

dealer is for larger drafters, and large horses can never result from scrubby, stunted colts. Do not work the dam too hard and steadily while she is nursing the colt. Give her a rest on pasture, if possible.

A hard time to keep the colt in good condition is immediately after weaning. Some breeders feed a little whole milk then, and others resort to skim milk. These, if fed in moderation, are either one very good, but the young colt requires protein and muscle-building material, and for this the skim milk is the better, because it has lost the fat content in skimming, and so contains a higher percentage of proteid material. It is growth that is desired, not fat.

The colt should be taught to eat at an early age. A few oats or oat chop, with a little bran, makes a good feed for them. This can be fed from a box when the mare is brought in, or a box may be placed conveniently in the pasture field. Oats are the most palatable concentrate for horses, and, in conjunction with a little bran, make a very nice ration for the young colt. Keep the colt healthy and growing, and a better mature horse will result than from either the stunted or the overfat colt.

LIVE STOCK.

Fly Protection.

Not a whit behind the season, the Horn Fly is with us again, and requests come for means of protecting cattle from its annoyance, as well as from the annoyance of the ordinary black flies. Numerous and varied are the specifics recommended and employed by different stockmen, but there is none yet to meet the demand for a treatment that will cost little and not have to be applied oftener than once a week. On the contrary, most of those we have require application daily, or oftener, involve not a little labor, and cost quite a penny in the course of a season. Since, however, no less an authority than Prof. Grisdale endorses the estimate that flies cause a loss of \$5.00 per head of cattle in the course of a season, it is worth incurring some expense and trouble to reduce the discomfort which is reflected in loss of condition and shrinkage of the milk flow.

A very satisfactory mixture, which, however, requires daily application, has been for several years past advertised in "The Farmer's Advocate." It is conveniently applied with a hand sprayer obtainable for somewhat less than \$1.00. Of homemade remedies, we note the following: Prof. Grisdale has recommended a mixture of lard and pine tar, 10 parts of the former to one of tar, stirred thoroughly together and applied with a brush or bit of cloth to the parts most subject to attack. Prof. G. E. Day has used, with very good results, a mixture composed of one part of a well-known coal-tar dip, 4 parts of either linseed oil or fish oil, and 40 parts of water. It is put on daily with a spray pump. Prof. Day's principal objection is the cost of the linseed oil in the mixture. An old stand-by is: Fish oil $\frac{1}{2}$ gallon, coal oil $\frac{1}{2}$ pint, crude carbolic acid 4 tablespoonfuls, mixed and applied to all parts, except the udder, once or twice a week. A correspondent of "The Farmer's Advocate" combines several of these materials in a special mixture of his own, consisting of fish oil 1 quart, pine tar $\frac{1}{2}$ pint, two or three ounces of a commercial sheep dip, and $\frac{1}{4}$ ounce carbolic acid, this to be rubbed over the cows once every four or five days.

Kansas State Agricultural College recommends the following: Resin $1\frac{1}{2}$ pounds, laundry soap 2 cakes, fish oil $\frac{1}{2}$ pint, water enough to make three gallons. Dissolve the resin in a solution of soap and water by heating, add the fish oil and the rest of the water, apply with a brush $\frac{1}{2}$ pint per cow. At first it is necessary to give two or three applications per week, until the outer ends of the hair become covered with resin; after that, retouch the parts where the resin has rubbed off. A specific recommended by another correspondent, who claims that it kills every fly it touches, is equal parts crude carbolic acid, coal oil, and water, applied with a hand sprayer. Among these many remedies, anyone who wishes to experiment may take his choice. An objection to some of them is their stickiness, which mats the hair. In other cases, the skin of the animal is irritated, and becomes scuffy. These may be seen what various objections when treatment is continued for a length of time. Make some effort to keep the fly pest. Breed as few as you can. Keep manure cleaned away as possible, and on no account put horse manure in trenches behind the cattle, as we have seen practiced, with incredible results in breeding flies.

Breed the Class of Stock You Fancy

The live-stock business is the natural accompaniment of good farming. It is necessary that some kind of stock be kept in order that the fertility of the soil be not reduced. The question in the minds of many beginners is what class of live stock to invest in, and in many cases they choose the one which is selling for the highest price and for which the demand is greatest, regardless of whether they are particularly fond of this one class or breed, or whether they have any working knowledge of it or not. This is undoubtedly a mistake. Rarely, indeed, does anyone make an unqualified success of something he does not like. It is seldom advisable to commence with a class of stock that one has not some particular fancy for, even if it is selling high and in great demand. Better results will usually follow if a person's favorite stock is the class he begins breeding. If the price is low, so much the better for the beginner, because it will generally rise. When the price of a certain class of stock is low, then is the time to purchase it, because, if it were very high, a drop would be likely, whereas, being low, the reverse is the case. Be sure to get the stock you like, because the increased satisfaction of having your own fancy satisfied will cause you to take added precaution to make your business a paying one.

Good Care for the Herd Bull.

In most districts the heaviest of the breeding season comes during the summer months, and it is then that the stock bull needs the best of care and attention. It is also at this time of year that he is likely to have the least time spent in keeping him clean and well exercised, and his quarters in a sanitary condition. Very few



Shelsley Primula.

Two-year-old Hereford heifer; first and champion, Bath and West of England Show, June, 1911.

breeders allow the bull to run on pasture with the cows, because there is a danger of all the young heifers getting with calf, and thus having their growth impaired. The bull is much better kept away from the cows, even if no heifers are pasturing with them, because he harms himself, as well as being a source of annoyance to the cows.

Most bulls are kept in the stable during summer, many in loose stalls, and many others tied. This gives rise to the problem of how to keep the bull exercised sufficiently to maintain him in the best possible breeding condition. The loose box is a great advantage over the tie, but even it does not give sufficient exercise, and some further provision must be made to give the herd header a chance to move around and keep in an active and useful condition. Wherever a bull is kept, a grass paddock near his stable is a great benefit, and should be provided, if possible. A little alfalfa, red clover and corn, growing near the buildings, and fed as a soiling crop, is also very profitable, since green feed is necessary, and a variety of this goes a long distance toward keeping the bull in a thriving condition. A little concentrate material is usually required, and can be well supplied by the feeding of a little oat chop, with a small quantity of bran or perhaps also a little heavier chop, as barley, peas, etc. It is not advisable to overfeed with these, but it is important that the bull be kept up in good flesh.

As the hot weather approaches, and the flies become troublesome, the bull should be out in the paddock during the nights, as he will then be able to eat and take his exercise without being troubled with these pests. During the day, the windows of his stall or stable should be kept open, as this is also a very effective means

of keeping the trouble caused by the swarming of these insects around and in the bull's stall, causing him no end of discomfort. Cleanliness in the stall is another means of preventing the fly trouble. Owing to press of work in the summer season, the stable is often left uncleaned for days at a time, or, if it be a box stall, often for weeks, and even months. This is detrimental to the bull's general health, and serves, also, as a breeding place for the filth-loving fly, which increases rapidly under such favorable conditions.

It is well to remember that the bull is half the herd, and that the calf crop depends very largely upon the care, exercise and condition under which the bull is kept during the breeding season. Do not neglect the bull, but give him a chance, and the results will more than justify the extra time spent in seeing to his comfort.

How Well Do Sheep Pay?

Editor "The Farmer's Advocate":

I keep usually from twenty to twenty-five ewes. Sometimes about eight or ten of these are the best ewe lambs we can pick out of the flock. I always aim to keep some of the very best ewe lambs each year; consequently, during this last fourteen years, by getting a good pure-bred buck each two years, and by keeping the very best ewe lambs, and nothing but the best, I have got into as nice a flock of sheep as you will find in this part of the country. The breed is Shropshire Down. I never kept a record of the feed or the price of lambs or wool, but will give you an idea of what we have done the last three years. Three years ago we had fifteen old ewes (over one year) which had twenty-seven lambs, twelve pairs of twins, and three single lambs. Out of this lot, twenty-four lived. I got \$4.50 for each lamb, making \$108.00 for lambs. The fleece of fifteen ewes and seven yearlings that did not have lambs averaged 5 pounds; 110 pounds, at 22 cents per pound, \$24.20 for wool, making an average of \$1.10 for each sheep for wool, and an average of \$7.20 each sheep for lambs. I always consider that the fleece more than pays the cost of feeding the sheep, and whatever lamb crop we have is clear profit. We feed our sheep, in winter, clover hay twice a day, and good bright, clean pea-straw that is only about half threshed out, once a day; they get enough peas out of the pea-straw to keep them in good condition. They are allowed to run out at all times, with an old shed to run in at night or in a storm. They do better if let run out and in whenever they like. In summer they have plenty of good high-land pasture and good water. They are trained to come to the barnyard every night, so we have no trouble with dogs. I think that every farmer should have from 15 to 50 good sheep on his farm, as I consider they are a benefit to the farm in keeping down weeds and brush that nothing else will eat, besides the advantage of being able to have your own fresh mutton whenever you want it, without having to go to the butchers for it. I hope my small experience with sheep will help some farmers to go into a good kind of stock for a trial.

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Guernsey Characteristics.

The characteristics of Guernsey cattle are distinctive, and should be distinguished from those of the Jerseys, which they somewhat resemble. We quote the authorized scale of points as adopted by the English Guernsey Cattle Society:

1. Head fine and long; muzzle expanded; eyes large with gentle expression; forehead broad; horns curved, not coarse.
2. Long thin neck, clean throat, chine fine.
3. Back level to setting-on of tail, broad and level across loins; thighs thin and long; tail fine and long, good switch.
4. Ribs amply sprung and wide apart; barrel large and deep.
5. Hide mellow and flexible, closely covered with fine hair; cream-colored nose.
6. Escutcheon wide on thighs, high and broad, with high oval.
7. Veins prominent, long, and tortuous.