

FORMS OF CATTLE.

From The Farmers' Cabinet.

Messrs. Editors, -Your correspondent, W. P. H., on page 260, of the present vol. of *The Cabinet*, asks if some of your readers cannot furnish the most approved anatomical forms of cattle, particularly the milk cow?

Some years ago, I wrote for *The Reporter* a piece on this subject, which was republished in *The Franklin Farmer*, of Feb. 1838. As this piece appears to answer your correspondent's request, I shall transcribe a part of it for that purpose, and make such additional remarks as may be suggested. In making the following observations, I acknowledge my obligations to many writers; but none to the gentleman in Indiana, who, a few years ago, furnished the piece, as published in *The Franklin Farmer*, to an agricultural paper of that State, as his own production.

The two principal objects in raising cattle appear to be *beef* and *milk*. And as certain forms are found to possess particular qualities, I shall proceed to give those forms, and the desirable qualities generally connected with them.

The head should be small—the muzzle fine—the countenance calm—horns fine—neck light, particularly where it joins the head—breast wide, and projecting well before the legs—shoulders moderately broad at top, and the points well in, so as to leave no hollows behind them when the animal is moderately fat—the girth behind the shoulders should be deep, so that if the carcass should be cut across here, the section would be an *ellipse*, blunt at both ends—back straight, wide and flat—ribs broad, and the space between them and the hips small—flank full and heavy—belly well kept in—hips globular, wide across and on a level with the back—twist wide, and the seam in the middle of it well filled—thigh straight, tapering well down to the hock—the legs straight, short jointed, clean, fine boned, and standing wide apart—tail broad towards the top, tapering down small towards the bottom—body long, and joined smoothly to the quarters before and behind—skin soft and elastic—veins large.

I shall now proceed to show the advantages of the above form. The reason why the head should be small and muzzle fine, -a small head facilitates birth, and as the head is composed mostly of bone, it shows toughness of bone, the advantages of which is fully appreciated by the grazier, who has learned that no animal fattens kindly that lacks them. Calmness of countenance also denotes a disposition to be contented, and is generally possessed by a gentle milk cow, and also denotes an animal that will fatten easily. The light neck will be very advantageous to the butcher, who will get much less coarse meat in such; short neck generally denotes a thrifty, hardy animal. A long, or ewe-neck, -that is, one falling off from the top of shoulders—denotes a tender constitution.

The wide breast and deep body, give greater room for the lungs, the importance of which will be seen presently. A straight back is indicative of strength; a weak animal is generally hump-backed; poor keeping will produce these deficiencies in a calf that was at first well formed. The straight back also denotes aptitude to fatten. Much depends upon the room the lungs have, no animal can be a good one whose lungs occupy a small space; and as the lungs occupy all the space inside the ribs, so it is important that this space should be large. For this reason, the ribs should spread wide, be deep, and extend well back to the hips. The full, heavy flank of the cow, is a most certain indication of a good milker, this, con-

nected with large veins, particularly those on the side of the belly, generally called the *milk veins*, is a certain indication of a good milk cow. The milk is formed from that portion of blood that circulates on the external part of the cow; and as large veins denote a large circulation, so it is indicative of a good milker. The bull with a deep flank generally produces good milk stock. The belly being nearly straight, shows that the plates of which it is composed are thick and strong;—when the plates are thin, the belly sinks from the weight of its contents. Thick plates are of great advantage to the butcher, when the animal is killed, as it adds much to the weight of meat. Globular hips hold much meat, and it is much easier put upon them, than on those that are sharp. Wide hips give a broader loin and more capacity to the pelvis, which is of much importance in the cow, giving the calf more room. The hind-quarter that is long from the hip to the rump, and straight with the back, will weigh very heavy, and for the same reason the twist (that is the space between the thighs) should be wide and well filled up, which gives great weight to the upper part of the thigh. Straight legs are now the fashion, and are said to be stronger than crooked ones. Clean legs, small bones, tapering tails, show fine bones;—and such animals are easily kept, and when not in milk, fatten easily. A short legged animal also, is more easily kept and fattened, than long legged ones. When the hock and tibia are large, the legs will be wide apart.

I somewhat doubt the propriety of insisting upon a long body; but a good animal with a long body, will weigh much heavier than one with a short body; but it is much easier to breed good animals with short bodies. There is a continual tendency in the produce of the long bodied animal to be narrow in the breast, which is not the case with the shorter animal. And as a general rule, the shorter animal fattens much more easily. However, if the width of the carcass can be kept up, a long body is to be preferred. Round bodies were formerly the fashion, but the deep body is now thought to be decidedly best. The limbs do not join to the body of the round animal, as smoothly as to the oval, there generally being a hollow behind the shoulder; neither is the carcass as heavy. Round animals too generally carry the fat upon the surface, and do not mix it as well with the flesh. A soft and elastic skin is one of the most certain tests of an animal that will fatten kindly. An animal may have the finest form and the most perfect symmetry, yet if he lacks the proper "feeling," he will not fatten kindly. On the other hand, if he has the proper "feeling," he may lack much in form, and still will fatten kindly. By "feeling," is meant certain sensations produced by "touching or handling" an animal; the causes learned of which, is the softness and elasticity of the skin. The elasticity is occasioned by the quantity of cellular substance (that is, little elastic bags to hold fat) that is placed between the skin and the flesh. As this cellular substance can be discovered by an experienced "handler," even down among the muscles (lean flesh), so he can tell whether an animal will fatten in such parts, and whether the fat will be well mixed with the lean. But this knowledge is not to be obtained without much practice.

I have above described the most approved form for cattle, and have given the reasons why this shape is preferred. There is another reason not yet mentioned. When the cow has ceased to give milk, and has been fattened, it will be found that she will not only weigh heavy, but will carry her weight upon the most valuable parts. For it is known, that the butcher sells some pieces of beef for twice as much as others. And she can be fattened

upon half the food necessary to fatten an inferior animal.

I have said nothing about the shape of the *udder* and *teats*, as these can be best judged of when the cow is in milk; and then the best proof is *milking her*. Still it may be serviceable to say, the udder should rather be round than long; should lay up close to the body; should spread forward—teats about equally distant, of moderate size, say about two inches in diameter, next the udder, and taper down to the point, which should be blunt rather than sharp; they should be from four to six inches long. The udder, when empty, should be greatly reduced in size, and the skin should contract so as not to leave it flabby—it should not feel at this time hard and knotty, as this would indicate that it might become thickened and scirrhus, so as to make the cow liable to inflammations, and probably loss of some of the quarters.

SAMUEL D. MARTIN.

Colbyville, Kentucky, April 3, 1843.

CORN STALK SUGAR AND MOLASSES.

To the Editors of the Tennessee State Agriculturist.

In compliance with a request set forth in the last number of the *Agriculturist*, I now furnish you with such information as I possess on the subject of making Sugar and Molasses from the common corn-stalk, which, if you deem of sufficient importance, you may publish in your valuable journal.

Respectfully, your obed't Servant,
W. H. DEADERICK.

Having during these hard times felt somewhat restless under a heavy tax imposed by the necessity of providing for the daily consumption of a large family, and stimulated by the Essay of Mr. Webb, on the subject of manufacturing Sugar from Corn stalks, I determined last summer to give the project as fair trial as my entire inexperience in the business would permit. Accordingly, the construction of a small mill, with two rollers about fifteen inches in diameter, was procured, and the first effort made with stalks from which the corn had been taken for the purpose of cooking. The juice, after standing half an hour to settle, was deposited in a bell metal kettle to boil, and when hot, a table spoonful of lime water was added for each gallon of juice.—Before it became too thick for the purpose, it was again strained and carefully skimmed during the whole process of the boiling. When broiled down to the point of crystallization which is indicated when a portion taken whilst warm between the thumb and forefinger, can be drawn into a thread from a half to an inch in length, it was removed from the fire, and a small quantity set aside for granulation. In about three days, this process commenced, and after perhaps one sixth part had crystallized, it ceased and would proceed no further. The next trial was from stalks, the corn on which had just become too hard for table use. In like manner portions were set aside, and the next day granulation commenced, and twice as much underwent this process as in the first instance. The third essay was with stalks, the corn on which had nearly become hard enough for grinding. The syrup or molasses obtained from these, was greatly inferior to the two first, and although a part of it was kept several months, never evinced any tendency to crystallize. It would thus appear, that the age of the stalk most congenial to the granulating process, is when the corn is just becoming too hard for the purpose of cooking. However, it will require further experience, positively to determine this question. The syrup thus procured, was somewhat darker than honey, but perfectly transparent and free from impurity, and