

whole provinces—say in Ireland, for example—has enormously increased within living memory, owing to Shorthorn crosses, and many thousands of pounds annually would not represent a tithe of the advantage which that one district by itself now realizes from the use of well-bred bulls; but any defence of 4000 gs. for a single bull which is based on such a fact as that, overlooks the certainty that the economy of meat-making does not hinge on relationship to any single family or strain of Shorthorns. The power of a well-bred bull depends, as we have said—(1) on its length of good pedigree, and (2) on its individual energy and merit. The second of these considerations certainly is not confined to particular names or strains, and neither is the first.

We do not suppose, however, that these high prices have been thrown away; the courageous men who have been the purchasers will be well paid for their pluck. The fashion will last their time. The ring may even widen, and embrace other favorites and strains; but, like many another fancy, its extravagance is artificial. "It is magnificent," no doubt, "but it is not agriculture."—*Agr. Gazette*, Oct. 9th.

#### Sprouted Grain as Food for Farm Stock.

The manufacture of grain for cattle by the process of sprouting, or germination, would be simple and easy were a malthouse accessible, but when the grain is required to be prepared upon ordinary farm premises, contrivance must step in and fill the void, and it will be my endeavor in this essay to eliminate the inconveniences attending the present various methods of sprouting, and lay before the manufacturer a practical method whereby the system of germinating may be made equally simple and easy.

That the inconveniences may be seen, it is necessary to detail the common modes of germinating.

1st. A few bushels of wheat or barley are put in a tub and steeped 48 hours in cold water, the water is drained off and the grain left to sprout in the same tub, and whilst yet in an unfit condition it is used until all is used up. The defect in this system is that more should not be put in steep at one time than is sufficient for four or five days' consumption, as the grain will not keep, and the time required for winter being 12 to 16 days, and summer germination 7 to 9 days, consequently, in the interim of a fresh supply, the animals must feed on raw food. A change so extreme is incompatible with health to ox, sheep or horse.

Other stock masters steep the grain 48 hours, drain off the water, remove the grain from the tub and place it in a heap upon a board, brick, or asphalt floor, and turn it every day. A second lot of grain is steeped and treated in a similar manner, and a third, one lot coming after another, so a supply of grain at a proper stage of germination is kept up.

By this method there is great confusion in working the grain upon the floor; the different steepings unavoidably get mixed, and consequently some of the grain is used before arriving at the proper stage of germination.

Horse keepers (especially Norfolk men, who place a high value upon the feeding properties of sprouted grain for horses) place a bushel or two of wheat or barley in a sack, throw it into a pond or ditch, and at the end of 48 hours remove and bury it in chaff in the sack, and shake it once a day until it is fit for use; a second lot is treated like the first, and a third, so providing a continual supply.

The germinating process is influenced by temperature, and different effects are produced upon the various kinds of grain under precisely similar influences. Whilst barley at the temperature of 40 deg. F., or any lower degree, requires turning once only in 24 hours, it is necessary to turn wheat twice within the same period. In summer either is manufactured in seven days; in winter 12, 16, and, if the grain has been harvested in seasons like 1864-5-8, as much as 20 days are required for the grain to arrive at a proper stage of germination. Wheat or barley requires steeping 48 hours, and will germinate favorably when not mixed together, whereas maize requires steeping four days and four nights, and will germinate only in combination with wheat or barley.

Whilst the use of sprouted grain was limited to feeding a few horses or pigs occasionally, the inconveniences belonging to the ordinary way of manufacture were not of much importance; but when its value as food for sheep and lambs became

known, with its rapidly increasing consumption, it became necessary to adopt improved methods of manufacture.

By a most simple method grain can be germinated equally valuable for feeding purposes to that which has been prepared in a malthouse. A herdsman or other farm laborer instructed in the system, can, in an ordinary farm out-house, 12 feet square, with close walls, board, brick or asphalt floor, and suitable utensils—steeping tub, draining, heating and germinating boxes—prepare, by the labor of one hour daily, sufficient sprouted grain to give a pint each daily to 250 sheep, or half peck each to 32 horses, or the same quantity each to 32 oxen; or, in a house 18 feet by 13 feet, so as to give space large enough to contain steeping tub, draining, and heating boxes, each 5 feet by 3 feet 20 inches deep, a tier of germinating boxes in addition, same size as floor boxes, supported on trestles or other wood work, about 4 feet, and immediately above the floor boxes sufficient grain can be sprouted to feed 250 sheep, 20 horses, 20 oxen, and 50 pigs, allowing pigs and sheep 1 pint, horses and oxen ½ peck daily.

By the box system of sprouting space is economized, the same depth of grain can be had at the sides as at the middle of the beds, grain of the different steepings is prevented getting mixed, and none can get to the feeding troughs insufficiently germinated.—*Eng. Agricultural Gazette*.

#### Sheep—their Breeds.

The Leicesters are usually placed at the head of the long wool breeds, as being the finest in form and fleece, and also because it has been largely used in crossing, for the improvement of the other varieties.

The head is hornless, and rather long and narrow; ears thin, with spots of bluish tinge. The long, well cut ear of the pure Leicester, with its sprightly backward inclination, is a distinguishing characteristic of the breed, as is also the full, prominent eye, with quiet and lively expression. The face and forehead must be bare of wool, though covered with a fine coat of hair—white, with a little inclination to the bluish tint.

The body is straight; with ribs well sprung and barrel shaped; the pelt inclined to be thin; the wool exceedingly soft, fine and lustrous, and should be uniform over the carcass.

The extremities—muzzle and legs—are exceedingly fine, but the quarters are full and wide, with back broad and level. Indeed, the carcass of the true Leicester sheep is as near perfection in form as can be conceived possible.

The Cotswold, though of late years modified by the crosses of the Leicester blood, and, therefore, strongly resembling that breed, is somewhat coarser and longer in carcass; with a heavier fleece, which should be as lustrous, though not so fine as the Leicester. The head is larger, and must have a tuft of wool on the forehead, which the Leicester never has.

The Lincoln is as large as the Cotswold, though in other respects, as now bred, very strongly resembling the Leicester. The head is long, the face narrow and bare of wool, with white, fine hair and light bluish tint as in the Leicester. They stand rather higher on the leg than the two varieties before mentioned, and the carcass is apt to be less symmetrical; but the fleece is longer and heavier, and, though not quite so fine as the Leicester, is unsurpassed in lustre, and therefore commands the best prices in the markets.

It is difficult to describe animals so as to enable a person to determine the pure bred from the mongrel; indeed, the best judges are not always able to detect the presence of a slight dash of inferior blood.

One thing the producer may rely upon—that long-wool sheep peddled about the country at low prices are never pure-bred. Indeed, blooded stock of all sorts should be purchased of parties that are known as reputable breeders—this is the only reliable security the purchaser can have that the animal purchased will turn out what it is represented to be.

The Southdown sheep has a broad, rather short, though exceedingly neat, head; forehead covered with wool, and the face and legs with grey or brown hair. The fleece is rather short, of good felting quality, equal to half-blood Merino, but superior for flannel, &c., and should be solid and compact, and of uniform quality throughout, without projecting hairs.

The carcass should be straight, with well sprung ribs and broad, level back, having wide quarters, deep flank and well-packed twist. This being held in higher esteem than any other breed for the production of superior mutton, the full and perfect development of carcass is deemed of the highest importance.

The Hampshire Downs are coarser in form and fleece, with black faces and legs.

The Shropshire Downs are a cross between the Southdowns and long-wools—a large breed, with long, coarse wool, in form resembling the Cotswold, with black faces and legs.

In regard to this matter of the color of the faces and the legs, it is remarkable that while the Southdowns, which stand at the head of all these varieties, have, as before observed, brown or gray colors in these parts, their crosses on other breeds will frequently show black faces and legs.

When the object is to keep a small flock for mutton, rams of this variety are found exceedingly profitable to cross on ewes of almost any other breed. But the nearer they go to the pure blood the better the mutton.—*Live Stock Journal*.

#### Keeping Firkin Butter.

The dairy product of butter, outside of the districts of the county around our cities and large towns available for daily marketing, must necessarily be put up, or packed in tubs made of white oak, holding 25, 50 or 100 pounds weight. The packages are known in the market as the tubs or firkins. The value of this butter depends upon the care taken to free it from the buttermilk, and the knowledge and taste required to flavor it by the proper use of salt, and the neatness with which the whole process of making is characterized.

The consumers are obliged to pay from twenty to forty cents per pound more for butter brought to their cities and large towns weekly than the average market price in our country-made and packed butter—this, too, when its intrinsic value is no more.

This is owing entirely to the want of proper knowledge of the mode of preservation after it comes into possession of the family by whom it is used. The country-made and packed butter is kept in the dairy cellar or spring house from the date of making until sent to market, retaining all the qualities as when first made.

This is done by excluding the air by the simple process of keeping the package covered with brine made of pure salt, strong enough to float an egg. When sold, and as soon as it is to be delivered, the brine is to be drained off entirely by reversing the package and leaving it bottom up for twelve or twenty-four hours. It is then headed up, and goes to market without brine. The consumer is interested in getting possession of his supply as soon after it leaves the dairy cellar as possible.

He should first take out the head, driving the hoops back to their place, and then make a brine of pure water and Ashton salt, and covering the butter with it, and keep it covered until the last pound is used. The butter kept just covered is easily cut out the size required for use, and if then held under the hydrant or pitcher, and water poured over it freely, it will prove as good as the first.

No fear will be entertained that the brine will impart its taste to the butter. The office it performs is to prevent the air from contact with the butter. The writer knows that firkin butter has been kept a year by this simple and inexpensive process as sweet and with all the flavor it possessed the day it was made and packed.—*P. E. Piollet, in Country Gentleman*.

#### Meat Product Per Acre.

Mr. J. J. Mechi, one of the leading scientific farmers of England, considers meat-making one of the main points of his agricultural success. He regards it as an essential part in good farming, to make meat and manure in summer as well as in winter. This, however, cannot be done without shelter for animals, combined with good ventilation to protect them from flies and other insects; with proper provision for this necessity, he has succeeded in putting on both growth and fat in summer time. He acknowledges that there is no profit in feeding stock at market prices, but where a farmer has sufficient capital and knows how to use it, he will find stock-feeding profitable on account of its sure product of the best and cheapest manure he can obtain. Mr. Mechi finds his mar-