

quite low condition. The question then arises, "How are we going to prepare the stallions that have already stood in idleness the greater part of the time since last season to give satisfactory results the coming season?" The answer is, "Get to work with them as soon as possible." It will only be a few weeks now until they will go on the road for the season, or stand at the owner's barn, as the case may be. Of course, the preparation must be somewhat gradual. Daily exercise should be commenced at once. The manner in which the exercise should be given will depend upon the class and upon the tastes of the groom. Heavy horses can be exercised either on the halter or in the team at light work, or even in single harness at light work or on the road. The lighter class of harness horses will probably be exercised in harness, or, if preferred, on the line beside another horse in the saddle, while Thoroughbreds can be exercised in saddle or beside a saddle horse, or, if educated to go in harness, can be driven. If they can be given the necessary exercise in doing something that has to be done, of course the expense will be less; but exercise they must have in order to give them the necessary tone and power to give satisfactory stud service. A heavy stallion should be given a couple of hours' light work or four to six miles of a walk daily at first, and the amount of work or walking exercise gradually increased until three or four times that amount is given. The lighter classes should be given proportionately more. We consider that when work or driving is to be done, the stallions should be kept at it steadily during the interim between seasons, except possibly for a month or six weeks after the season, when it is well to lessen the grain ration, and proportionately lessen the amount of work.

In preparing horses that have been idle for months, of course, regular grooming is as necessary as exercise, and the food should be of good quality and easily digested, and in proportion to the labor performed; but the groom should always be careful to not allow them to become excessively fat. The food to be given under these conditions does not differ in kind or quality from that which should be fed to horses being put into condition for any purpose. The administration of drugs should be avoided. It is a mistaken idea that stallions should be given medicines, stock foods, nerve tonics, etc. Under no circumstances should a healthy animal, whether it be stallion or mare, be given drugs. If any disease exists, recourse should be had to drugs, but those given should be those indicated by the disease existing. Medicines that tend to lay on fat quickly, give a gloss to the coat, etc., are very dangerous, as they cause fatty degeneration and disintegration of tissue, and if continued for any great length of time, permanently injure the constitution. Good food, good grooming, good general care and regular exercise is all that any horse needs or should be given in order to get him in condition.

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The horse show at Calgary this week bids fair to be the strong card for the week. Entries are numerous, especially in Clydesdales. Calgary always has been well known for horses, some notable ranches being in the vicinity.

WHIP.



THE GRIFFIN FOR THE FARMER
J. C. Modell's Working Outfit, in the foreground.

STOCK

(Contributions invited, discussions welcomed.)

Winter and Summer Range for Sheep.

EDITOR FARMER'S ADVOCATE:

It would be hard to say just how much land per head would be required to graze sheep. With us some of our ranges carry more sheep than others. The ranch where I live has been used as a winter range for fourteen years and it is in very good condition yet. We have grazed from 2,000 to 2,500 sheep on it for about six months each year. They would range out about two miles each way. There is a good deal of buffalo and spear grass on our winter range.

For the summer months they would not require any more range, but it is advisable to move the camp about once a month, as they do not feed out so far in hot days and the range gets stale much quicker.

By using two ranges, one for summer and one for winter, it is always in good shape. If only one were used it would not last long. The sheep must be kept off the winter range in the early spring months, so the grass can get a good growth.

When sheep are on an open range about one ton of hay would feed 1,000 sheep on a bad day, but if they had to be fed for any length of time they would have to be fed more heavily.

One hundred tons of hay per thousand ought to be sufficient for any winter we get in this part. I do not think that anything like this amount is usually put up by the ranchers of the West.

SHEEP RANCHER.

[Sheep feeding is likely to become more and more common, and the feeders must come to the range for the sheep. Mention has been made of the Port Arthur yards. We understand shearing wethers are preferred there, although lambs and ewes are also being fattened there on screenings. Some sheep that were put in at 85 lbs. about the end of November were taken out first week in March weighing 133 lbs.—Ed.]

The Intermixture of the Blood of Pure Breds

A correspondent writes us as follows:

"I shall be glad to have your opinion and that of any reader of your valuable paper as to the advisability of mating Holstein cows with an Ayrshire bull, purebred in each case. Has the cross been a success where it has been tried?"

"M. P. WILLIAMS."

This request evidences the fact that our correspondent has overlooked one of the main principles involved in the breeding of purebred stock; viz., the perpetuation and intensification of certain characteristics peculiar to the breed, such as color, shape, etc., and especial fitness to do certain things under certain conditions. As is well known, the Ayrshire and the Holstein are two different breeds of cattle, both belonging to what are known as the special dairy breeds. The former originated under the rugged conditions

of Ayrshire, Scotland, and they exemplify the form and quality which would be required in a dairy animal required to make the most economical use of their food and do the best under conditions too severe for finer and more delicate cattle. The Holstein has grown up under conditions which have favored a large animal with extreme development in the production of milk. In the study of the breeds, Shaw states that in general outline of body the Ayrshire might almost be called a miniature Holstein, if the color markings, etc. were changed; and it is also stated that the Scotch breed is not nearly equal to the Dutch breed in size, in quantity of milk produced and in docility. When one considers that by the crossing of the two breeds, the progeny resulting could not be registered, and therefore in the eyes of the general public worth less money, and also that the particular characteristics desired by the breeder may be emphasized by judicious selection, and more confidence be felt as to the results than by crossing the two breeds, it appears to us that it would not pay to cross the breeds. We cannot cite any experiments either for or against the practice, but believe that breeders of either kind of cattle would be averse to mingling the blood in the way suggested by our correspondent. With the Holsteins as with the other breed, there are great possibilities for the person who will go in for the rigid selection of his breeding animals from a utility standpoint, such of course to include constitution, capacity and good feeding qualities.

Feeding Steers.

At the North Dakota station experiments have been conducted to find out the relative merits of barley, rejected wheat and bran for feeding and fattening steers. The conclusions reached were:—First, the steers made very satisfactory gains on a grain ration consisting of two-thirds ground barley and one-third bran with ordinary hay for roughage; second, that the amount of grain consumed per pound was relatively low; third, the average daily gain (2.14 lbs.) made on the ration above was as high as gains made in a trial where corn had been fed as the exclusive grain ration (the steers were on feed 132 days); and fourth, that the steer with an inferior beef form and lacking the blood of the beef breeds did not make such good gains as the others which were superior in form. The steers used for the experiment were bought at 3½ cents and were sold at \$4.62 per cwt., the profit per head being figured out at \$7.57.

On the test with rejected wheat and bran and cornmeal and bran a loss was sustained and the following summary is given:—First, the steers fed rejected wheat and bran did not make satisfactory gains; second, the lot fed rejected wheat and bran made exceptionally good gains when fed corn and bran for seven weeks after the regular trial; third, that feeding steers rejected wheat and bran for sixteen weeks at the beginning of the feeding period of twenty-three weeks produces as good gains as feeding a grain ration of corn and bran for the whole period; fourth, that the lot fed rejected wheat produced the cheapest gains; fifth, that rejected wheat and bran will prove unsatisfactory as a ration to finish steers upon.

The steers in the first lot were grade Short-horns and the opinion of the experimenters was that feeding that class of steers on the ration mentioned would be a profitable undertaking. The margin between the cost of the feeders and the price received for them when finished is one of the factors which decide very largely whether a profit can be realized in feeding cattle for market. If the market price for all grades of cattle is lower when the finished animals are to be marketed than it was when they were bought, this narrowing of the margin will often result in a loss instead of profit from feeding cattle for market.

The advantage to be gained by feeding good steers is twofold—gains are more certain, and the price brought when finished is correspondingly greater. The work at the Illinois station has shown that it is more profitable to feed fancy or choice feeders than it is to feed the poorer grades. The price charged for barley was \$11 per ton; for bran \$14 per ton; the roughage was corn fodder and hay of an inferior quality. The steers were fed in an open lot with access to shelter for shelter, the experiment being thus conducted to get as nearly like farm conditions as possible. In the later trials rejected wheat was charged at 50 cents per cwt., corn 46 cents per bushel, hay \$3 per ton.