

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN
THE DOMINION.

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inches and one inch, to be 167.4 tons of water per acre.

While some adhere to the old custom of hilling up such crops as potatoes and corn, those who study the subject are departing from it, giving level culture, since the flat surface, rather than the thrown-up ridges, is less wasteful of soil moisture. To hill potatoes or corn to a height of six inches when the rows are three feet apart may increase the surface exposed to the sun and evaporation five per cent., and if ridged to a height of nine inches, more than nine per cent. Under these conditions, the water must rise to a greater height under the rows before reaching the surface roots, while midway between them and where the ground is least shaded the unmulched surface lies nearest the water supply. "These being the conditions," says Prof. King in his work, "The Soil," "ridge culture must be more wasteful of soil water than level tillage, whence it becomes evident that naturally dry soils everywhere and moist soils in dry climates should, where practicable, be given level cultivation." On the other hand, on stiff, heavy soils in wet climates and during wet seasons it may become desirable to practice ridge culture with potatoes and some of the root crops, but not so much to increase the rate of evaporation from the soil as to provide a soil-bed in which it will be less difficult for fleshy tubers and roots which form beneath the surface to expand. In practice, however, we find the hilling of potatoes to be quite generally followed, not during the season of cultivation, however, but at a later date when the tops have grown to near their full height and have commenced to blossom. A light hilling at this season covers the tubers that grow at the surface, and thus prevents their becoming sunburnt. If the land has been well filled up to this date, it will contain sufficient moisture, which, with the addition of the showers that are almost certain to come in early autumn, provide the conditions necessary for a full yield of potatoes.

The Guelph Experimental Farm.

The thousands of excursionists that will visit the Ontario Agricultural College farm at Guelph during the coming few weeks will find much of real interest and profit if they will but look into the work in which they feel a special concern. One cannot hope to take in in a single day more than a small portion of the lessons that are to be learned at such an institution. The field experimental plots alone could easily occupy a week of careful study in order to gain anything like a comprehensive view of the work so well conducted under the supervision of the energetic and keenly discriminating Experimentalist, Mr. C. A. Zavitz. At this season the plots, covering almost half a hundred acres, present a motley appearance, with their variety of crops, covering grasses, clovers, fall and spring grains, fodders, etc., in various stages of development. The fall wheats are particularly luxuriant, having come through the winter with almost every plant alive, except in a few spots where ice lodged for an extended period. While definite crop results are not yet determinable, fairly positive deductions can be drawn from the condition of one long range of fall wheat stretching across plots of 1899, where various leguminous and other crops were plowed under for manure. The wheat growing where the Common Red, Mammoth Red, Sweet and Alsike clovers were plowed down is decidedly darker and more luxuriant than where such crops as buckwheat, rape, etc., were turned under. Another range shows a comparison between the use of such annual crops as peas, rape, buckwheat, Crimson clover, and bare summer-fallow with twenty tons of yard manure per acre, and bare summer-fallow with no manure. At present the crop following fallow with 20 tons of manure presents the most promising appearance, with that manured with growing peas next in order. These plots and all others are plainly labeled, so that visitors can easily study out for themselves the results of various treatments.

Another interesting range of plots indicate at this season a wide difference between various varieties of grasses for spring pasture. Compared with timothy and Blue grass, which are our standard grasses, there are several sorts that are quite a week earlier. Lyme grass (*Elymus Virginicus*) and Western Rye grass (*Agropyrum tenerum*) are Western grasses that promise well. The plots of these are thick, luxuriant and well advanced. Tall oat grass (*Arrhenatherum averaceum*) is very early and also hardy, but it does not stool out sufficiently to be considered equal to the above sorts, except, perhaps, in a mixture. Brome grass (*Bromus inermis*) at the time of our visit, May 18th, presented an appearance equal to timothy. Western Rye grass (*Lolium perenne*) is a hardy sort, quite as dense as timothy, and about a week or ten days earlier. Orchard grass (*Dactylis glomerata*) proves itself a tender variety at Guelph. Of the many grasses tested, it seemed about the worst killed out of any of those seeded last year. It is very early where it does well, but inclines to grow in bunches. Both the Canadian and Kentucky Blue varieties were dense, but short and late.

Another interesting test, and one which is being given its first trial this year—and, by the way, it was suggested by the FARMER'S ADVOCATE—is to determine in various ways the relative values of several forage crops for pasture. This is to meet a demand for information as to what crops to sow in spring for summer forage in case of a failure of grasses and clovers sown the previous year. The crops being tested are the following, and are sown in triplicate or in three ranges: Oats, oats and peas, oats and vetches, oats and hairy vetches, barley, spring wheat, buckwheat, spring rye, Hungarian grass, corn, sorghum, Kaffir corn, common Red clover, Crimson clover, common vetches, hairy vetches, peas, grass peas, cow peas, yellow soy beans, and Dwarf Essex rape. These crops will be tested for earliness, bulk of crop, and palatability, in the following ways: Range 1 will be all cut at the same time and weighed, as early as a number of the crops are fit for pasture. This range will again be cut and weighed as soon as they again reach a pasturing size. Range 2 will not all be cut at the same time, but each crop will be taken off as it becomes ready. Range 3 will have a hurdle fence surrounding all the crops, to enclose cattle, in order to learn the preferences animals may have for the various crops. It is hoped that many valuable lessons will be learned from these comparisons of forage catch crops for pasture.

The Farm, which is now under the supervision of Prof. G. E. Day, B. S. A., presents a promising appearance. The fall wheat areas, chiefly of Dawson's Golden Chaff, promise a full harvest, while considerable of the new seeds look exceedingly well considering the summer drought of 1899. Spring grains were all nicely up, having been sown under very favorable conditions. The corn land had been well manured and cultivated ready for the drill, which was to commence on the 19th inst. The variety being sown is Wisconsin Earliest White Dent, a sort that matures well in Central Ontario, producing a heavy crop of fodder and ears. It is sown about 40 inches apart, at the rate of about 25 pounds per acre. The 18 head of first-class export steers in this department are a grand lot, that will average upwards of 1,400 lbs. each. They are soon to be shipped at top market figures.

The Poultry Department, in charge of Mr. W. R. Graham, B. S. A., presents evidences of energetic effort. At the time of our visit some 600 birds had been hatched since Feb. 8th, and it was estimated

that in two weeks later fully 1,000 chickens would be hatched, by incubators and hens. As was referred to in our issue of May 15, some attention is being given to winter-hatched broilers. Those that were sold in Toronto at the end of April brought a profit equal to \$1.20 per dozen for the eggs, had they been sold in that form. Experiments are being conducted with various foods for young chicks, and with foods and conditions best suited to prepare fowls for the British market.

Some attention is being given to egg records. A Eureka Patent nest box is used in a pen of Barred Plymouth Rocks. The fronts of the row of nests are hinged at the top, and swing inward as the hens go in to lay. The hens cannot escape from the nest, however, without assistance, so that when a hen has laid, she is taken out and a record made of her production. The use of this box has revealed some interesting facts. The pen of ten pullets commenced to lay on Nov. 2nd. Up till the 1st of March they laid an average of four dozen eggs each. Since that later date three have made individual records of 60 eggs each up till May 18th, while two others had produced only 16 eggs each, and two others no eggs at all. Without making this test, it might easily have been concluded that all the pullets were laying about equally well, as they all appeared thrifty and about equally vigorous. Mr. Graham considers it as important to have hens with egg records as to have cows with milk records, and it is his purpose to pursue this sort of investigation with all the breeds under his charge, and thus be able to improve the laying stock by selecting breeding hens that have made good records, and by setting only the eggs of the heaviest producers. Just here, however, Mr. Graham expressed a caution that should be observed in selecting eggs for setting. When a hen has laid heavily for an extended period there is a probability that some of the eggs will be infertile, and also that the germs in the fertile eggs will be weak. So that judgment must be exercised apart from selecting eggs from the heaviest layers.

Various substances and preparations have been tested for the preservation of eggs. Between water glass and vaseline there was no room for doubt as to which was superior. Eggs coated with vaseline for one year were stale and murky, quite unfit for use; while those kept in water glass for a like period broke as fresh and firm as newly-laid stock. These latter would do to boil, poach or cook in any form, and appeared quite as fresh in the shell as new-laid eggs.

A casual glance through the dairy, horticultural and other departments indicated to us that the work in these departments was being ably conducted. Visitors to the farm who are especially interested in these branches of farm work will learn considerable by giving attention to these departments during their stay at the farm.

STOCK.

Swirls on Pigs.

Of what use or detriment is swirls? What is the advantage or disadvantage in black or red hair or whiskers to the owner of pigs? Will the pig with straight hair be any better or feed faster than that with a swirl, providing both have hair of a good, soft quality, not bristles? I have a boar with a beautiful swirl that can give points to a lot without swirls, and I should be sorry to discard him; but if the fashion says no swirls, I suppose he should go, and be sacrificed to the good fashion—but not this year. I cannot see why people should object to the hair having a swirl in it any more than a young lady should object to a lot of curls. Usually the pig with a swirl and the girl with a curl are both furnished with a luxuriant crop of fine silky hair, and are proud of it.

I think there are many things connected with our best bred Large White pigs that want improving more than the swirl in the hair, and one is getting them ready for the butcher at as early a date as possible. I keep both Large and Middle White pigs, but I can make pork pigs of about 110 lb. dead weight from Middle White pigs sooner than I can from the Large White, and the quality gives better satisfaction, but the Large White have the preference for larger pigs for the bacon-curers.

But if you want a cross, put a Large White boar to Berkshire or Middle White sows, and you get the correct thing, but mind and be sure both are pure of their respective kinds. Let them both have all the good qualities of their respective breeds, with plenty of hair. Never mind a swirl on the boar if he only has a good square rump to carry it, and you will have the pigs that will pay to either keep or sell. The pigs to either feed in a sty or yard or roam the stubble should be bred from a sow with good level top and bottom, wide round the girth, plenty of tilt, and a good, thick, well-set-on head that meets you with a pleasant look. The boar will put some length and lean meat into the pigs, and she will give them the necessary fattening propensities.—Amicus.

None Like It.

DEAR SIRS,—I received the premium, "Flowers, and how to grow them," all in good order. Am very much pleased with it. I think there is no paper like the FARMER'S ADVOCATE; we like it very much. I remain, Yours Truly,
York County, Ont. MR. WM. ROWE.