

OUR FARM PAGE: ITEMS OF INTEREST TO EVERY FARMER

Permanent Pastures and Increased Yields

As demonstrated in experiments by the Division of Field Husbandry, Central Experimental Farm, Ottawa, the yield from permanent pastures may be increased. When manure is available, the pastures may be top dressed at the rate of eight to ten tons per acre in the fall, once in every three or four years, followed by harrowing to avoid undue compaction of the herbage. However, commercial fertilizers are usually preferable for permanent pastures. It requires less labour to apply them, and different kinds may be used to meet different plant food requirements. The fertilizers may be applied in the spring.

For grass pastures or clay loam soils, the recommendations are 100 pounds of sulphate of ammonia annually, then 400 pounds of super-phosphate and 50 pounds of nitrate of potash every four years. If preferred, 500 pounds of a commercial 2-12-6 mixture of 2-10-6 may be applied every four years with 100 pounds of sulphate of ammonia in the intervening years. Such applications at Ottawa increased production of grass pasture over a six-year period from 2,329 pounds of dry matter to 3,206 pounds per acre. On light sand soils, the amount of potash may be slightly increased.

Where clovers are plentiful, 500 pounds of superphosphate alone or an equal amount of 0-12-6 or 0-16-6 fertilizer may be all that is necessary. Clovers obtain nitrogen from the atmosphere and store it in the nodules on the roots. In this way, sufficient nitrogen is added to the soil. An application of 600 pounds of superphosphate every three years on a grass-clover pasture at Ottawa increased average production for six years from 2,159 pounds dry matter per acre to 3,431 pounds. In the last two years, production almost doubled, from 2,371 pounds to 4,687 pounds per acre.

There is no other tobacco JUST LIKE OLD CHUM

Little Chats ON Farm Management No. 1

SCALE OF FARM OPERATIONS

The net returns from a dairy farm business are greatly increased when the volume of business is large. This is shown by a study of the dairy farm business which is now being made by the Economics Division, Marketing Service, Dominion Department of Agriculture, Ottawa, in co-operation with the Ontario Agricultural College, Guelph. The business of the shippers of milk to whole milk markets, for the year ending June 30, 1937, may be cited as an example. Those with milking herds of less than 10 cows secured averaged labour earnings of \$412, while those with 20 or more cows had similar earnings of \$910. Again, it is shown that those milk producers who sold during the year, less than 50,000 lbs. of milk per farm had labour earnings of \$382, while those who sold more than 150,000 pounds of milk per farm had such earnings of \$1,085. Somewhat similar results were found to obtain on those farms from which milk was shipped for cheese, butter and concentrated purposes.

Any business has a definite overhead expense which remains constant or nearly so, regardless of the business turnover. For this reason, the cost per unit of product tends to be reduced as volume increases.

The volume of business on a dairy farm may be increased by either more intensive or more extensive farming. Greater intensity of operation is attained by developing more business on the present acreage of the farm. This method should be given first consideration to the end of securing greater net returns from the business. More live stock may be maintained on a farm if higher crop yields are obtained. Improvement in the quality of the livestock is a particularly useful means of increasing the farm business turnover. Greater use of the hog and poultry enterprises along with the dairy assists, very materially, toward increasing the business volume.

The Control of Seed-Borne Diseases of Vegetables

Many serious vegetable diseases such as pod spots of beans and peas, black rot and wilt of crucifers, blight or celery, bacterial blight, ear and seedling rots of corn, leaf mould of tomatoes and many not mentioned here are seed-borne. States J. K. Richardson, Dominion Laboratory of Plant Pathology, St. Catherine's, Ont. By planting seed free from the parasites which cause these diseases, a grower can often prevent serious losses. However, the vegetable grower is not in a position to know the original source of the seed he is planting and has no guarantee of its freedom from disease. Under such conditions the advisability of seed treatment as a precautionary measure is obvious.

There are many chemicals which are effective in killing seed-borne parasites, but the resistance of seeds to the adverse effects of different substances varies to such an extent that no single treatment can be recommended for all. Solutions of mercuric chloride and formaldehyde were among the first treatments to be used commercially and are still frequently recommended. There are distinct disadvantages in using these liquid treatments, not the least important of which is the necessity of planting the seed immediately after treating or drying it before it can be stored. Within the past few years, organic mercury, copper and zinc compounds in the form of powders have largely replaced the older liquid treatments, due to the fact that they can be used dry. In addition to having good fungicidal properties, they can be applied more rapidly, do not interfere with seed storage, and have a better protective effect on the seedling during the early stages of its development.

As is the case with liquids, dust fungicides differ in their effect on various seeds, some being definitely beneficial, while others cause reductions in germination. The two most commonly used for treating vegetable seed at the present time are copper oxide and semesan (hydroxymercurochlorophenol). Both these compounds are usually applied dry in quantities just sufficient to cover the seed thoroughly, one level teaspoon per pound for small seeds (beet, cabbage, etc.) and one-eighth teaspoon for large varieties such as peas, beans, melons, etc. When

treating, place the seed in a fungicide in a closed container (small tin, tin can or large drum, depending on the quantity being treated) and turn it end over end a sufficient number of times to cover the seed entirely with the fungicide.

Most varieties of vegetable seeds can be treated with either copper oxide or semesan, but certain ones show definite preferences. All crucifers, such as cabbage, cauliflower, etc., are injured by copper oxide while good results are obtained with semesan. With spinach and tomato, however, the opposite is true, copper oxide being preferable.

Dust treatments have a tendency to increase the friction between the seeds, with the result that they do not flow readily. This is not significant where small quantities are treated and the seedling is sown by hand, but it is extremely important. This condition can be corrected by the addition of a small quantity of fine flake graphite to the fungicide. One and a half to two ounces of graphite that will pass through a 325 mesh screen, added to each bushel of seed should give results.

In addition to killing a large percentage of the seed-borne parasites present, seed treatment has the added advantage of reducing the amount of damping-off by protecting the seedlings against soil-borne parasites during the early development. In the case of cabbage, cauliflower or other cruciferous seed is suspected of harbouring "Black Rot" organisms, it should be soaked in a solution of mercuric chloride in the proportion of 1 ounce to 8 gallons water, for 30 minutes, rinsed in water, dried, then treated.

When using commercial products for the treatment of seed always follow the directions of the manufacturer for the specific material being used.

PIG LOSSES FROM ANAEMIA

(Experimental Farm News)
The heavy loss of pigs during the winter nursing period presents a serious problem for the swine producer. States H. E. Wilson, Dominion Experimental Station, Lacombe, Alberta. This mortality is generally due to impoverished blood or anaemia in which there is a deficiency in the number and quality of red blood cells. It is especially likely to develop in suckling pigs farrowed during the winter and early spring and confined to pens with wood or concrete floors and receiving no minerals apart from those contained in the mother's milk. This condition is not seen to any extent in pigs which are born during the late spring and summer months when they are out in the sunshine, and when they have free access to suitable soil and vegetation.

Some pigs die suddenly while still fat but usually there are symptoms which indicate the presence of anaemia, such as unusual pale colour of the skin, listlessness, and a rough, curly hair. Diarrhoea is common and within a day or two they will show a decided unthriftiness and lose weight rapidly. There is a heavy deposit of fat at the jaw. It will be noticed that anaemic pigs do not run and play as they should but prefer to lie in the sun most of the time. They quickly become exhausted when made to exert themselves, and show a labored jerky breathing which is usually called "thumps." This condition is most critical in continuously housed young pigs from one to four weeks old, and it often affects the fattest and sleekest pigs in a litter. As soon as the little pigs begin to eat food from the trough, danger of anaemia is past. Pigs that have anaemia and recover are likely to develop into runts which may be unprofitable to raise. Moreover, the anaemic pig is greatly weakened, his vitality and resistance lowered, making him much more susceptible to other diseases, or parasite infestation. Anaemia of suckling pigs is traceable to a deficiency of iron in the milk supplied by the nursing sow. Feeding iron to the nursing mother will not help for this does not increase the iron in her milk. The iron must be given direct to the little pigs. The most convenient way of administering it is in the form of finely powdered "reduced iron", which can be purchased at any drug store. Dosing the pigs on the seventh and fourteenth days after birth is sufficient; each dose being approximately the amount of reduced iron that can be picked up on a ten cent piece. The dose, administered on a home-made wooden spatula or spoon, is dropped on the back of the tongue, the body marked, and the pig put back in the pen.

It is also good practice each day to place sods approximately one foot square in size in the pens with the sow and pigs. Soil contains considerable quantities of iron and the young pigs, in rooting around in the dirt, eat sufficient quantities to make good the shortage of iron. Extremely sandy soil that is very low in iron, should not be used. At the Dominion Experimental Station, Lacombe, Alberta, the sods are stored in a suitable place for winter use. These sods are taken from areas on which pigs have not been allowed to run, so as to guard against infestation of parasites in the young suckling pigs. To insure the presence of iron in the sods they may be sprinkled with a solution of iron sulphate. This solution is made by dissolving a teaspoon of iron sulphate in one quart of water and sprinkling this amount of the solution on each sod, with a sprinkling can.

COVER 65,000,000 MILES

There are 2,655 locomotives of all types on the Canadian National System. During the year they cover between 68,000,000 and 69,000,000 miles.

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I have the following used Tractors and Machinery, all in real good condition.

- 1 McCORMICK-DEERING 15 - 30 TRACTOR, repainted and re-conditioned.
- 2 McCORMICK-DEERING 10 - 20 TRACTORS in real good condition.
- 1 7-ft. McCORMICK-DEERING BINDER, just cut two crops. In dandy shape.
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The above binders have been traded in on Power Binders and are real bargains.

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How to Order Seeds

For Flower Gardens

Before ordering the flower seeds, some thought should be given to where the plants are to grow, and for what purposes the flowers are needed, says Isabella Preston, Division of Horticulture, Central Experimental Farm, Ottawa. If required only for landscape effect, plants which bloom profusely for a long season are most useful. If for cutting for decorating the home, then flowers with long stems are needed for living rooms and halls, as well as smaller flowers for decorating the dinner table. The colour of the flowers is also important and should blend in with the general colour scheme of the rooms.

Good seeds from reputable firms should be obtained, as they will give better satisfaction than cheap seed. It is a great disappointment when the seed does not germinate or the seedlings are not true to name. Some plants like asters and petunias have a great number of varieties which vary in habit of growth, and these should not be bought in mixture. As an example, large flowering petunias growing with small compact and balcony forms do not make an attractive bed. When only the colour of the

flower varies, the combination may be quite good, so that balcony petunias in mixture are permissible. If some special colour scheme is planned, then seeds in separate colour can be obtained. Kinds of plants that have done well in previous years, or are known to do well in the locality, should be the chief items ordered, but one or two novelties added to the order each year will be interesting to all, and will widen the gardener's knowledge of plants.

CANADIAN HOG DOING ITS BIT IN EMPIRE WAR

With Canada being geared to wartime production, everything is being made to contribute to the successful conclusion of the Allied objectives, including the lowly hog. It is expected that Canada, along with the United States, will be looked to to augment supplies of bacon which ordinarily come from the Scandinavian and other continental European countries. During the last war, Canadian bacon exports rose from 37,212,000 pounds in 1913 to 114,919,000 pounds in 1918, according to the Industrial Department of the Canadian National Railways.



AN INDUSTRY Pledged TO THE FURTHERANCE OF AGRICULTURE

Founded and developed on the basis of helpfulness to the farmer, the implement industry is entirely dependent on the prosperity of agriculture for its own success.

Through the years the implement maker has, with quality of product and genuinely helpful service, won the high regard and goodwill of the users of his product. There are few farmers who do not value sincerely the service of the implement company.

Lack of understanding of some of the problems of the industry may give rise on occasion to criticisms that seek to detract from or disparage the part that the implement maker plays.

In the light of the facts, however, misunderstandings vanish and a better appreciation results.

Farmers' Equipment Investment Greatly Reduced

Most of the discussions on prices of implements, comparing them with those of years ago, for instance, fail to take cognizance of the improvement in methods that have taken place, resulting in the use of different machines from those of a quarter-of-a-century ago.

The One-Way Disc Seeder has displaced, to a serious extent, so far as the manufacturer is concerned, several other machines, and it does so because it cuts the cost of tillage and seeding by from 40% to 50%.

The small combine has spread the use of this method of harvesting until the sale of them now almost equals that of binders. And this because it costs only 26c per acre for out-of-pocket expense to harvest with the small combine as against \$1.90 per acre by the Binder-Thresher method—a saving of \$1.64 per acre.

The wheat farmer can equip today with the latest tractor and tillage and harvesting equipment at 28% less than he could for comparable machines ten years ago—equipment, too, that enables him to cut the costs of his operations by over 50%.

This is the contribution of the implement industry to the furtherance of agriculture and Massey-Harris takes pride in having played an important part in it.

WHATEVER HELPS AGRICULTURE—HELPS CANADA
MODERN FARM MACHINERY HELPS AGRICULTURE

MASSEY-HARRIS

LEADERS IN THE IMPLEMENT INDUSTRY SINCE 1847

Fixing Up THE FARM



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