituted for either corn silage or hay without noticeably affecting the milk production.

A safe motorist drives as if the rest of the world is both deaf and blind.

Those who play the horses don't always get a good run for their money

The Youngest Eel in Michigan Waters is 46

Ancient Because They Have Never Been Able To Return to Ocean

An eel is taken occasionally from Michigan waters. The startled fisherman usually makes haste to get it off his hook and back in the lake or stream. Eels do not command the respect in Michigan that is theirs in European countries where they are considered to be one of the most delicately-flavored of all food fishes.

The fisherman may be startled, according to R. W. Eschmeyer of the Institute for Fisheries Research at Ann Arbor, but he is lacking in respect for the aged. The eel that he catches certainly is nearly 50 years old. Perhaps it is older.

Michigan eels have had a strange history. Sixty years ago the Michigan fish commission obtained 265,000 young eels from the Hudson river and planted them in 13 southern Michigan counties. Similar plantings continued through 1891, ending with that year.

According to one who knows his eels, that means the youngest eel still alive in Michigan waters is 46 years old.

Eel generations have peculiar fixations, according to Mr. Eschmeyer, . . . and then do something about it."

Mr. A. Drummond Jones, agricultural economist, U. S. Department of Agriculture.

Youth

"Resources which young people have at hand have enabled them to go much farther and faster than is now appreciated by adults but . . . young people cannot expect to come into economic prosperity by dancing the Virginia Reel."—Mr. Foley, youth program, Ohio Farm Bureau.

Participation

"Wider participation in the farm program is desirable . . . so as to make the program more effective in stabilizing and improving farm incomes. It can do the job only if enough farmers co-operate to adjust their acreage and the total market supplies to the effective domestic and export demand, plus a reasonable ever-normal granary reserve."—Mr. C. R. Wickard, North Central Division, AAA.

Fancy Smells Mean Nothing to Moths

Tests in the Department of Agriculture show that even the most deadly of the moth-killing chemicals do not repel moths when the fumes are not strong enough to kill them. The only way to make vapor effective is to keep enough of it corralled in a tight container.

Killing chemicals recommended for moths are naphthalene, paradichlorobenzene, and gum camphor. Careful crusaders against moth holes make sure, before woollens are packed away, that the garments have first been thoroughly cleaned. They guard, too, against any opening in packages, chests, or closets, through which moths may wiggle their way.

Wool Pool Was Closed Aug. 31

In accordance with the announcement which appeared in the August issue of the Michigan Farm News, the Wool Pool was closed for the receipt of further consignments Wednesday, August 31. The late-pooled wool which had accumulated in the Lansing warehouse is now being shipped to Boston, for grading and appraisal. As soon as the necessary reports are returned from Boston to the Lansing office, growers whose wool was in this last shipment will receive a second payment to bring their total advances up to their full Government loan value available on their wool.

Total consignments to the 1938 Pool were more than 187% of the 1937 tonnage which in turn was 165% as large as the 1936 tonnage.

Uncle Ab says that failing to try causes most failures.

Does Labor Get Too Much at our Expense?

(Continued from page 1.)
Where the Money Goes

It was also brought out at this Midwest conference that not only does the farmer make and support the country, but one half of the country's wealth is given over to the cities during every generation. This statement was verified in this way—farm families average four children, of whom one marries another farmer, two go to the city and the other one usually remains on the farm and attempts to buy the others out. The two in the city take the money earned in the country and invest it in the city. On top of that we were told of the huge amounts that are paid every year to city landlords by their country tenants and also the great sums of interest money paid to city financiers.

For years we have watched the hordes of young people going from the farm to the city, the vast majority never to return. We know full well that their dependent years and education were at the expense of the country, but we had never before considered the continued contribution made in other ways.

It seems to me that we might well bear these facts in mind when there comes a demand from the city for a diversion of the tax derived from automobiles and gas. The country roads must never again be placed on the farmer alone.

Must Beer Be Everywhere?

And last but not least is a real grievance of not only myself, but I believe of the majority of folks and that is the practice of issuing special licenses to beer vendors every time there is a picnic or a homecoming or other gatherings of like nature. Why cannot a few be kept free from the disgusting taint of beer?

We have a small county park bordering on the Huron River that for years has been an ideal place for family reunions, Sunday School picnics and functions of like nature. But everything has changed since a concession has been granted a beer vendor.

When we planned the first county

Fair for Monroe County last spring, we were emphatic about it being kept free from anything of a carnival nature or anything that could cause criticism from a moral standpoint, but imagine our chagrin when on the opening day we watched a make-shift stand go up across the street and saw it decorated with a beer sign.

It has been almost unbearable that beer gardens were allowed to invade quiet rural communities and change them almost overnight into saloon areas, but when it comes to deliberately following us around and camping on our doorstep it is high time for all respectable folks to protest and to do it so vigorously that the practice will not be repeated.

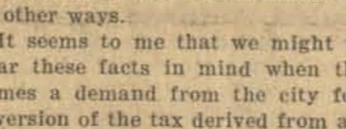
A dairy cow will drink from four to five pounds of water for each pound of milk she produces.

A sturgeon usually is about 25 years old before it spawns.

One hundred and seventy-six different kinds of fishes are recognized as inhabiting Michigan waters.

Uncle Ab says that most of us could do more if we would try to do less.

SEND POSTCARD and learn how egg production was More than DOUBLED



NOPCO 184 ESSEX ST. HARRISON, N.J.

IT'S AN EVEN COATING THAT MAKES IT LAST

To be effective, a zinc coating must be equally thick on all parts of the wire. The life of a coating is no longer than the life of its thinnest spot, as at the top of the lower wire in the cut.

Bethanized coatings can't help being uniform Zinc particles deposited on wire by electricity form a perfectly uniform coating. They can't help it, since it is the nature of electricity to flow uniformly to all parts of the surface.

Exceedingly durable zinc Scientists have proved that it's impurities in the zinc that cause ordinary coatings to weather away. These impurities are not present in bethanized coatings. All bethanized coatings are 99.99-per-cent-pure zinc.

Not even a feather crack for weather to enter Bethanized coatings are practically part of the wire. They can't flake or peel, even from the bending and twisting undergone in weaving the fence.

All bethanized fence is woven of rust-resistant copper-bearing steel wire. It sells at the same price as ordinary fence.

FARM BUREAU SERVICES, INC.

LANSING, MICHIGAN

Livestock Markets

Ford Farm Market Reporter
12:30 to 12:45 p. m.
Monday thru Friday over all stations

- MICHIGAN Radio Network
- WDFB Flint
 - WOOD Grand Rapids
 - WECM Bay City
 - WJIM Lansing
 - WXYZ Detroit
 - WELL Battle Creek
 - WIBM Jackson
 - WKZO Kalamazoo

Morning 6:45 A. M. over State College Radio Station **WKAR**

WE ARE A FARMER OWNED AND CONTROLLED organization offering you livestock commission sales service on the Detroit & Buffalo terminal markets; we can furnish all grades of feeding cattle & lambs; also 5% financing for feeding operations.

MICHIGAN LIVESTOCK EXCHANGE Secretary's Office Hudson, Michigan

SHIP YOUR STOCK TO US AT Michigan Livestock Exchange Detroit Stockyards Producers Co-op Ass'n East Buffalo, N. Y.

Fertilize Your FRUIT TREES THIS FALL WITH NON-LEACHING Granular 'Aero' Cyanamid

FALL APPLICATION of Granular AERO Cyanamid has the advantage of getting the job out of the way of Spring work. Moreover, in the Spring unfavorable weather may interfere with applying the nitrogen early enough to produce the best results.

Granular AERO Cyanamid does not leach. Tree roots absorb it and store it up for use in the Spring.

Play safe! Apply Granular AERO Cyanamid to your orchard this Fall, while you still have good weather.

Get the job out of the way of Spring work Write for Leaflet F-142

AMERICAN CYANAMID COMPANY
30 ROCKEFELLER PLAZA NEW YORK, N. Y.

HE TALKS BUSINESS BY TELEPHONE

This youngster has a little business all his own. He is already a veteran at feeding and fattening steers. His county agent helps him with his activities and they often talk things over by telephone.

Thousands of boys and girls who will be tomorrow's farmers are learning at an early age to use the telephone. They have found that the telephone gets things done quickly, easily . . . that it keeps them in touch with happenings outside the family circle.

Watch the youngsters use the telephone. Perhaps it will give you some tips on extra uses for this low-cost, handy hand.

MICHIGAN BELL TELEPHONE COMPANY

Michigan Beans Ripe for Pulling

Stimulating rains to the contrary, Michigan's huge crop of beans is about ready for pulling.

Even if recent heavy rains have coaxed vines to put on new growth and blossoms and try to add up more beans for the growers, those wise to problems of quality will begin to pull and stack the crop as soon as it is ripe, advises H. R. Pettigrove, bean specialist of Michigan State College.

Quality probably will be good this year, he says. But only if proper stacking is accomplished before rains in September prevent good curing conditions. Even if some of the vines and pods now are green, he finds from past experience that they will cure out fairly well once they are in a stack.

It's the old story of "pick" that determines bean profits. When beans are graded and marketed they must be sorted over to take out culls and small stones, lumps of good Michigan clay and other inedibles. When the portion of pick runs too high the deductions piled against a grower may ruin his chance of profit or even indicate a loss.

The college continues to recommend use of the McNaughton system of stacking. Commonly many beans still are cured in small bunches from double row of the bean puller or from the window left by a side delivery rake. If there are no rains, this system hastens curing, but wet weather often spoils the practice. The pulled bunches weather even more than un-pulled beans.

Books are buried with the dead to assure them both good luck and entertainment on their final journey in the Yunnan Province of China.

The deepest copper mines in the world are found near Houghton and Calumet in the upper peninsula. The deepest vertical mine depth is more

Use of COMMERCIAL FERTILIZER

By P. V. GOLDSMITH
Growers' Field Secretary, Farmers & Manufacturers Beet Sugar Ass'n
(In the Sugar Beet Journal for August)

The formulae used in fertilizer manufacture expresses the per cent of nitrogen, phosphoric acid and potash which the mixed fertilizer contains and is expressed in that order. For instance, 2-12-4 on a bag of fertilizer means that it contains 2% of nitrogen, 12% of phosphoric acid, and 4% of potash. Expressed on a ton basis, each ton of the fertilizer contains 40 pounds of nitrogen, 240 pounds of phosphoric acid, and 120 pounds of potash.

Many growers ask the question, "If a ton of 2-12-4 fertilizer only contains 40 pounds of nitrogen, 240 pounds of phosphoric acid and 120 pounds of potash, a total of 400 pounds of actual plant food, what is the other 1600 pounds? And why must I pay freight on something I cannot use?"

In the first place, the chemical elements, nitrogen, phosphoric acid and potash as such, cannot be used in mixed fertilizer. They must be used in combination with other elements forming compounds that can be handled in the manufacturing process, and secondly, even if they could be used in a form 100% pure it would still be necessary to complete the ton with some form of filler in order to obtain the correct percentage composition of the finished product.

By the way of illustration, the druggist in compounding a prescription uses small quantities of concentrated drugs and then proceeds to complete the volume with water or some other filler. If this was not done and the ingredients were administered alone, it would probably result in the death of the patient.

In speaking of "filler" in the manufacture of commercial fertilizers, it should be mentioned that there is another type of filler used in some instances which is not a so-called natural filler. The addition of filler in fertilizer manufacture sometimes becomes necessary in the case of low analysis goods such as a 2-6-2, for instance, or in any case where the natural filler supplied by the chemical compounds themselves, is not sufficient to make a ton.

For example: A ton of 2-6-2 fertilizer requires: 40 pounds of nitrogen, which we obtain from 250 pounds of nitrate of soda (16%); 120 pounds of phosphoric acid, which we obtain from 600 pounds of super-phosphate (20%); 40 pounds of potash, which we obtain from 80 pounds of sulphate of potash (50%); total, 930 pounds; add filler to make a ton, 1070 pounds—total 2000 pounds.

The natural filler which these compounds contain are not sufficient to make a ton, so it becomes necessary for the manufacturer to add 1070 pounds of sand or other inert material in order to complete the full 2000 pounds and get the desired percentage of fertilizing ingredients in the completed product.

Less Filler in High Analysis
Now suppose that we desired to make a 4-12-10 fertilizer: This would require: 80 pounds of nitrogen, which we obtain from 400 pounds of sulphate of ammonia (20%); 240 pounds of phosphoric acid, which we obtain from 1200 pounds of super-phosphate (20%); 200 pounds of potash, which we obtain from 400 pounds of sulphate of potash (50%); total, 2000 pounds.

In this case it is found that the natural filler carried by the fertilizing materials themselves are sufficient to complete the full ton without adding any additional filler.

The advantage of purchasing mixed fertilizer of higher analysis is that it, as a rule, contains no filler other

NEW IMPROVED CERESAN DOES THESE 4 THINGS TO MAKE WHEAT PAY BETTER



- Checks Seed Rotting
- Reduces Seedling Blight
- Controls Stinking Smut
- Improves and Increases Yields

You do just one thing—treat your seed with New Improved CERESAN—and this effective dust disinfectant does four! Checks seed rotting, reduces seedling blight, controls stinking smut, and improves and often increases your wheat yield—at a cost of less than 3¢ an acre!

The U. S. Dept. of Agriculture, along with many Experiment Station authorities, recommends this treatment. It is a protection against seed-borne stinking smut—a way to better yields. Even on clean seed the average increase has been 1.13 bushels an acre.

Easier to apply. One-half ounce per bushel—costs only 2 cents. No drill damage. Controls covered smut and stripe of BARLEY, and smuts of OATS—often increasing stands and yields of both grains.

One lb., 70¢; 5 lbs., \$3.00. Come in now for your copy of free Cereal Pamphlet.

Buy at FARM BUREAU STORES and CO-OP ASS'NS

TREAT SEED EVERY YEAR—IT PAYS

"— A POUND OF BUTTER .. please —"



"A POUND OF BUTTER, PLEASE . . ." This request made to grocers many thousands of times daily is sweet music to all dairy farmers.

The Mid-West Producers' Creameries, Inc., sells 26,000,000 lbs. of butter annually. We have facilities for complete sales promotion campaigns to help our associated creameries and 25,000 farmer patrons sell their production at good prices.

Producers of cream can earn more by marketing through member creameries of the Mid-West Producers' Creameries, Inc. Co-operative creameries are invited to join this organization. Write for complete information.



MARKET YOUR CREAM THROUGH A PRODUCERS' CREAMERY MID-WEST PRODUCERS' CREAMERIES, INC.

OFFICES—224 W. JEFFERSON STREET, SOUTH BEND, INDIANA
INDIANA: Columbus-Farmers Mktg. Ass'n; Crawfordsville-Farmers Prod. Ass'n; Middlebury Co-op Creamery; Marion-Productors Creamery; Orleans-Productors Mktg. Ass'n
TENNESSEE: Gallatin-Summer Co. Co-op Cr.; Murfreesboro-Butterfield Co-op Cr.; Nolensville Co-op Creamery
MICHIGAN: Coldwater Dairy Company; Constantine Co-op Creamery; Carson City-Dairyland Cr.; Fremont Co-op Creamery; Grant Co-op Creamery; Lawrence Co-op Creamery
MARIETTA: Marcellus Co-op Creamery; Nashville-Farmers Creamery; Niles-Productors Dairy; St. Louis Co-op Creamery
ILLINOIS: Alton Co-op Creamery

We make 26,000,000 pounds of butter ANNUALLY

USE FARM BUREAU FERTILIZERS FOR WHEAT!



THE HARVEST TELLS THE STORY

- FOR INCREASED YIELD
- LOWER COST PER BUSHEL
- BETTER QUALITY GRAIN
- MORE PROFIT!

Farm Bureau Fertilizer Prices Are Lower This Fall

IT PAYS TO FERTILIZE WHEAT. There are two profits. Fertilizer on wheat pays for itself and makes a profit by the increase in yield and extra quality of the wheat. It pays a second profit by increasing the yield of the following hay crop.

FARM BUREAU FERTILIZERS ARE BEST FOR WHEAT. Their nitrogen is 95% water soluble. It is quickly available to give the young plants that quick, strong start to take them through the winter in fine shape. We have the old reliable recommended fertilizers:

FARMERS CASH PRICES PER TON AT YOUR ELEVATOR

0-20-0	\$22.52	0-45-0	\$50.83	2-12-6	\$26.32	3-12-15	\$34.96
0-14-6	24.56	1-14-5	25.60	4-10-6	28.21	3-18-9	36.10
0-12-12	27.55	2-8-10	26.31	4-16-8	35.39	4-24-12	48.31
0-20-20	43.08	2-12-2	23.32	4-16-4	32.06		

NOW READY AT FARM BUREAU STORES AND CO-OP ASS'NS

SEED WHEAT and RYE

Michigan Crop Improvement Ass'n certified wheat and rye out-yield ordinary seed and produce top quality grain. The small extra cost per acre is a good investment. These varieties are the best and highest yielding for Michigan:

- BALD ROCK—Beardless, soft, red winter wheat. Big yielder. Resistant to lodging.
- AMERICAN BANNER—White, soft winter wheat. Beardless. Stiff straw. Winter hardy. Heavy yielder. Best for lighter wheat soils.
- ROSEN RYE—Outstanding heavy yielding rye. Large plump berries. Well filled heads. There is no better rye.
- WINTER VETCH—Sow with rye. Excellent cash seed crop. Michigan is specially adapted to vetch seed production. Vetch, a legume soil builder.

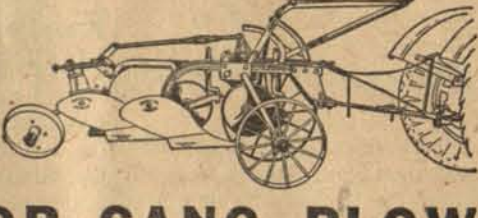
WE BUY SEEDS - - - WE CLEAN SEEDS

We buy Michigan grown alfalfa, red clover, alsike and sweet clover seeds. Send us 8 ounce representative sample for bid. Take equal amounts from each bag to make mixture, from which to take sample . . . Let us clean your seeds in our modern plant. Very reasonable charges. Send sample and we will advise cleaning needed and price. Have your seed cleaned early.



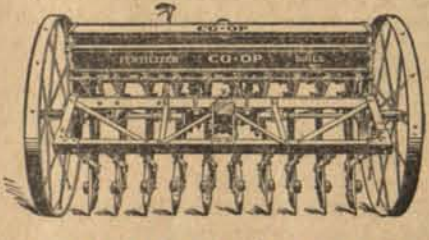
AVERY CO-OP TRACTOR GANG PLOW

Extra high clearance for extra deep plowing and easy transportation. Power lift from land wheel instead of furrow wheel to keep clutch free from trash. Two lift adjustments. Rear wheel takes landside pressure, reduces draft, prevents wear on landside and saves fuel. Extra clearance between bottoms. Two and 3-furrow sizes. Automatic spring-release coupling hitch. Shares for every type of soil at your Co-op store.



CO-OP DISC-SHOE FERTILIZER GRAIN DRILL

New, exclusive type of disc shoe penetrates hard ground, cuts trash as it opens furrow and prevents clogging. Places seed uniformly and well in the soil to insure fast germination and full use of seed. Tight-fitting galvanized steel lids. Grain and fertilizer boxes combined in one substantial unit. Zerk lubrication. At your Co-op store.



A CO-OP TRACTOR For Your Fall Plowing

- Self starter
- Battery & generator
- Electric headlights
- Rubber tires
- Truck brakes
- Truck steering

Our Co-op Tractor in one plow and 2 and 3 plow sizes has plenty of power and it can take it. See it at Farm Bureau Stores & Co-ops.

AVERY CO-OP TRACTOR DISC HARROW

With a single lever you can angle or straighten all gangs as easily as you shift the gears in your car. No expensive, complicated angling mechanism. Hair-breadth adjustment to any degree of angle. Electrically heat treated discs. Oil goes to bottom of bearings for thorough lubrication and long life. See this simple, strong, light-draft, deep-cutting disc harrow today at your Co-op store.



CO-OP TWO-HORSE SPREADER

So light in draft, you can pull it by one hand with beaters in action. Automotive type wheel swing for making sharp turns. Passes through narrow doors. Top of box only 3 feet from ground. Less work to load. Plenty of clearance. Fits under carrier. Shreds and pulverizes manure thoroughly. 60 bus. capacity. Wide, even spread. Broad tread. See this time-and-labor-saving spreader today at your Co-op store.



FALL EGG PROFITS are made now



MERMASH

Keep Mermash Before Young Pullets on Range

Buy at Farm Bureau Stores and Co-op Ass'ns

HARNESS SALE



FARM BUREAU KING HARNESS FOR BIG HORSES, 1,700 lbs. up. Heavy duty, Rust resisting hardware. Black or brown leather.

\$67.00 SET

At your Co-op.

Feed Mermash Now AND COLLECT EGGS THIS FALL AND WINTER WHEN EGGS ARE HIGH AND PAY YOU WELL

Farm Bureau CATTLE SPRAY

Guarantees Livestock Comfort



Farm Bureau Brand Supplies at 300 Farmers Elevators FARM BUREAU SERVICES, Lansing, Michigan