

In the Field of Agriculture

PROFIT FROM MANURE

Every crop removed from the soil takes from it materials which have been used in building up the plant's tissue. Soil with no fertility added and which annually bears a crop, must in time become exhausted of its store of valuable plant food, and unfit to bear further profitable crops. Substances which are added to the soil in order to replace the ingredients which have been removed by previous crops are called manures. The oldest and most common form of manure is the farm manure. Of all fertilizers this is the most popular. From earliest history up to the present time the majority of farmers have placed their reliance on this class of manures for maintaining the fertility of the land.

A well-kept manure heap may be safely taken as one of the surest indications of thrift and success in farming. Neglect of this resource causes losses, which, though little appreciated, are vast in extent. It is estimated that the approximate value of the fertilizing constituents of the manure produced by each horse or mule would annually be \$27, by each head of cattle \$20, by each hog \$4, and by each sheep \$2. It is fair to assume that at least one-third of the value of the manure is annually lost through careless methods of handling. At this figure it is estimated that the annual loss in the United States, based on the number of farm animals, would reach the tremendous sum of \$875,000,000. Practically all of this loss could be prevented if the importance of farm manure was appreciated to its full extent by the farmers of the country. Some farmers actually begrudge the time and labor required to remove it from the barn and feeding lot, and it is not uncommon to see a man purchase commercial fertilizers and waste the manure produced by his stock.

PLANTING WHOLE POTATOES

"The first thing that interested me in the use of whole seed potatoes," says a writer in the Denver News, "is that it practically guaranteed a perfect stand. Later we found that we could also get a better 'set on' from the whole seed, and that by giving our potatoes space in proportion to the strength of the soil in which they were planted, we could produce a crop that was more even in the size of the potatoes, because every hill came, and each hill had an equal distribution of plant food. We have also been remarkably free from disease, and we attribute this largely to the fact that we use whole seed, in which there are no cut sides to be easily infected by any disease germs that may exist in the soil. We plant the whole seed, also, because we feel that the extra strength and vitality of the plant, makes it more sturdy, and by the time the food in the seed potato is exhausted, the plant has reached a condition in which it can much more strongly resist any disease with which it may come in contact. A good, healthy seed potato will usually start a single heavy sprout—the master sprout—which is the strongest and best sprout the seed can produce, and if this sprout is not broken off, no other sprout will be started by that potato. Usually this sprout springs from the seed end, and as in most cases where potatoes are cut for seed the cutting is done through the seed

end, you are liable to kill the strongest sprout the seed can produce. If you cut potatoes for seed you get a great many weak plants, which naturally produce a much smaller yield than the more vigorous plants from the whole seed. Plant potatoes only on good ground that has been in alfalfa or some other legume crop for several years. Use good seed that is free from disease and plant it whole, cultivate and irrigate carefully (if irrigation is necessary) as needed, and you should harvest a crop that is abundant in quantity and fine in quality."

NO BREED OF HOGS IMMUNE

During the past year the United States department of agriculture has been conducting campaigns in Indiana, Missouri, Iowa and Nebraska to control the contagious disease of hogs known as "hog cholera" by means of anti-hog cholera serum and farm quarantines. In every county where these measures were employed, even though begun after the disease had continued its ravages for some time, there was less loss from hog cholera than in either of the two preceding years.

In addition to its great function as a preventive, it has been found that the anti-hog cholera serum would cure a large portion of the hogs in the early stages of the disease and render them immune after recovery. Hogs not treated by this serum show a loss of 75 to 100 per cent of all the affected herds. So far as is known this serum is the only thing that will prevent the disease. Of hogs actually sick when treated the department's inspectors lost but 25 per cent during the past summer. Of well hogs in diseased herds, 2.8 per cent died after being treated, and of hogs in exposed herds less than one per cent died after being inoculated with the serum.

The cholera does not seem to affect any particular breed of hogs more than another, and while generally the careless farmer is more apt to have the disease among his hogs than the careful one, the disease sometimes occurs where the conditions are sanitary. The object of the department has been to control the disease and if possible to eliminate it from the country.

SEED CORN PATCH

Many farmers are now trying the plan of using a separate breeding plot of corn. Its the only way to insure perfect purity, strong vitality and uniform type. A quarter or half acre is enough land, but it must be separate from other corn to prevent crossing. It must be in good condition to make strong plants. It must be uniform in fertility to make selection safe. Plant only the best seed obtainable. Suit yourself as to variety and go ahead.

HOW BEES SWARM

Bees increase by swarming, or dividing one large colony into two, says Francis Jaeger, apiculturist of the Minnesota college of agriculture. The old queen with about half of the bees leaves the old home and starts a new colony somewhere else. The young queen will take charge of the old home as soon as she hatches. Long before swarming-time bees begin to make preparations for it. First they raise a large number of

drones or male bees, from which some day the young queen may choose her mate. When later the colony increases in strength the queen lays from eight to twenty eggs in especially prepared wax cells called queen cells. The egg laid in a queen cell, being a common worker egg, will hatch into a larva which the bees will feed abundantly on "royal jelly." This special food and the large cell will make the egg develop a queen. The ninth day after the egg is laid, the bees cover the wormlike larva with hatches from it, with a porous cap. The queen shell at this time is not unlike a peanut in appearance. As soon as the first queen cell is capped over, a sign is given and the old queen with her workers leaves the hive. After circling in the air for a while the swarm settles upon some tree or shrub and send out scouts to find a new home for them, and the old queen never again sees her old home or her children, and even if starving to death she will not go back to the old house for one drop of honey.

BLIND STAGGERS

In the past years horses have died by the thousands in Texas, Iowa, Missouri, Illinois, Kansas and Nebraska from a disease known as blind staggers or forage poisoning. Last year the disease was more prevalent than ever before. Investigators of the United States department of agriculture have practically established that this horse disease can be cured effectively only by a total change of feed and forage. These investigators say that it is quite obvious that there is a direct connection between the green forage, exposed pasturage and newly-cut hay or fodder which the horses eat, and this cerebro-spinal meningitis, as the disease is known in science. In fact, eating of such forage when contaminated is undoubtedly the most important cause. Over 95 per cent of the cases of this disease in Kansas and Nebraska during the outbreak in 1912 were maintained under such conditions. Great care must be taken that the horses do not obtain the dangerous forage unknown to their owners. About 90 per cent of the affected animals die. While medical treatment in the vast majority of cases has not brought results, nevertheless if it is used at all it must be prompt and before the disease has had time to run. The first and most important thing to remember is to avoid risk of disease in the first place by feeding your horses only clean, well-cured forage and grain, and pure water.

TIME TO SOW ALFALFA

This month or next is the time for the spring seeding of alfalfa in the latitude of Nebraska, according to the Nebraska college of agriculture. The advantage of planting now is that the plants may be given an early start on account of the spring rains. However, care must be taken to see that the alfalfa does not have to contend with a large crop of weeds, or it will be choked. The safest way to prevent a growth of weeds is to clean the ground by previous cultivation. If the field that will be used for alfalfa was plowed in the fall, it should be disked as soon as it can be worked and kept disked and harrowed until seeding.



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