

Cleanliness in Swine Raising.

"Whoever would raise hogs without disease (and this is necessary to obtain the highest profit) must get rid of the notion that the hog is naturally a filthy animal; that filth is less distasteful and unhealthful to him than to the steer or horse, and that it is impossible because of the nature of the animal to surround the hog with sanitary conditions. Filth is a prolific source of disease among all animals; and because the hog is brought into contact with the most filth, there is the most disease among swine. Filth opposes the health and thrift of swine just as it opposes the health of horses or man. The first step in growing hogs without diseases is to keep filth away from them, to give them clean food, clean drink, clean quarters, clean shelters."—*U. S. Farmer's Bulletin.*

Pasturing Pigs on Stubble Fields.

Farmers generally appreciate the importance of allowing the growing pigs and breeding sows to run on the pea stubble for a time after harvest, to gather the gleaner's share and appropriate it to the production of meat. It does not, however, usually occur to one that there is much left in other grain stubble fields, upon which pigs can make gains, or perhaps even a living. It is not peculiar that this is the case when it is observed that little grain can be noticed lying upon the ground, and the pigs do not seem to enjoy staying in the field to hunt feed for themselves the first few days, especially if they are given daily feeds at the barn.

Some interesting experiments have recently been made at the Montana Station to learn the value of this as compared with other methods of feeding. Forty-one pigs from six to nine months old were allowed the run of barley, wheat, and pea stubble fields of 18, 10.44, and 10.73 acres, respectively. For some time before the test they had been pastured on alfalfa, and fed one pound of cracked barley per head daily. For ten weeks immediately preceding the test they made a daily average gain of 0.42 pound per head. While pastured on the stubble fields they were given no grain in addition to what they could find, except on stormy days. The grain thus fed amounted to 24.1 pounds in the five weeks of the test.

During this time the pigs made a gain of 22.8 pounds per head, or 17.5 pounds, deducting the amount which it was calculated they gained from the grain fed during stormy weather. On the supposition that 4.5 pounds of grain are required to produce a pound of pork, the 41 pigs gathered 3,228.75 pounds of grain, which otherwise would have been lost. The harvesting had been done in the usual manner, and in the investigator's opinion the amount of peas and grain remaining in the field did not exceed that left in the stubble fields on the average farm. The scattered grain could not have been saved in any other way, and represents a clear profit.

The grain saved from the stubble fields by these pigs was not all that could have been gathered if they had remained in the fields a longer time. Seven brood sows were afterwards pastured during the winter on the Station stubble fields, which included a 24-acre oat field in addition to those mentioned above. They were given no food in addition to what they could gather, except kitchen slops and a small grain ration on stormy days.

It is stated in a recent communication from the Montana Station that several brood sows have been pastured during the past season on stubble fields without receiving any grain in addition, and that they are in fair condition. They had, in addition to the grain stubble fields, the range of clover, alfalfa, and timothy meadows, and the gleanings of fields where root crops had been raised. The manure from grain-fed stock, which was spread upon the fields, also furnished some grain.

The Sheep Outlook.

BY J. M'CAIG, PETERBORO.

The foolish man sold his sheep when they were cheap and bought them back when they were dear. The sheep industry ran down in Ontario for four or five years previous to 1897, and the number in that year was very low relative to the capacities of the country to support a large sheep industry. Last year things brightened up considerably, and the present year promises to be at least as good, if not better, for the producers of both butchers' and breeders' stock. Men are looking for good types to found new flocks at good stiff prices, and the depletion of our beef stock by buyers for the ranches has made the butchers turn more towards mutton. The large export of Canadian pork, for which the demand has been well established, contributes to the same end. On the whole, the sheep-man has reason to face the future with equanimity.

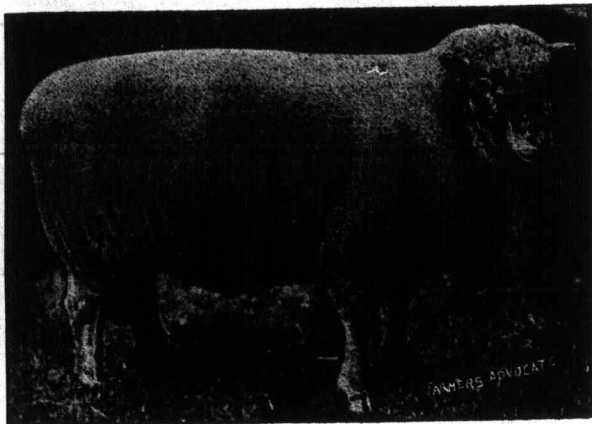
The buying up of Canadian stockers for the West is of interest to the sheep producer for another reason besides that it removes a lot of beef from competition with mutton for home consumption. There must be some compensation for the freights that the western buyer pays on his stockers as against the Ontario beef producer who breeds the stock he feeds. This is to be found in the cheapness of his feedstuffs. His land represents little or no investment of capital; it represents no labor invested to clear it and no effort to make it produce suitable food, as good grass for both summer and winter feeding is indigenous and abundant. Thus his cattle owe him in profit only a suitable return for the money invested in them-

selves alone and not a return besides for the capital invested in land six or eight times the value of themselves. It is a matter of history and of sober fact, and not of speculation merely, that the West has us at a disadvantage in this respect. In the production of beef as beef our day is as certainly past as it is in the growing of wheat. We certainly hold a place, however, and a high place, in the cattle industry. During last winter and spring the supply of thoroughbred beef stock, both male and female, at almost artificial prices, was certainly not equal to the demand. The economic truth, likewise, that high classes of stuff, and not staples or ordinary necessary classes, yield the highest margins of profit, was fully demonstrated. Common stockers sold well, but pedigreed stock paid many times better. We were once a beef country. Fields of production have widened and margins have consequently narrowed or disappeared, and the industry must pass to that part of the whole producing class who can produce cheapest.

With regard to sheep the same prospect is before us. The drawback of the prairie wolves, which is the most serious one to sheep grazing in the Western States and in the Canadian Northwest, is an incident to early and sparse settlement that will speedily disappear in the face of the great essential suitability of the country for sheep grazing, and we may confidently look forward to a strong spurt in mutton production in these countries in the immediate future.

The part that the East is to play in this movement is perhaps already evident. We are not entirely out of it because grass is cheap in the West. The West has what we might call potentiality, but the East has tradition. With all its possibilities, the West is without the experience, knowledge and established standards of the mutton breeds that is the result of years of care and weeding and selection that alone can build up a flock. The place that Ontario takes, then, both from necessity and fitness, is that of producing the best type of breeding animals for western breeders.

It is lamentable to reflect that the larger majority of the sheep of the country are only grades and that the class of males used by the ordinary farmer are selected because they are



TWO-YEAR OLD SOUTHDOWN RAM, WINNER OF 1ST PRIZE, ROYAL SHOW, 1898; OWNED BY E. MATHEWS, POTTER'S BAR, HEREFORDSHIRE.

cheap and not because they are good. Breeders of pedigreed stock have very little local demand for their good rams. Ten dollars is looked on as an extravagant price. The practice of English breeders is a good object lesson with regard to the selection of males. It is there fully realized that the cheapest way to get a good flock is through a good male. It would take a lot of money to get perfection in a whole flock of ewes, whereas it might be possible to get one perfect animal, and it is besides an advantage to have the perfection on the side of the male on account of his having greater influence and prepotency in determining the character of the offspring than the females have. The prices paid over the water are a revelation to the ordinary sheep breeder. A whole flock of rams of a reputable breeder sometimes average fifty to one hundred dollars each, while one thousand dollars is common for choice ones, and recently the sale of a ram has been reported there at \$5,000. There is need of improvement in the practice of breeders with regard to the kind of rams they select. There is wisdom in becoming the owner of a pure-bred flock; there is a hopeful prospect for the breeder already the owner of such a flock.

A Bull's Head.

Mr. Wm. Housman, in some notes in the London *Live Stock Journal*, makes the following reference to the champion Shorthorn bull at the Royal Show at Birmingham:

"Not having myself enjoyed the pleasure of seeing the show at Birmingham, I felt considerably interested in reading the report in last week's issue upon the champion bull Marengo, whose great substance, handsome shape, and full coat of hair of rich red-roan color, relieved with a few touches of white, I have always admired. The description, read in the light of his well-remembered appearance at Manchester (the last time I saw him), commends itself as true. The improvement noticed in his head, I apprehend, is that of twelve months' progress towards masculine maturity in a part of

the animal which requires time for the full development of the secondary sexual characters. I liked Marengo, head included, as a younger bull, and quite expected the development of head power which appears to have come with the last twelve months. The bulldog, I have been told by a successful breeder, wants three years for the perfecting of the terrors of his head, and that length of time seems little enough to allow a bull, that he may give the world assurance of his sex by the index of his head. An elephant calf or a young boar does not show what tusks he can grow, neither is a boy of fourteen expected to appear with a full-flowing beard, nor a six-months cockerel with spurs. Some of the most majestic of the Kirklevington sires, the noblest-looking bulls at maturity, were but lanky, lathy, oxy-horned, and weak-headed stripplings up to the age of eighteen months or more; but what heads they put out when they reached the age of four or five years! And how those long frames deepened, and long legs became proportionately short, and narrow backs grew broad, as the bull-stirk grew and ripened, a male complete. By skilful rearing and feeding the frame of Marengo was furnished with an ample covering of evenly distributed flesh, the calf's flesh probably never lost, so that throughout his growth he had much the body of a mature bull. His head, nevertheless, showed his youthfulness, until he came of age, and if it has already taken some of the grandeur of full growth, it will doubtless continue to improve for at least a year or two more."

Blindfold the Vicious Bull.

Scarcely a month passes that we do not read of lamentable cases of men being attacked and seriously maimed or killed outright by vicious bulls. It is never really safe to trust a bull over a year old to be led without a ring in his nose and a staff. In most cases where they have become dangerous the fit has come upon them suddenly, and after an attack the remark is commonly heard that the bull never showed any disposition to be ugly before. It is often the quiet fellow which suddenly develops into a fiend, so it is well never to take the risk of an attack. If a bull has once shown an inclination to be vicious in the way of attacking a man, it is not safe to lead him even with a staff, for he may quickly snap the staff with his horn or jerk it from the hand of the attendant. Dehorning, while it mitigates the danger to some extent, is not a sure cure, as many bulls are just as vicious after the wounds heal, and the operation disfigures a handsome bull. It is not necessary to put him away for this fault, however, if he is a valuable animal and a good breeder (and it is generally the lively fellows that get good stock and transmit force and energy to their progeny), as he may be easily controlled by being blindfolded by the use of a leather helmet formed to cover the forehead and eyes, secured firmly around the horns and by a strong throat latch made to buckle under the cheeks. The eyes may be protected by conical shaped leather goggles, which are firmly fastened in the helmet. The helmet is a complete blinder, and the bull wearing it is subject to his master's hand and may be led quietly wherever desired. The same appliance may be used with complete success in the case of a cow becoming excited and hard to manage when being led or shipped. We have seen the worst cases made tractable by the means of blindfolding.

The Foal During Autumn.

The lesson has been pretty thoroughly learned during the last few years that only high-class horses will pay for the raising, and that strictly good, young, mature animals of any special class will meet with a ready demand at a good price. A knowledge of these facts has led wide-awake horsemen to breed only such mares and to such horses as are likely to produce high-class offspring, be it of draft or one or other of the lighter classes of horses. There are so many influencing circumstances between the mating and the appearance of a healthy foal that the breeder is always relieved when he sees the youngster scampering about on a fair way to a sound and well-formed horsehood. This, if he be wise, will induce him to provide the mare and foal such treatment as will induce healthy growth of the latter. In some cases it may be necessary to put the mare in harness, but as little as possible should be done, especially if the mare is a meager milker. Of course, considerable work can be taken out of a mare suckling a foal by a careful man, but in every case where working the dam is necessary the progress of the foal should be watched, and the care given it and its dam governed accordingly. A setback at this delicate age may seriously handicap the foal's future, and to allow that is to court defeat in accomplishing what was set out to do—raise a good horse for our own service or the market. When a mare has to be worked, pains should be taken to get the foal eating well of such foods as will be relished and are nourishing. In this way a foal can be taken from the mare at four months old and not suffer a setback, but where a mare is not needed, and has a good pasture, the foal is just as well to suck till nearly or quite five, and even six, months old. By that time its digestive apparatus will have sufficiently developed to enable it to live well without its mother's milk if proper food is provided it.

No doubt many farm brood mares that foaled in April and May will have to go into work now that