Berkshire and Essex Swine.

The following is the description of the Berkshire and Essex breeds as adopted by the Natural Swine Breeders' Association of the United States at their meeting at Indianapolis:

Berkshires.

Color black with white on feet, face, tip of tail, and an occasional splash of white on the arm; while a small spot of white on some other part of the body does not argue an impurity of blood, yet it is to be discouraged to the end that uniformity of color may be attained by breeders, white upon the ear, or a bronze or copper spot on some part of the body argues no impurity, but rather a reappearance of original colors. Markings of white other than those named above are suspicious, and a pig so marked should be rejected.

Face short, fine, and well dished; broad between the eyes. Ears generally almost erect, but sometimes inclining forward with advancing age; small, thin, soft, and showing veins. Jowl full. Neck short and thick. Shoulders short from neck to middling, deep from back down. Back broad and straight, or a very little arched. Ribs—long ribs well sprung, giving rotundity of body; short ribs of good length, giving breadth and levelness of loins. Hips, good length from point of hip to rump. Hams thick, round and deep, holding their thickness well back and down to the hocks. Tail, fine and small, set on high up. Legs, short and fine, but straight and very strong, with hoofs erect, legs set wide apart. Size, medium. Length, medium; extremes are to be avoided. Bone, fine and compact. Offal, very light. Hair, fine and soft; no bristles. Skin, pliable. The Berkshires are hardy, prolific and excellent nurses; their meat is of a superior quality, with fat and lean well mixed.

Essex.

Color, black; face, short and dishing; ears, small, soft, and stand erect while young, but coming down somewhat as they get age, carcass, long, broad, deep and straight; ham, heavy and well let down; bone, fine; carcass, when fat, composed mostly of lard; hair, ordinarily rather thin. The fattening qualities are very superior; as breeders they are very prolific, and are fair nurses.

The Liver Fluke.

The "fluke" is a parasite that inhabits the gall bladders and gall-ducts of a large number of animals. It has been found in the squirrel, the rabbit, hare, dog, sheep, deer, ox, horse, elephant, and also in man. It is the most de-

Fig. 1.—Full-Grown Flukes.

structive parasite that infests the sheep, causing a disorder that carries off whole flocks, when the proper remedies are neglected or unknown. The shape of the fluke is flat, oval, with a thicker conical portion towards the head, and flattening out like a leaf at the hinder part. In fig. 1 are shown some specimens taken from the liver of a sheep, and in fig. 2, young flukes from the same animal; these are all of the natural size. This creature is highly organized, and is provided with an intricate digestive and circulatory apparatus. In figures 3 and 4, is shown the in-

Fig. 2.—Young Flukes

testinal canal with the digestive organs. The mouth is situated in the conical head, and there is a second sucker below the first on the under side of the animal. Its nutriment is derived from the bile of its host. Fig. 5 represents the veins and other circulatory organs.

The sheep is the most seriously infested of any of the domestic animals. The disease caused by the presence of these animals in the liver has carried off millions of sheep in a year. In one year 2,000,000 sheep died in England alone, and many millions have died in a single year in Australia and South America. Many sheep yearly die in this country from this disease, without any suspicion or knowledge of the cause. The disease is known as the "rot," or the "liver rot." It is caused by the obstruction of the gall-ducts by the flukes, which have entered them from the stomach. The parasites are taken into the stomach along with the food cropped in wet or marshy places, in which they pass one of the stages of their existence. If there are but few flukes, the sheep suffers little or no inconvenience from them, but if they are numerous, they choke the smaller ducts, arrest the flow of bile, and irritate and inflame the liver. The sheep suffers first from jaundice, which causes the skin and eyes to become yellow. At this stage the sheep thrives and fattens rapidly, and the yellow color of the fat of the many carcasses of mutton that are sold in the market, is due to this bilious derangement. In a short time the sheep fails, the skin and eyes become white and bloodless, a watery tumor appears beneath the jaws, the abdomen swells from dropsy, the wool becomes harsh and easily parts from the skin, and after lingering some time, the sheep dies, completely rotten, with every organ diseased. A knowledge of the natural history of this parasite teaches a simple and complete

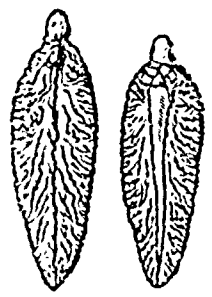

Fig. 3.—Fig. 4.—Digestive Organs.

preventive. As the fluke passes the first stage of its existence in water, the eggs voided in the dung of the infected sheep being hatched therein, it is only in wet undrained pastures, or in the neighborhood of ponds, that the sheep can take them into their system. Sheep that are pastured on dry fields are exempt. Wet pastures and meadows should therefore be drained and freed from stagnant water. Where their presence in the sheep is suspected, a cure may generally be effected by administering the following medicines, viz: 3 oz. of saltpetre, 2 oz. ground ginger, 1 oz. carbonate of iron, (colcothar of vitriol), 2 lbs. of salt, mixed with 6 quarts of hot water; to this mixture is added 6 ounces of spirits of turpentine, and the whole is bottled for use, in pint or quart bottles for convenience. A dose is two ounces or two table-spoonfuls of the mixture, well shaken, given in the morning before feeding; no food to be given for three hours afterwards. The dose is repeated every fourth day three times. A cow's horn open at the small end, is convenient for giving the medicine. The flukes are never found in salt marshes and near the sea coast, and a regular supply of salt is an excellent preventive in those cases where the use of low lands for pasture can not be avoided. The wide distribution of the fluke in America is now a well ascertained fact. It has been stated that it was not native to this country, and only existed in imported sheep. Last winter flukes were discovered in the liver of the hare, and in that of the deer in Minnesota, and we have examined a portion of a deer's liver, in which more than a hundred of these parasites were imbedded. Fig. 6 is an accurate drawing—half life size—of a fluke taken from a deer's liver in Minnesota, by Mr. Joseph Batty, formerly connected with the *Agriculturist*, and an experienced naturalist. Numerous other specimens were sent by him to the Smithsonian Institute, at Washington, for preservation. The fact that this parasite abounds, should be a caution to owners of sheep to be on the lookout for its appearance in their flocks. The present season having been more than usually rainy, has been a favorable one for its increase in low grounds, and

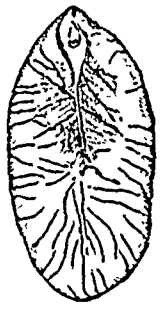

Fig. 5—Vein System.

Fig 6.—Fluke from a Deer.

it is probable that during the coming winter we may experience more than usual trouble from this cause. Fortunately we have an unerring and timely symptom of the disease in the absence of the usual red color at the corner of the sheep's eye, and beneath the eyelid. When the sheep seen to be ailing, and this sign is perceived, the above remedy should be administered without delay, and the sheep should have some extra nutritious food, linseed-cake meal being the best.—*American Agriculturist.*

Rain Water for Drinking Purposes.

Rain water collected from the farm buildings is not unsuitable for either horses or cattle, and with reasonable precautions, is not injurious. The sickly, mawkish taste which distinguishes it, is soon disregarded by animals in the habit of drinking it. Its brightness and purity are enhanced by keeping the roofs clean, and especially by having the spouts, heads, down pipes, and cisterns cleaned out at intervals of every few weeks. Leaves lodging in the spouts or cisterns often impart a dirty color and disagreeable flavour to rain water. To keep out leaves and other impurities, it is desirable that your cistern, whether of lead, iron, stone, or brick, be covered either with stout boards or with stone, which should be partially movable to admit of the cleansing just advised. It conduces to the purity of the water, and facilitates cleansing, if the cistern or tank has near the bottom an opening from which the turbid residue can from time to time be withdrawn.

For the conveyance of water over tolerably level surfaces, iron gas tubing of 1 or 2 inch bore is often preferred to lead piping; it is less expensive, equally durable, and not liable to give off any poisoning principle to the water. Unless, however, water stands long in leaden pipes or cisterns, unless mortar and other such rubbish which exert a chemical influence on the metal are in contact with the lead, there is no fear of its contaminating the water.—*North British Agriculturist.*

THE SELECTION OF THE BULL should be made with special reference to the wants of the owner and the style of improvement which he desires. If he sells milk, an Ayrshire or Holstein will probably be the best to cross with his stock; if he sells butter, the Jerseys; if he wants working oxen, the Devons; while for steers, oxen or cows for beef, or for general purposes, the Short horns will be all that can be desired.

THE BEST CROSS UPON THE BERKSHIRE.—The question having been propounded through one of our cotemporaries, "what is the best cross upon the Berkshire?" the questioner is very properly answered by the *Live Stock Journal* thus:—The "best cross" is to *let the Berkshire entirely alone* as he now is. What is his distinguished merit! Well-marbled, lean, tender meat, more suitable than that of all other breeds for smoaked hams, shoulders and side pieces. Now, if you cross any other breed upon him, and especially the Essex, or Suffolk, or Prince Albert, you spoil the Berkshire for hams and bacon. These small, fine, fat breeds are good for salted side pork, but are of little value for smoked meat. Besides, does the writer of this article know how the improved Berkshire and Essex breeds were made? If not, he had best study into this subject before he writes any more nonsense upon it.

HAND-FEEDING OF CALVES.—Mr. A. L. Bradbury said, at a meeting of Maine farmers, that some years ago he took two calves from the cows at two weeks old, and put them on skimmed milk and potatoes, and fed two others on the cows until thirteen weeks old. The result was that the hand fed calves so far outgrew the others, that he had hard work to keep them from the butcher, while the others he did not want. The hand fed ones kept constantly ahead of the others, and at two years old the smallest one came in as a cow and measured more than six feet; while the best one fed on the cow was only five feet—both having had the same treatment after having been weaned. Similar results followed other experiments of a similar character, and proved beyond question the value of whey and skimmed milk for feeding to calves. Whey alone, fed to pigs, had proved that it was worth saving for this purpose.

SALT IN ANIMAL ECONOMY.—Common salt is, perhaps, one of the most valuable of the complementary food stuffs. Its presence is needed in almost all of the most valuable fluids of the body which are concerned in digestion. It furnishes the hydrochloric acid of the gastric juice, and the soda of the bile; it is needed for the conservation of the organic compounds of the blood in their normal condition, and in this way is most valuable in preventing morbid changes, which give rise to disease; it hardens, and renders the muscular and other tissues tense, and gives vigorous tone to the health and system. In this way it counteracts any ill effects that may arise from an excess of potash salts in the animal's food. The abundant presence of salt in the intestinal canal is hostile to almost all intestinal parasites; and it is also hostile to parasitic worms which it cannot immediately reach, because it gives a vigor to the health that is unfavorable to their development and existence within the body. If, instead of getting food seasoned with salt, as well as having the salt-cellar at table, to take as many pinches from as we may wish for, we had to get all our salt by licking a piece of rock-salt, and if, moreover, there were several others behind us, who were impatiently pushing us out of the way, in order to have their turn at the piece of rock-salt, we think it is very likely that we should not get salt enough for our health, and that many more of us would suffer from worms than do now.—*Prairie Farmer.*