Of Interest To Our Out-of-Town Readers

Effect of Manures and Rotation on Growth of Corn.

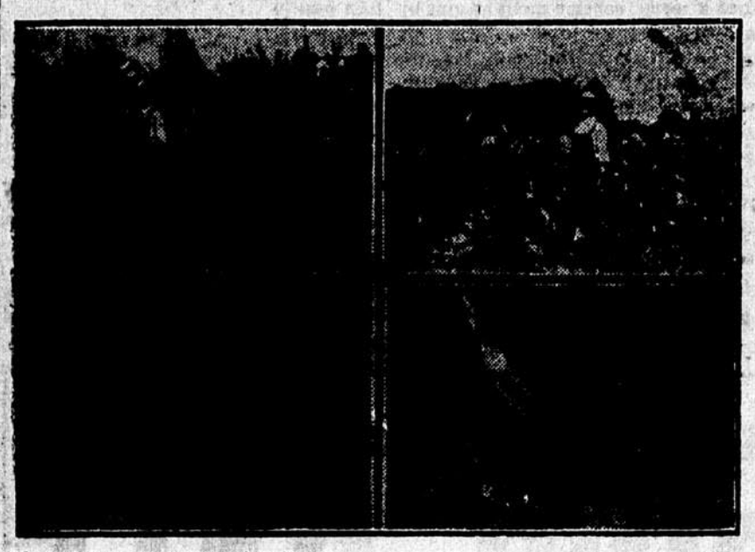

Photo Minn. Agricultural College.

The views on the left are from a field where the crops have been rotated and manure has been applied. Note the large growth of corn and the vegetable matter in the soil.

The views on the right are from the field where corn has been grown continuously. Note the small growth of corn and the absence of vegetable matter. Such a soil becomes hard and dense and difficult to handle.

Use Manures in Crop Rotations.

By PROFESSOR ANDREW BOSS, Agriculturist, University Farm, St. Paul.

The rotation of crops has been strongly advocated during recent years. Because crop yields have been increased in some cases by rotation many are led to believe that something is added to the fertility of the soil by crop rotation alone. Nothing could be farther from the truth. In fact it is likely that the aggregate amount of plant food is more quickly exhausted by rotating the crops than by single cropping, provided no manures or fertilizers are used in either case.

That yields are temporarily stimulated by rotation is well shown in the results from the crop rotation plots at University Farm. Wheat grown continuously has yielded 19.3 bushels per acre for a ten-year period. In the three-year rotation for the same period it has yielded 20.6 bushels. Corn has yielded 27.5 bushels an acre where grown continuously and 46.3 bushels where grown in a three-year rotation of wheat, clover, and corn. The yield of hay on continuous meadow is 1.7 tons and in the three-year rotation 2.7 tons an acre. The yields are larger with each class of crops in rotation. The very fact that the yields are larger suggests that more plant food is taken from the soil in producing them. No plant food is added by the growing crops except that nitrogen may be gathered from the air in the soil spaces by the bacteria on the roots of the clover plants. All other elements of fertility are more rapidly exhausted by the larger crops grown on the three-year rotation fields. Doubtless the bacteriological and physical condition of the soil is improved by the change of crops in rotation, thus accounting for at least a part of the increased yield, but it is probable that unless manures and fertilizers are supplied the yields in the three-year rotation without manuring the land in the following years will decrease. Poor soil conditions and correspondingly poor plant growth is even now noticed in the clover and corn crops.

In a five-year rotation where eight tons per acre of barnyard manure are applied once in five years, wheat has averaged 27.4 bushels per acre during the ten-year period mentioned above, corn 61.3 bushels and hay 3.6 tons an acre.

It will be noticed that the yields are materially increased by the use of manures. The aim in a well balanced rotation should be to return in the manure the elements removed by the growing crops. For every pound of nitrogen, phosphorous, potash or other material taken from the soil for crop growth a pound must be returned if the normal supply is to be maintained.

Most of our farm crops will take from the soil yearly from twenty-five to 100 pounds of nitrogen, about twenty-five pounds of phosphoric acid and thirty-five to sixty pounds of potash. Any rotation scheme to be correct must provide for replacing these materials. Barnyard manures offer the best agency for this supply. It may be that in years to come it will be necessary to add mineral fertilizers such as phosphorous, potash, lime, etc.

As rotations for the maintenance of production the following are suggested:

Three-Year Rotation.

First year: Grain—sown to red clover eight pounds per acre.

Second year: Clover hay, two crops—plowed in fall—top dressed in fall or winter with six tons per acre of barnyard manure evenly applied.

Third year: Corn.

Five-Year Rotation.

First year: Grain, seeded to timothy eight pounds and clover six pounds.

Second year: Timothy and clover hay, two crops.

Third year: Pasture, plowed in fall—top dressed with eight tons per acre of barnyard manure.

Fourth year: Corn.

Fifth year: Grain.

Time can well be spent during the winter season in planning the fields for crop rotations and it would be well at the same time to calculate the amount of manure that can be supplied by the farm live stock. If one lives close to a village or city it is often possible to secure manure from livery or other stables for the hauling. Idle horses could be profitably employed in hauling it to the farm, the pay coming in the increased crops.

GATE CLOSING LAW.

South African Statute Would Be Useful Here.

Every right thinking citizen wishes to promote public convenience. The public as a whole usually appreciates his attitude. Unfortunately a few people often abuse the privilege extended.

Perhaps no better illustration of this can be found than the abuse of the privilege of passing through private premises. When a bridge is out or roads drifted full of snow, adjoining premises are usually willingly placed at the disposal of the traveling public. The obliging farmer sometimes expresses bitterness toward all who have availed themselves of this privilege because some one abused it. Perhaps a hundred respected it, but the next man cut the fence in order to get back into the road at a more convenient place. Perhaps he left the gate open and the owner's stock went into the neighbor's cornfield.

Many owners who have experienced this situation may well wish for the passage and enforcement of such a law as recently went into effect in one of the British South African countries. It provides a fine of $50 or less for anyone who opens and leaves open, or unfastens any gate. After the first offense he is fined $100 or less, or imprisoned for one month. The same penalty applies to any one who finds the gate open, passes through and neglects to shut and fasten it.

Any one who willfully injures or removes fences or gates is liable under this law to a fine of about $375 or less, or imprisonment for not more than six months. If he accidentally injures the fence or gate, and voluntarily reports it to the owner, he is given the privilege of repaying the owner the cost of repairing. The law further provides a fine of $100 for any person who refuses to give the owner his correct name and address after injuring a fence of gate, or climbing over without permission. Such a law as this judiciously enforced would go far toward preventing the abuse of a privilege which every right thinking farmer is glad to extend to the traveling public.—J. O. Rankin, Editor, University Farm, St. Paul.

How's This?

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Toledo, O.

We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by his firm.

NATIONAL BANK OF COMMERCE, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75 cents per bottle. Sold by all Druggists.

Take Hall's Family Pills for constipation.

There seems to be an almost irresistible inclination on the part of many persons to cultivate too much land. Land well cultivated will produce better crops with less work than a large area poorly cultivated. The small farm, with the use of brains, will do better work than will the large one where only muscle is used.

Courtland

Mr. and Mrs. Diederich Gronholz were visiting at New Ulm Thursday.

The Courtland and Nicollet Horse Co. held a special meeting here in the Town Hall Thursday for the purpose of considering if their present horse is to be sold. A vote was taken and the result was 8 in favor of selling and 17 not to sell.

Hippert Bros. and Fred Wilking are nearly through filling ice houses. They also filled the ice house for the Cambria Creamery.

John Rockvam and Otto Sommer were callers at Cambria Thursday.

The Courtland Fire Department will hold their fourth annual ball in the hall on Saturday evening, Jan. 25th. The committee has made arrangements for good music, good supper and good prompting. The fire laddies are known to be loyal and good entertainers. Come and have a good time and help the fire boys along. Good management and a good clean floor guaranteed by the committee.

G. W. Schlottmann was a business caller at New Ulm Wednesday.

The masquerade here Saturday eve was a success. Friteche and Thiede furnished good music as usual.

The 9c sale at Schlottmann's Store was a big success and Mr. Schlottmann had to re-order two more lots like the first one.

Willie Strehlow is still on the sick list but is improving.

There is a big demand for dwelling houses here. Why not build some? Let loose of some of your money, you money men and make a good investment.

The Courtland Fire Co. held their annual election of officers Tuesday evening and re-elected W. A. Gerboth as treas. and Max Friederich as sec. The treasurer's report shows that the Company has over $200 in the relief and some special funds. The Chief, E. C. Etter suggested that the hose cart members and hook and ladder company not be changed as they are good at their respective places and the request was practically carried out. It was voted to hold the 4th Annual Fire Men's Dance, Jan. 25.

Escaped After Fifteen Years

W. P. Broyles made a successful escape after fifteen years of suffering from kidney and bladder troubles. Foley Kidney Pills released him and will do just the same for others. He says: "They cured a most severe backache with painful bladder irregularities, and they do all you claim for them". Refuse substitutes.

O. M. Olsen.

HANSKA

The Farmer's Institute which was held here Monday and Tuesday was well attended.

Supt. R. B. Kennedy accompanied by Supt. Tonning visited Hanska Tuesday where the latter gave a most interesting talk on Consolidation of Rural Schools. Consolidation of a number of the adjoining district schools with our village schools has been frequently mentioned in connection with the improvement of the Hanska Schools. The teachers and pupils greatly enjoyed the half holiday which was given them so that they might hear Supt. Tonning talk.

Gilbert Rusten and Nels Bekken left Friday afternoon for Minneapolis where they will take up a course in automobiling.

Mrs. Einar Toenberg and Mrs. Christ Mo entertained at whist, the former Friday evening and the latter Saturday evening.

Miss Nora Moe was a New Ulm visitor Monday.

The Men's Whist Club served an oyster luncheon at the club rooms Thursday evening.

The Misses Gina and Nina Smeemo entertained a number of their friends Saturday evening.

The Dairy Industry In Minnesota

Some interesting dairy figures have recently been gathered by H. J. Maxfield, commissioner of immigration, which show a remarkable growth of Minnesota's creamery industry, during the past twelve years. "I confess that I am surprised", said Mr. Maxfield, "and I believe that many of our people will be when they learn that Minnesota creameries have more than doubled in the past twelve years. In 1899, Minnesota had 582 creameries, and in 1911 she had 814. In 1899 our creameries manufactured 44,007,933 pounds of butter, against 98,984,789 pounds in 1911. Here is the most interesting and important fact of all. In 1899, $6,959,914.55 was paid out to our farmers for butter fat, against $22,381,375 26 in 1911, or a gain of $15,421,460.71; more than three times as much in 1911 as was paid out in 1899. This of course is not due entirely to increased production, but largely to advance in prices.

The advance in price can best be observed by comparing the average price paid per pound for butter fat in 1899, which was 17.5, against 27.18 in 1911, an advance of about ten cents per pound. In 1899, the creameries of this State had 40,189 patrons, against 90,704 in 1911. 331,512 cows were supplying Minnesota creameries in 1899, against 714,318 in 1911. These two latter cases show a substantial increase and both have more than doubled.

The above figures were taken from the Dairy & Food Commissioner's report. The 1911 report shows that Minnesota cows produced an average of 139 pounds of butter each. The amount received by each patron averaged $246.75. When we consider the fact, that Minnesota has many thousands of acres of undeveloped land, all of which are particularly adapted to dairying, her future as a dairy State looks exceedingly bright, and I predict that in the next ten years we will again see this remarkable industry doubled.

The foregoing figures do not take into account the value of cheese produced in Minnesota, nor the values of the by-products of the dairy industry. It is safe to say, that all the dairy products of the State are worth annually to the farmer $40,000,000.00, outside of the indirect value to agriculture by the keeping of stock on the farm.

Dairying is profitably carried on in older states, where land sells for much more than Minnesota land. If dairying is profitable on $200 land, it is necessarily much more profitable in Minnesota on land that costs from $25 to $125 per acre."

FARMS IN UPPER PENINSULA OF MICHIGAN

$15.00 per acre. Twenty years time. Interest six per cent.

This country beats the world raising oats, peas, barley, Winter and Spring Wheat, Flax, Red Clover, Alsike Clover, Timothy, all root crops and apples.

In fact it is without doubt the greatest diversified farming district in the United States.

The peas raised here are all sold for seed peas now, and in the near future, as soon as enough land is put under cultivation, the same will be true of its grains.

We are draining about 200,000 acres of marsh prairie now and find a black muck soil from three to five feet deep.

See our local agent Max Reinhart

Western Land Securities Co. Owner's

Home office—Second Floor Gilfillan Block, St. Paul, Minn.

CLEARING SALE

This is your opportunity to save money. It doesn't make any difference how many sales you have attended or where they were conducted, we guarantee this sale will eclipse them all. So now then, THIS IS THE SALE YOU HAVE BEEN WAITING FOR.

This Sale Opens January 22nd, and Closes Monday Evening, January 27th, 1913

Granite Ware

12 Qt Pail, Blue and White, 60c, now ... 49c
12 Qt Pail, Dairy, 35c, now ... 29c
12 Qt Pail, Galvanized, 25c, now ... 19c
6 Qt Preserve Kettle, Blue, 35c, now ... 24c
6 Qt Preserve Kettle, Gray, 25c, now ... 19c
14 Qt Dish Pans, Gray, 25c, now ... 19c
17 Qt Dish Pans, Gray, 35c, now ... 29c
4 Qt Preserve Kettle, Gray, 15c, now ... 10c
3 Qt Sauce Pan, Gray, 15c now ... 10c
All our other Granite Ware, 10c, now ... 9c
Size 8 Fry Pan, Ground Steel, 25c, now ... 18c
Size 9 Fry Pan, Ground Steel, 35c, now ... 28c
10 Qt Pail, Tin, 10c and 15c, now ... 9c
Coat Hanger, Wood, two for ... 5c
15c, 20c and 25c Whips, all to go at ... 9c
6 Knives and 6 Forks, White Metal, 65c, now ... 50c
6 Table Spoons, 20c and 15c, now ... 13c
6 Tea Spoons, 10c, now ... 9c

Glassware

Salad Bowls, Fancy China, your choice of 8 different patterns, each ... 25c
Water Glasses, Colonial Style, sale price 3 for ... 9c
After Dinner Japanese Cup and Saucer, each 5c
After Dinner Japanese Plates, each ... 9c
Large Globed Lamp Chimneys, each ... 9c
Cup and Saucer, Gold Band, 6 for ... 75c
Dinner Plate, Gold Band, 6 for ... 75c
Cake Plates, Fancy China, each ... 25c
Star Cut Tumblers, genuine cut, each ... 9c
Star Cut Pitchers, genuine cut ... 65c
Star Cut Sugar and Creamer, 70c set, now 49c
Plain White Dinner Plates, 6 for ... 39c
Heavy Cut Water Pitchers, 15c, now ... 10c
Curtain Rods, Brass, 10c, now ... 5c
Wizard Carpet Clean, 10c, now ... 9c
All our Pot Covers, sizes 8 to 12 ... 5c
All our 50c and 55c Brooms, to go at ... 39c
A good all around Hammer ... 9c
Shoe Brushes, 15c, now ... 9c
All our 10c Oil Cans, to go at ... 5c
Regular 5c per bar Soap, now 7 bars ... 25c
Crumb Trays and Brush, 25c, now ... 19c
Crumb Trays and Brush, 50c, now ... 39c

Pictures

All our 10c and 15c Pictures, now ... 9c
75c Pictures "Cupids," all to go at ... 59c
Large Fruit Pictures, $1.50, now ... $1.19

25c and 35c Stocking Caps, a bargain at. 18c
Boys' Belts, Buster Brown, while they last. 8c
Girls' Beads, 15c, now ... 9c
Hat Pins, 15c and 10c, all to go at ... 5c
A Big Reduction on all high grade Ladies' Hand Bags.
Also a Reduction on all sizes Heavy Stockings.
Gents Four-in-hand Ties, in boxes, 35c, now. 19c

Look over this List of Bargains with care, then bring it with you and be one of the FIRST to save big money on the things you need every day.

THE FAIR STORE

THE STORE WHERE YOU PAY THE LEAST FOR THE MOST

THEO. B. MELZER