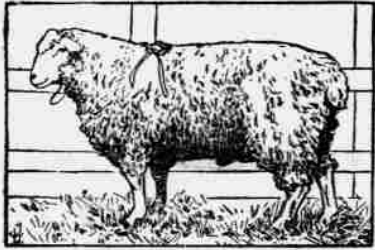


THE SHEPHERD AND HIS STOCK.

To produce and maintain a flock with uniformly good constitutions, vigorous and thrifty, test the ability of a shepherd more than to produce one that is a fine wool producer or that carries a good mutton form, says a writer in American Sheep Breeder. Good constitution and a breed that is adapted to the environment are necessary conditions for a vigorous flock. There is a great difference, however, in the strength of constitution of different individuals of any breed. It is indicated by the form and appearance of the animal. A deep chest, front legs set wide apart, brisket coming well forward, well sprung ribs—marks showing plenty of room for heart, lungs and digestive organs—are evidences, though not infallible ones, of good constitution. Stronger evidence of it or lack of it is to be seen in the motions and carriage of the animal, the poise of the head and ears, the expression of the eye and the apparent spirit of the animal. These are not easy to describe intelligently, but are easily recognized by the experienced shepherd.

Constitution is an inherited characteristic, one that is born with the animal.



AN ENGLISH CHAMPION.

[South Devon ram, first prize at royal show.]

Just as in other matters in breeding, not all the conditions affecting it are known, but it is as certainly transmitted from parent to offspring as any other trait. So that it is important that the progeny of only such animals as have good constitutions be retained in the flocks, and not all of them, for there is variation in this particular as in all others, and parents of strong constitutions sometimes have weak offspring. The evidences of good constitution should be required in the individuals themselves as well as in the ancestry of those that are to be retained as breeders.

However good the constitution of a sheep may be, it cannot retain its vigor unless it be well fed. A hungry flock will not long be a healthy flock, nor will it retain its health and vigor if it be exposed to climatic conditions that are much more severe than those to which the breed has been accustomed. The breed must be adapted to its environment if the flock is to be vigorous. Probably the most common mistake is the attempt to keep high grade or pure bred sheep under the conditions of feed and shelter that are adapted only to low grades or scrubs.

Having the right breed for the environment or else making the environment suit the chosen breed, having individuals of good constitution to start with and subjecting to a rigorous inspection all additions to the flock, there is yet one important point in maintaining the vigor of the flock. That is culling. Some sheep have at times all the outward marks of a good constitution that do not really have it. Such may be allowed to enter the flock, and they will soon begin to show signs of their weakness. Every sheep will break down from old age and lose vigor and become unprofitable or succumb to disease at some time. The period of usefulness varies much with the breed and varies much with individuals of the same breed. Some become unprofitable at three or four years of age, others at ten or twelve or even older. The shepherd should have his flock under his constant observation, and whenever a sheep begins to show signs of weakness, evidence of disease or lack of thrift and vigor it should be removed from the flock.

The Profitable Hog.

Experience will determine each man's preference. If a hog is wanted that will attain to a great size, is quiet, in fact rather lazy and sluggish, that will fatten readily at any age and make good use of the feed given him, the Poland-China or the Chester White will fill the bill, writes J. A. Dolbe in the National Stockman and Farmer. But the Poland-China is prone to small itters, and the Chester White is prone to skin diseases in winter unless well housed and clean bedded. I have raised hundreds by crossing the Chester female to the Poland-China male, and the combination is very hard to beat. Some strains of the Duroc-Jerseys approached nearer to perfection than any I have ever tried, and some approached too nearly to the old woods hog. A cross between the Poland-China male and Duroc female is the best all round pork producer I have ever tried.

Produce the Best.

Once started in the right direction a farmer can produce a good grade of cattle almost as cheaply as he can grow scrubs. Good pure bred bulls of all the leading beef breeds can be purchased at reasonable prices, and there is not the slightest excuse for the keeping of a scrub bull at the head of any herd. With first class cattle as much profit can be made with a smaller investment for land, cattle, feed and labor than can be produced with a larger outlay in feeding inferior stock. In every department of agriculture it pays to produce the best, and this is especially true with respect to live stock.

LIVE STOCK REMEDIES.

How to Treat Various Ills Without Calling the Veterinary.

For scours in calves, try a raw egg stirred up in a little milk and a tablespoonful of flour added. One farmer recommends saleratus in the milk, a teaspoonful at each feed till cured.

For lice on calves, use grease and sulphur or spray with kerosene. Do not put on too much or it will take the hair off.

If your horse breathes hard and has a cough, look out for heaves. To prevent them, do as you would if he had them. Give but little hay and give water carefully; allow a little time after feeding and watering before putting to work. Give five grain doses of arsenic once a day for two weeks. Improve the condition of the horse as much as possible and relief will follow. Often when horses are poor in flesh and not doing well the trouble is worms. If such is the case, give a tonic—powdered sulphate of iron and gentian root in equal parts. Give six drams twice a week till his condition improves.

Mange in horses is caused by an insect which burrows into the skin. To cure it, this insect must be scoured out with sand and affected parts washed with soap and warm water, using a brush and drying carefully. After this apply an ointment of sulphur and lard or sulphur and water.

For a sore or wound on a horse or man I know of nothing better than a solution of carbolic acid. In warm weather it acts as a repeller of flies also.

Foul in the foot in cattle is caused by standing in mud and may become serious. To cure, cleanse the space between the toes by drawing a small rope through, then apply sulphate of zinc, one dram in half a pint of water.

For caked udder in cows try this: Remove one of your horses from his stall, throw a quantity of horse manure in the stall and tie the cow in there overnight. An old farmer told me of this. As I have never tried it I cannot say as to its value, but it surely can do no harm, and this cannot always be said of dosing with drugs, either in man or beast.—John Upton in Country Gentleman.

Watering the Horse.

There is no danger of watering a horse when he is hot if precaution is taken to prevent his rapid cooling. It is the chilling of the surface of the body through rapid evaporation of the perspiration that causes the congestion in the feet which is called water founder. A horse may suffer in this way and not even see water. After many years' experience with many horses I have no hesitancy in saying that a horse is never too hot to drink, writes H. P. Miller in National Stockman and Farmer. That does not mean that he should be allowed all he will drink. There is danger of an excessive thirsty horse drinking too much. Working horses suffer seriously from not being watered more frequently. Three or even four times a day is not enough for a hardworking horse in hot weather. He should be watered within two hours after each feed and in hot weather the first thing in the morning, in addition to the usual practice. A horse uses up water when at hard work just as does an engine. If it is not supplied, it is drawn from the body tissues. They shrink and the horse gets "poor," as it is expressed. This is the explanation for hardworking horses getting poor far more frequently than from lack of feed, and water is usually cheaper than feed.

THE HORSEMAN.

When the colt has been kept in during the winter it has not the opportunity to wear down its hoofs as it did in pasture, and they will grow long and perhaps uneven. Shorten them with mallet and chisel and save the sound feet.

The oat box should be large, with broad bottom, so that the oats will scatter and not be bolted.

See to it that the work collars fit and that they are kept soft and clean. There are few things more discouraging in the beginning of a busy season than horses with sore shoulders, and this vexation and cruelty can be avoided by the exercise of proper care.

A well grown yearling is worth more than a stunted two-year-old.

The brood mare should have a few hours' exercise in the yard or on the road every day. It does not pay to keep her confined.

The horses and colts should be kept away from the hens and hogs. The odor of the pigeon is offensive to the horse, and hen lice are hard to eradicate.

Never shout at a young horse while training him.

Irregular feeding makes thin horses, no matter what amount is given.

Keep the colt's feet in good shape. Do not let the toes become too long.

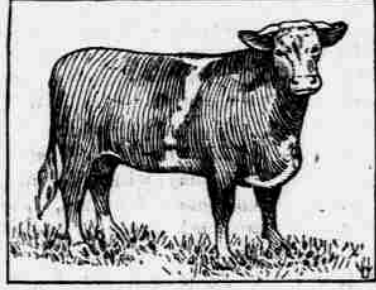
Breed only to pure bred sires. Use pure bred dams if possible.

Animals harboring lice—if they have an abundant coat—should be clipped previous to dressing. It saves material and permits of more ready contact between the dressing and the skin, where the pedicell are to be found. In dressing an animal for the destruction of lice it should be wetted all over—not only just where it appears the vermin congregate—and a beginning should be made at the extremities—face, ears, poll, mane, tail and legs. The object of this is to cut off the retreat of the enemy, since, when the body is dressed first, they run to those outside parts as harbors of refuge, and if a pair or a pregnant female escapes and presently emerges the horse is soon as badly infested as ever.

Preparing Cattle For Market.

In preparing cattle for shipping every precaution and the greatest care should be exercised by the feeder or shipper so that the animals will reach the market in prime condition.

If the steers are being finished on grass and grain, they should be taken off the pasture and put in a dry lot at least twenty-four hours or, better still, forty-eight hours before shipping and fed only half their usual allowance of grain, with all the hay they will eat. In some cases it is advisable to feed no grain, thus getting the animals to eat considerable bulky food, such as hay. The whole secret, if there is such a thing, of shipping cattle successfully is to get them full of dry food just previous to the time they are placed on the cars and market—that is, the less moisture the food contains in proportion to dry material the better, because as a rule a steer that is largely filled with water has a tendency to scour and thus show up gaunt and bad on the market. Some unscrupulous shippers have a custom of salting their



A BUCKEYE BEAUTY. (Two-year-old Shorthorn steer, raised in Ohio.)

cattle, so that they drink large amounts of water and fill up on the same. This is something that is usually very detrimental to the sale of the cattle. It is useless for the shipper to think that he can fool the buyer by such a practice. By feeding a large quantity of salt one is apt to bring on a fevered condition in the animal's stomach or digestive organs.

When the cattle are taken off pasture they should be put in as dry a yard as possible, so that they may keep tolerably clean. Do not leave the ordering of the car until the last minute, but rather order it so that it can be properly bedded and a good supply of hay put in its racks. Straw, of course, makes the best kind of bedding one can use. However, the most essential thing is that of supplying plenty of whatever is available. To simply half bed a car in many cases is like cutting the price of the cattle, because they become dirty, and much of their finish and quality are apparently lost. There is nothing better than good, sweet hay for cattle before loading or in transit. Some shippers advise feeding a small quantity of grain; but, as a rule, grain, especially corn, has a tendency to fever the animals and cause them to drink too much water. Thus, all things considered, the less grain that is fed just previous to and during shipment the better. When the cattle are ready for shipment, they should be driven over the scales and the weights recorded. Then they should be driven very carefully to the stockyards or station where they are to be shipped.

As a rule, about twenty good sized steers will fill a car; however, one should not rely on any given number, but, rather, go by the amount of space in the car. That is, always fill the car just as full as it will hold of cattle of a uniform size. By allowing the animals too much space they will push, fight and jam each other so that they will shrink considerably more than if they are crowded enough to keep them quiet. If the shipping takes place in midsummer, when it is very warm, care must be taken to supply the animals with plenty of water on the car. —W. J. Kennedy, Iowa State College, in Farmers Advocate.

How to Produce Good Animals.

Good animals are produced by good feed, good care and plenty of it. The farm where good stock is kept must be kept well. It will not do to abuse the farm by eating out the pastures and impoverishing the land. Good, well kept farms and good stock very naturally go together. In the production of good stock good feed condition must first be provided. This means good farming, and good farming is the basis of every successful farm industry or enterprise. The feed supply must not only provide for the grazing season, but all seasons. The winter season or prepared feed season is the most critical period in the growth of the animal, because the natural conditions of vegetation must be supplied as far as practicable by the storage and preservation of succulent feeds for the winter use. —Twentieth Century Farmer.

Secure the Best Stallion.

Dr. Alexander in a bulletin on horse breeding says: The cheap stallion is dear at any price, just as is a counterfeit of any kind. The best is none too good, and it is only by using the best obtainable breeding material that the highest quality of horses can be produced. The farmer does not buy seed corn or oats or barley or wheat just because it is cheap, nor does he go from seller to seller looking for the seed he can buy the cheapest. When it comes to selecting a stallion, however, all of this sensible business policy seems to be forgotten, for the mare owner too often neglects the offered opportunity to patronize the pure bred stallion and for the sake of saving a few paltry dollars at the time of breeding uses a stallion of impure blood and nondescript type and character.

THUMPS IN HOGS.

The Cause of This Disease and How to Treat It.

Thumps is a result of certain diseased conditions in the system and is not to be looked upon as a disease itself. The cause in practically all cases is the character of the feed or the way the hogs are kept or a combination of both. It is usually the result of an unhealthy condition of the blood, generally caused by a large number of worms in the intestines caused by overfeeding with lack of sufficient exercise. Rheumatic conditions may cause it, or the irritation caused by a large number of worms in the intestines may be the cause. However, the most frequent cause of the disease is feeding an excess of corn or other foods of like character and not enough nitrogenous foods.

Usually the hogs that suffer from thumps are fat, overfed young hogs, and a feed composed largely of corn would produce this condition. I think the best prevention would be to give a variety of feed or at least to feed less corn and to have the pigs where they could have the run of pasture. Hotel slops would be the kind of material that would produce fat and not muscle, being in this respect like corn. If it is impractical to secure and use feeds of a proteid nature, I would advise feeding less corn to the young hogs until they are a few months old, as every hog raiser who has had experience with the trouble knows that it is the young fat pigs that are generally troubled with the thumps.

If treatment is undertaken at the beginning of the trouble, it is generally successful. At the first indication of the disease give one or two ounces of castor oil as a physic and follow this with tincture of opium and tincture of digitalis, giving twenty drops of each at a dose. Give this every two or three hours, and you can generally relieve most of the cases in from twelve to fifteen hours. If the pig is much exhausted, you can combine with the above one-eighth ounce of aromatic spirits of ammonia in a little cold water. Unless the pig is quite sick and will refuse feed the best way to give such medicine as recommended above is to give it in a small amount of feed, as milk or wet ground feed. If necessary to give the medicine by hand, take a large spoon and place the medicine as far back in the mouth as possible. Never give medicine to a pig while it is struggling or squealing, as it is liable to get it into the windpipe. —L. L. Lewis in Oklahoma Farm Journal.

Dry Cured Pork.

For each hundred pounds of meat weigh out five pounds of salt, two pounds of granulated sugar and two ounces of saltpeter and mix them thoroughly. Rub the meat once every three days with a third of the mixture. While the meat is curing in this manner it is best to have it packed in a barrel or tight box. For the sake of convenience it is advisable to have two barrels and to transfer the meat from one to the other each time it is rubbed. After the last rubbing the meat should lie in the barrel for a week or ten days, when it will be cured and ready to smoke. To cure nicely it is desirable to have a cool and rather moist place in which to keep it. This recipe should not be used where the meat must be kept in a warm and dry place, as the preservatives will not penetrate easily and uniformly. —National Provisioner.

Stallions Should Wear a Shield.

The Horse Breeder says that every stallion that is two years old or upward should be made to wear a good stallion shield at all times when standing in the stall. A neglect of this precaution has caused the ruin of many promising colts that but for this would have developed into successful turf performers and valuable stock horses.

THE SHEPHERD.

There is quality of water as well as quality of food.

If the ewes have nothing but corn, they will lack milk and be feverish. Don't call this "bad luck."

When lambs are two weeks old they will begin to eat bran and linseed meal. Give it to them and see how they will grow.

Don't expect feeders to realize fat lamb prices, or, in other words, don't market half fat lambs.

It does not cost as much to raise pure bred sheep as scrub sheep, judging by the way our books balance, says the American Sheep Breeder.

The feeding racks should be cleaned after every feeding, as the sheep never relish fodder that has been breathed on. Always have a good clean supply of water.

Do not confine sheep during hot days where they cannot get shade and seclusion from the flies. A darkened stable or outbuilding is enjoyed by them.

Keep the lambs growing. A stunted lamb never makes a good sheep.

Keep the drinking vessels absolutely clean, and give fresh water often.

Hay should not be carried over the backs of sheep when it can be avoided, as it causes the fleece to become full of seed and dirt.

The sheep bell may not scare the dogs, but they may warn you of their presence.

A poor sheep produces a harsh, weak wool, lacking luster. The well conditioned sheep produces an oil for the fleece that is essential to good fiber, soft texture of the wool and a bright, attractive look. Any check in the growth of the sheep can be detected in the fleece. The wool produced at this time is of poorer quality. The fleece of a poor sheep can be picked from a collection. —Farm Journal.

FARM AND GARDEN

CURLY TOP.

This Blight in Sugar Beets Is From an Unknown Cause.

The blight, or "curly top," of the sugar beet is a disease which has been known in the semiarid portions of this country for a number of years and caused much speculation as to its nature. On the California coast the disease has been the cause of serious losses in certain seasons for some time, and the growers have been entirely in



BEET BLIGHT.

the dark as to the nature or handling of the disease. In the spring of 1905 the trouble began to appear abundantly in certain sections, and the attention of the writer was called to the need of information concerning this disease by Dr. G. W. Shaw of the California experiment station.

The disease in question is a peculiar stunting or nondevelopment of the plant, occurring often under conditions apparently very favorable for growth. Some years in large areas the plants stop growing, the leaves curl and crinkle in a peculiar manner, the roots become blackened in the internal rings, and soon the whole crop is a complete loss. The disease has been studied more or less in different places, but its cause has never been discovered.

The disease has a very marked relation to moisture and climate, especially rainfall at certain seasons, but presents many very peculiar features. It is a very definite disease, with characteristic symptoms, and not simply the injurious effect of unfavorable conditions. The disease is one of a number of so called "physiological" plant diseases and resembles in some features similar diseases of the tobacco, China aster and other plants. —Ralph E. Smith.

The Value of Mules.

Few farmers realize the real value of mules.

They will do as much work as horses on less food. They will live longer, and they can be kept sound more easily.

A mule will never eat or drink when he is heated nor run a way in a blind panic, like a horse.

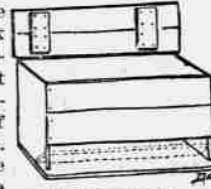
If a mule is properly trained when a youngster, he will not kick, and he will always respond to kindness and good, common sense treatment.

Why not raise mules on the farm?

A good pair of mules when three years old will bring from \$400 to \$500. —Farm Journal.

Self Feeder For Swine.

One breeder whom we know of practices the feeding of a mixture of salt and slack. He is situated near a coal mine, where he can procure the slack easily. He feeds the mixture from a feeder, a sketch of which we show.



SELF FEEDER.

The box part of the feeder is of sufficient size to hold several bushels of the mixture. There is a false bottom to the box, which slopes from the front to the rear and allows the salt and slack to feed down through a space two inches wide between the box and the rear end of the false bottom. The salt and slack work out on the bottom proper, where the hogs gain access to it. One would be surprised to know how regularly each one of the herd comes to the box, says a writer in Iowa Homestead. On several occasions the box has gone empty for a day or two. On refilling every member of the bunch was as anxious to get at the mixture as could be imagined. Some swine growers on account of their location in a country where limestone occurs in abundance may not need to supply mineral matter to the extent that is necessary on soils of a different nature.

The Tomato Crop.

The tomato is not a specially exhausting crop. Tomatoes do not remove as much plant food from soils as most farm crops at the usual rates of production per acre, states T. H. White.

The refuse of the crop from an acre of tomatoes contains more fertilizing material than similar remains of most other crops.

The vines and roots of tomatoes are very rich in potash.

The residue of the tomato crop should be evenly spread and plowed under.

As regards economy of soil fertility the tomato crop is a desirable one to raise.

IN OREGON.

Important Points to Observe in the Care of Cows.

The great future of the buttermaking industry in Oregon depends upon the quality of the product. "Quality and not quantity" must be the motto of every dairyman and creameryman. In order to make butter of the highest quality the dairymen and creamerymen must work in harmony. They have a common interest. The dairyman cannot expect a high price for his butter fat if his cream is poor. Butter made from inferior cream cannot get the highest market price.

Must Begin on the Farm.

In order to secure better butter we must begin on the farm. The stables in which the cows are kept must be clean and supplied with an abundance of fresh air. The floor must be clean, and an occasional bit of lime or gypsum should be thrown upon it to destroy the odors. The cows' udders must be washed before milking. This is the starting point of most of the trouble with cream. The milker sits down with a pail open at the top. Any dust, straw or manure that may be hanging to the udder is gradually worked off and finds its way into the pail. Every particle of such dirt carries with it a quota of germ life. While the dairyman milks he unconsciously sows the seed of destruction in the very product he is going to market. The destruction begins at once and is carried on rapidly so long as the proper temperatures are maintained.

The Remedy.

The remedy naturally suggests itself. Stop the dirt from getting into the milk. If the milker will carry with him a damp cloth and carefully wipe off the udder and the parts immediately around it the trouble will be prevented to a great extent. This work will require but a few moments of extra time and would prevent much after trouble in the way of sour or ill flavored cream. The cow should be milked in a place in which the air is free from dust. When the cows are kept in the stable never feed or move hay or clean out the place or do anything to stir up dust or strong smells just before milking. —J. W. Bailey, Oregon Dairy Commissioner, in Kimball's Dairy Farmer.

LIMA BEANS.

In California Vines Are Not Poled—A Solid Field.

The weeding and cultivation of lima beans in California are at first done with machinery called bean knives, and when the vines have advanced too far for this method hoeing by hand is resorted to. The bean is not poled, and in about six weeks the plant has reached dimensions which in many instances cover up the line mark of the rows and form a solid field of the most beautiful green, dotted with tiny white flowers. Where there are young walnut orchards present the bean is planted in between the rows of the young trees to utilize the same soil.

One remarkable fact is that the lima bean does not seem to deprive the soil



LIMA BEANS, BLOSSOMS AND PODS.

of its productive qualities. It can be grown repeatedly on the same land. Some fields here have carried the crop for thirty years, says a writer in Orange Judd Farmer. Irrigation is not needed. The plant depends largely upon the moisture of the warm soft fog prevalent here on the long, narrow strip of coast land between the Santa Ynez mountains and the Pacific.

Cheapest Feeds in the Corn Belt.

It is a well known fact that the cheapest feeds in the corn belt are those suited to the growing needs of the animal. Corn will never produce bone when fed in itself for the simple reason that it does not contain a very large per cent of mineral matter, says a writer in Iowa Homestead. Some of the other grains are much better fitted in this respect for bone making, and a great many farmers are feeding liberally of oats, wheat, rye and barley. Here and there we find some man who is a firm believer in keeping a good supply of coal, ashes, slack, charcoal and any other kind of material which contains a large portion of mineral matter on hand for hogs.

Selection of Laying Fowls.

Many rely on selecting their best laying fowls by merely studying the form, or, in other words, they believe that there is a characteristic egg type. Trap nest records seem to indicate that this rule is variable to some extent, at least. One should be able to select by form with fair success, as it has been noticed that hens with crow heads—that is, long, peaked heads—are seldom good layers. The same is true of hens that are unusually long legged. —J. C. Halpin.