

or alfalfa plot handy to the buildings and paddocks. It can be fed when quite young, and is relished by the calves, and should be kept in the feed boxes or mangers in the stalls, and, if necessary, a little may be thrown to the calves in the pasture at night. Future cuttings soon come on after the first has been made. It doesn't require much, but a little fills a great place in the development of the calf. Where it is wished to rush the calf along, no better system for summer care than the foregoing is known. If it is desired to grain the calf, this may be done while he is in the stall during the day. A few oats, whole or ground, often serve as an aid in tiding the calf over a period of green-feed shortage. It always pays to take care of the young things in the herd.

Shade in the Pasture.

Any person whose occupation necessitates that he remain in the sun all day, or even a part of the day during the intense heat of summer, appreciates an opportunity to enjoy a little shade. The stock grazing in the fields will do much better if a few trees are present under which they can repose, sheltered from old Sol's burning rays, and in a breeze refreshing and cooling. It is indeed an exceedingly still air when there is no appreciable movement of the atmosphere under a clump of spreading trees thickly foliated. Every pasture, for the comfort of the stock, should have a shade shelter, and, where possible, it is a great advantage to have the water situated in the shade. Did you ever, on a hot summer's day, watch a flock of sheep or a herd of cattle, make for the shadiest portion of the brook for a drink? Animals enjoy a cool drink as well as you do yourself. What a boon to the stock farmer is a stream of running water skirted on either side by forest trees.

Artificially-constructed shades are not very practicable for cattle and horses, but for sheep and pigs a few rough boards can often be utilized to advantage in erecting sun protection. Sheep suffer greatly from heat, and pigs very often become sunburned, and, as the pig does not sweat like other animals, it also often suffers greatly. A small covering over a corner of the grass plot will serve to shade the pigs or sheep during the heat of the day, and, provided no natural shade is present, will be found profitable.

Raising the Bull.

If the calf is destined to become the head of a herd, to be the sire of stock, either grade or pure-bred, he should be well fed from the beginning. While it is not absolutely necessary, with the beef breeds, it is generally advisable, where at all practicable, to let the calf suck for some months. This gives him a great start, and, as a rule, beef dams do not supply such a large amount of milk as to overfeed their progeny. With the dairy calf it is often advisable to wean from whole milk and feed on sweet skim milk. Do not wean the bull calf intended for breeding purposes too early. Give them, in the case of dairy animals, skim milk until five or six months of age, and beef animals may be allowed to nurse until seven or eight months, and sometimes even longer. It is best, however, to avoid forcing too much, but more bull calves are injured by insufficient feeding than by overfeeding. Teach him to eat green feed and a little whole or ground oats as early as possible. Keep him growing well, neither too thin nor too fat.

Weaning time is a rather critical period in his life, but if he has been taught to eat grain and roughage, the change will not be so severe. His food must be nourishing and of a succulent nature—green feed in summer, roots and silage in winter, accompanied by sufficient concentrates to keep him in good condition. Increase the ration as the calf grows and his appetite warrants.

Handling is imperative with the young bull. While he should be allowed to run loose the greater part of the time in a stall or paddock, it is absolutely necessary that he learn to stand quietly while tied, and that he be taught to lead. Handling must be begun early in his life. When he is a few days old, tie him up for a short time, and continue the practice daily until he becomes thoroughly accustomed to standing tied. At from nine months to one year old a ring should be placed in the young bull's nose. As soon as the wound caused by the insertion of the ring is healed, the strap or staff used for leading should be snapped into this ring, the headstall discarded, and the bull taught the use of the ring. A strong staff is preferable to a strap or rope for this purpose, as it is always advisable to take no unnecessary chances with a bull. Firmness in handling is absolutely essential, but roughness and abuse are uncalled for, and only serve to make the animal vicious, and a vicious bull, once he knows his power, is difficult to handle under any circumstances.

Care must be taken, in placing the young bulls

in service, that they do not do too heavy a season the first year; some breeders go so far as to say that a yearling should seldom or never be used, claiming that using bulls too young mars their usefulness in later years. It is quite true that a yearling bull which is called upon to serve a large number of cows often has his growth checked and his verility injured, and sometimes altogether ruined. It is always advisable to use him, if at all, rather sparingly the first season, and then he is in a fit condition to go into a heavy season's work in his two-year-old form. Where possible, a loose stall should be provided for the day time, and a grass paddock for night. He must have exercise, and by the time he has reached his third year, with careful treatment he should be ready to do his heaviest season's service without injury. Take good care of the bull, for he is half the herd.

Choosing a Brood Sow.

Much of the failure or success made with the litters depends upon the dam, and the breeder cannot be too careful in her selection. The pig which is to be the future brood sow should never be selected at random. Her usefulness is great or little, according to the value of her ancestors. Her sire and her mother should be carefully considered in making the choice. They should both be good individuals of the breed to which they belong, and should be old enough that no doubt remains as to their value as breeders. Choose a pig from mature stock. Too often the old sows and boars are discarded long before their period of usefulness is at an end. Mature stock, tried and proven, is much more valuable in the breeding herd than young stuff. Select the young pig, then,



Hereford Cow, Noble Frolic.

Winner of first prizes at principal English shows.

from animals which have proven their worth. Be sure that the mother of the young sow is a good milker, and never pick out a sow with less than twelve teats, and fourteen, when possible.

See the entire litter, and choose one of the growthiest individuals, one that was a good size at the start and has done well ever since. Get the sow from as large a litter as possible, and select one whose dam raises large litters regularly. Pick a good smooth pig of great length and strong constitution, and feed well from the time she is weaned. Do not spoil by breeding too young, and as far as it is possible to make selections from appearances, you should be hopeful of getting a desirable breeder.

High Beef Prices and the Future Supply.

The best-finished, smooth cattle, whether in the exporter class or in the butcher's class, have been selling at a high price on Canadian markets this past spring and up to the present time. What is true here has also been the case in the United States, and, as a result, a large number of cattle have been marketed, some of which should have been retained in the breeding herd, and others not in as high finish as it would have been profitable to have made them. High prices for products should prove a stimulus to any industry, beef-feeding not excluded. But the cattle-fattening business has phases peculiar to itself. A season of dear meat very often brings forth a large number of cattle from the breeding herds which never would have been sold had normal or low prices obtained. This slaughtering of breeding cattle, while it does not seem important in any particu-

lar section, when taken over the entire country, has a marked influence upon the future supply of beef. To maintain a fair supply on our markets, breeding herds must be kept up to maximum strength, and every cow or heifer disposed of during a season of scarcity and high prices is one step towards depleting the supply in future. Thrusting a large number of cattle upon the market at the time prices are high has a tendency toward making the market unstable. Even if the market held up to its maximum strength, of what benefit would it be to the producer who had disposed of and depleted his breeding herd so severely as to so curtail production to such an extent that there is nothing further to market for several seasons? Even if prices are unusually high, it is not in the best interests of future cattle-breeding to stampede the market. Keep the breeding herd intact, and do not allow present high prices to influence you, unless in the direction of increasing the number of cows and heifers kept for breeding purposes.

THE FARM.

Clean fence corners mark the thrifty farm.

Run over the weedy pasture fields with mower or scythe.

The average weed inspector's job is a sinecure. Should it be so?

Importance of Grass Crops.

In commenting upon conditions in the middle Northwestern States, a writer in Bulletin 125 of the Minnesota Agricultural Experiment Station says many farms have too large a percentage of land planted to grains. He believes that farmers may keep one-third to one-half of the land in grass and other forage crops, and in the end make more money per acre and build up better farms. Continuous cropping of grain, including the rotation of small grains with corn, results in reducing the amount of vegetable matter in the soil, and unless the corn is in large proportion, in increasing weeds and in otherwise reducing the productivity of the soil, until the yields are no longer large enough to be profitable. On such farms, continues the writer, owing to the beneficial effect the grass and clover have in building up and cleaning the soil, it undoubtedly pays to increase quite largely the proportion of the farm kept in grass.

There are few cases in which hay or other roughage cannot be put to some profitable use on the farm, either by increasing the amount of live stock kept on the farm, or at least by buying stock, cattle or sheep to feed during the autumn and winter. In some cases hay and other roughage may be sold at a profit, even if it does remove vegetable matter and plant food from the farm. Dairy farming is especially favorable to keeping the soil well supplied with fermentable vegetable matter, and therefore to the production of profitable yields of all crops. Besides, with due care in saving the manure, little of the nitrogenous and mineral fertilizing ingredients of the soil is wasted or removed from the farm.

Since the net profit on an acre of wheat, oats or other small grain on run-down soil is very small, decreasing the crop of wheat and using the land for grass, even though the grass cannot be used to great advantage, will under such conditions not materially decrease the net profit of the farm. The margin of profit in raising wheat is not reached on lands on which the interest or the rental charge amount to \$3.50 per acre, unless the crop produces ten bushels or more per acre, and profits rise rapidly with every bushel above that amount.

The cost of producing hay in Minnesota and surrounding States is less than that of producing any of the common field crops, as no extra