

THE FARMER'S ADVOCATE AND HOME MAGAZINE. THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

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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.*

Farmers' Institute Meetings.

A series of Institute meetings will be held during the last week of June and the first week of July. It is intended to cover the whole Province and provide meetings at every organized Institute and Agricultural Society. The changes in the railway time table, that come into effect on June 15th, have delayed the completion of final arrangements, but programmes will be out shortly.

Surface Cultivation and its Action.

The value of surface tillage of the soil is becoming better understood year by year, which is showing itself in a more general adoption in practice, especially with what are termed hoed crops. The farmer that allows weeds to grow in his field, for lack of cultivation, loses a great deal more than the weeds appropriate of plant food and moisture, which is no small item. While the destruction of the weeds pays well for the cultivation that hoed crops must receive, the great value of surface tillage comes from the conservation of moisture by the arrest of evaporation that goes on when a crustlike surface is allowed to form. The object should be to make the water which seeks to escape from the surface pass through the cultivated plants. Without the circulation of water or sap, no plant can be fed, because plant food requires to be in solution before it can be appropriated. Water is the conveyer of food to the plant. If this moisture is permitted to escape from the surface by evaporation, it leaves the plant food at the surface. This food cannot nourish plants, because it is out of the range of their feeding roots. If the course of the moisture is through the plants, there is created a moisture current towards the roots, and the plant food is carried where it can be used to advantage. It will therefore appeal to any thinking person that measures should be adopted to prevent this moisture from being lost by evaporation.

The most practical and effective method is to establish and maintain a surface mulch of fine soil. By frequent use of implements of tillage which loosen the soil to a depth of two or three inches, this mulch may be preserved and the moisture saved. The drier and looser this mulch, the more effective it is, as it then successfully breaks the capillary connection between the air and the moist under-soil, having the effect of interposing a foreign body between the atmosphere and the earth. A board, a bunch of litter or a blanket laid on the earth has the same effect, and the soil is moist beneath it. So long as this mulch remains dry and loose, it serves its purpose well; but after each shower a crust will form, destroying the mulch, making a direct capillary connection between the lower moist earth and the atmosphere, which in a measure serves a purpose similar to a leak in a pail. The thing to be done, then, is to stop the evaporation leak by again breaking up the crust and creating the surface mulch by cultivation. If this is done after every shower as soon as the soil will work well, a large portion of the moisture will be secured to the growing crop. In a dry time—that is, when several weeks go by without rain—if the crops are tilled every ten days, all the benefits to be derived from surface culture may be expected, as more frequent tillage does little good, and tends to arrest growth, as rootlets are broken and the plants bruised unnecessarily.

With shallow-rooted plants, as corn, the preparatory tillage should be as deep as practicable, that the soil may be prepared thoroughly before the roots have entered it, and shallower later on, in order that the rootlets may be disturbed as little as possible. For the corn crop, as the shoots are coming through the soil, and say once afterwards, nothing equals a stroke of the harrow. After the first two weeks, it is well not to cultivate deeper than three inches, a depth which is very effective in conserving moisture. Extended and repeated trials on different soils and in different seasons have shown that invariably there is left at the end of the season a larger amount of water in the soil where stirred to the depth of three inches than when stirred to a depth less than this amount. Prof. King gives as the amount of difference in water content at the end of the growing season in four feet of soil, between that cultivated three 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 tilled 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.

Worth of a Superior Sire.

The improvement of the general character and quality of a herd of cattle or of any other class of stock depends so largely upon the character of the sires used in building up and maintaining the herd that too much importance can hardly be attached to the selection of the head of the harem. From the fact that he plays so large a part in stamping the character of the offspring of all the females in the herd, while each of the females can only leave her impress directly upon her own produce, it is not difficult to assent to the statement that the sire, in so far as breeding is concerned, is half or more than half of the herd. Taking this view of the case, it is of the utmost importance that care be given in the choice of the sires to be used. Individual excellence should be the first consideration after being satisfied that the animal is purely bred and descended from a line of high-class individual ancestry. Masculine character and vigor of constitution are among the first essentials in a sire, the former being illustrated in the general appearance, in head and eye, in walk and carriage, and the apparent self-consciousness of superiority which proclaims him a prince among his peers. Constitution is indicated by breadth of chest and crops, thickness through the heart, well-sprung and deep ribs, flesh elastic to the touch, and skin and hair handling so soft and loose that a handful of it may be grasped. A bull of this description, especially if bred from ancestry of the same character, is tolerably certain to produce stock of the same type with a large degree of uniformity. That bulls of this class backed by good breeding exert a powerful influence in the herds in which they are used, and on their posterity when inferior sires are not used to succeed them, has been clearly demonstrated in every stage of the history of the various breeds of live stock. Taking Shorthorn cattle for an example, the early history of the breed in England proved the prepotency of such sires as Favorite, Comet, Belvedere, Duke of Northumberland and Cleveland Lad in the hands of the Colling Brothers and Mr. Bates; Ben, Twin Brother to Ben, Albion, Pilot and others in the herds of the Booths; Heir of Englishman, Champion of England and William of Orange in the evolution of the favorite Scotch type of the present day, as moulded by the honored Aberdeenshire breeders, and perpetuated in Canadian herds by such notable breeding bulls as Mr. Dryden's Royal Bampton and Bampton Hero, Mr. Johnston's Indian Chief, Mr. Russell's Stanley, Mr. Watts' Challenge and Royal Sailor and others which have left a stamp on their produce and descendants, which has bred on through succeeding generations, producing prizewinners in profusion wherever their blood has been used.

These bulls were not accidents in breeding, but were the result of the mating of high-class animals bred from ancestors of outstanding excellence of constitution, conformation and lineage, which gave them the power of prepotency, the power to stamp their individuality upon their offspring and posterity. The history of all the breeds of cattle, both beef and dairy, as well as of heavy and light horses and of sheep and swine, furnishes similar instances of the striking influence of noted sires in the improvement of their class wherever they have been employed. This fact serves to emphasize the vital importance of exercising great care and good judgment in the selection of male animals for use as breeders in the raising of any class of stock and the wisdom of utilizing to the fullest extent the services of a sire which has proved his worth by producing uniformly good stock, instead of turning him off before half his term of usefulness is over and risking an untried one, which may prove a disappointment, if not a failure. It is well to hold on to the one that has given good results until the new one has been tried and his offspring developed sufficiently to show whether they are likely to be satisfactory. It is well also to select a son of a prepotent sire from a superior dam, and having regard to the influence such a sire may exert in a herd for good or ill, the question of the purchase price is certainly but a secondary consideration, when one that fills the bill is procurable at any reasonable figure.

While sires of outstanding merit in any class or breed of stock are by no means plentiful, yet it would be a mistake to conclude that only two or three in a decade are produced in any breed. There are doubtless many diamonds in the rough that have not been discovered or estimated at their true worth, for want of judgment or appreciation, and so there are many excellent animals which have lived and died in obscurity or making no record above mediocrity, which, if they had fallen into the hands of men of skill and judgment in breeding and management, would have left their mark prominently on the honor roll of their race as producers, if not as prizewinners, and doubtless in every year in the wide field of stock-raising a good proportion of this class is born which need only the proper treatment to develop into superior animals and judicious mating to prove improvers of their sort.