

It has also a tendency to lay on a larger proportion of fat to lean flesh.

The Lincoln Curly Coated breed vies with the Large White in being the largest breed in size. It is one of the oldest breeds in the country. The skin, with the exception of blue spots, is white, and covered with long, abundant curly hair, also white. The face is short, and the ears fall right over it. The snout is long and straight. The breed is strong boned, robust in constitution, very prolific, and claimed to be unequalled for early maturity and development. It is equally good as a "sucker" or a bacon pig, weighing anything up to 40 stones at eighteen months.

Viewed from the side a good Lincoln pig has well-rounded quarters, with large hams, well furnished down to the hocks, a straight back gradually curving from above the shoulder to the forehead, embracing a fairly long neck. The bacon curer requires long sides which are thick on the belly, in which the meat is well streaked with lean, and never too fat, two inches being about the outside. The loin should be lean and tender, and the neck or fore-end light, inasmuch as this is the cheapest part of the carcass. Thus a pig with broad back and loins, deep sides, full belly, and large hams, produces a maximum quantity of meat at the best parts and a minimum at the worst. The Lincoln pig is adapted, and by continuous care in breeding it will become still better adapted, to the production of young meat, which is all that the consumer desires.

The Large Black has two main types, viz., the West Country pig from Devon and Cornwall, and the East Country pig from Suffolk and Essex. The former are more refined, but it is claimed for the latter that they are hardier and more prolific. The skin is mealy-colored and easily cleaned. The head is medium in length and not very wide, the ears long and thin, set wide apart and lying forward over the face, with the points inwardly inclined generally. The jaw is not very large. The body is long, skin fine and soft, with a moderate amount of hair, straight and silky. The tail is large and set high. The sows are prolific and good milkers. The average weight at one year old varies from 10 to 14 stones.

Berkshire in color is black, and has smooth, fine hair. The face is short and dished with short, erect, pointed ears. All the lines of the body are straight and firm, smooth and trim. It has a strong tendency to early maturity, both in pure and cross-breeds, but the former are delicate in constitution. The Berkshire has been the favorite breed in the dairy districts of Berks, Oxfordshire, Buckinghamshire, and Wilts, and the breed is widely scattered in other counties.

With time given, Berkshires attain to great weight; when carefully bred they possess hardy constitutions, and are prolific breeders. The average weight they attain at 12 months old is 12 to 14 scores, or say 300 lbs. In addition to perfect form, a pure Berkshire should have a coat of thick, long, silky hair, four white feet, some white on the forehead and face; a white tip to the tail, and a little white on the ears, it is esteemed.

The Tamworth is an ideal bacon pig, very light in the calf, with a long, trim body, very smoothly covered with firm flesh, indicating a desirable mixture of fat and lean. In color it is cherry-red or dark chestnut, with long, fine, straight, abundant hair. Lighter shades of color show too much Yorkshire blood, originally introduced to effect quicker maturity. The head is slim, snout fine, ears intermediate in size, rigid, pointed, set high, and fringed with hair. The neck is light between the ears, but swelling towards the trunk, and merging into deep, well-covered shoulders smoothly. A long ham or gammon, fleshed firmly between the hocks, without folds of fat, is a special feature of the breed. When crossed it produces a handy commercial breed, well able to withstand the cold and having the necessary good points of the bacon pig.

AN EXPERT'S DEDUCTIONS.

James Howard, a one time leading English pig breeder, bred many crosses, and the result of his experience was that none grow so rapidly or realize so much money in a given time as pure-bred pigs of the Large White breed. On the art of breeding, James Howard has left some cardinal points for the consideration of future generations. His own observations have proved:

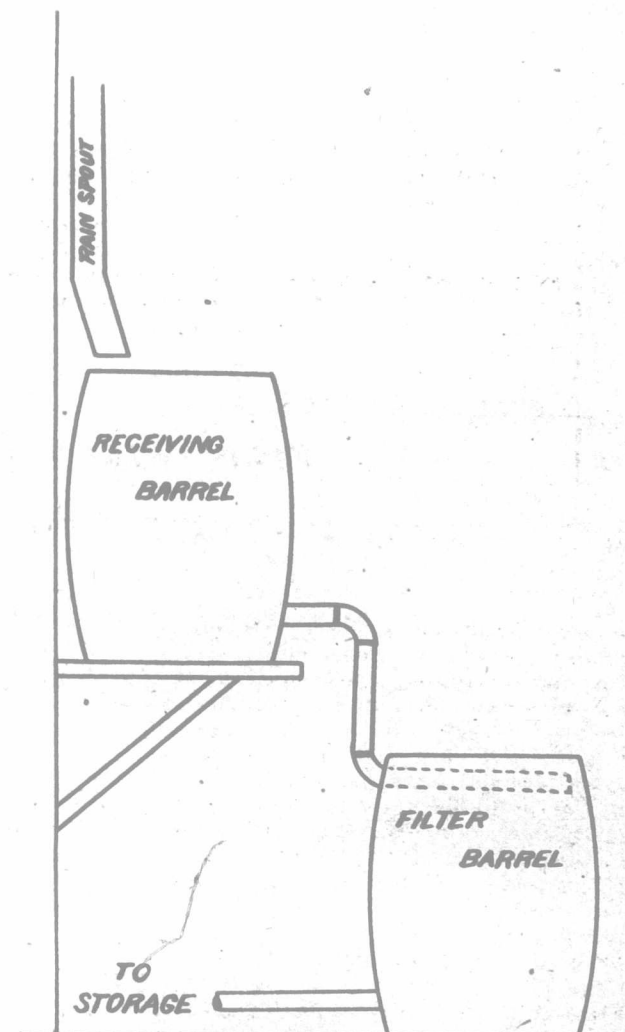
1. That from the male parent is mainly derived the external structure, configuration, and outward characteristics—the locomotive peculiarities inclusive.
2. From the female parent are derived the internal structure, the vital organs, and, in a much greater proportion than from the male, the constitution, temper, and habits.
3. That the purer the race of the parent the more certainty there is of its transmitting its qualities to the offspring. Say two animals are mated; if one is of purer descent than the other, he or she will exercise the most influence in

stamping the character of the progeny, particularly if the greater purity is on the side of the male.

4. That, apart from certain disturbing influences or causes, the male, if of a pure race, and descended from a stock of uniform color, stamps the color of the offspring.

5. That the influence of the first male is not unfrequently protracted beyond the birth of the offspring of which he is the parent, and his mark is left upon subsequent progeny.

6. That the transmission of diseases of the vital organs is more certain if on the side of the female; and diseases of the joints if on the side of the male parent.



A Filter System.
SOW SELECTION.

With respect to the selection of sows for breeding, she should possess size, this being a more important point than with the boar. The legs should be straight and short, the shoulders well outside, the chest thick and deep; the body should be of good length, with the back slightly convex, so as to carry weight without drooping; there should be good width throughout, the ribs well sprung, giving rotundity, the loins and flank well filled up, the hams reaching as near down to the hock as possible; the tail should be long, but not coarse, set on nearly in a line with the back, and should have a good tassel of hair at the end. There should be a good width between the eyes as well as the ears; the latter should be erect or only slightly pointing forwards, and of good length and fine. The collar or neck should be wide and well filled up; the skin should be fine and clear, denoting thinness; the hair should be abundant, long, and silky, a proof of good constitution and quality; it is also an indication

of lean flesh. A sow should be a good milker and not have fewer than twelve teats; for milk to the young during the first few weeks is all-important; hence in selecting young sows for breeding it is highly desirable that they should be the produce of dams with good milch qualities. Brood sows should be selected from spring or early summer litters, inasmuch as they are generally better developed than those of winter litters. It will be obvious that the former have not only better wealth for growth, but the advantage of field exercise and an abundance of green food, which all tends to promote the milch qualities.

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THE FARM.

Farm Engineering.

A SAND FILTER FOR RAIN OR BROOK WATER.

The use of screens, whether of wire or cloth, for straining the water supply obtained from brooks, springs and falling rain or snow is extremely unsatisfactory, because of the ease and frequency with which they become clogged. Moreover, silt and fine particles are not removed from the water. The sand filter not only strains out the finest particles of suspended matter, but also, it has been found by careful investigations, the water is purified bacteriologically. To a certain extent, the filter allows thorough contact of the water particles with the air as the former trickles over the surface of the sand grains.

Usually the water is led to the top of the filter and allowed to seep down through the layers of sand and gravel to the lower part of the container, from which a pipe leads to a storage basin or reservoir. The house supply is pumped from the latter. If rain water is the source of supply, it is usual, when no filter is used, to allow the first few minutes' fall to run to waste in order that the impurities washed from the atmosphere and from the collecting roof area may not enter the storage basin. If a sand filter be used, this need not be done, although it is very advisable, for there is no advantage in having the filter do more service than is necessary. An automatic device may be used with safety, however, to divert the first fall. Such a device will be described in this column before long.

One acceptable form of filter is shown in the diagram. There is a receiving barrel, a filter barrel and a storage receptacle. The receiving barrel is in such a position as to receive the water directly from the roof and pass it out through a smaller pipe to the top of the filter barrel. In this way no more water is fed to the filter than can percolate through the sand, even if the flow from the roof is very plentiful. If brook water is used, this receiving reservoir can be omitted and a pipe laid from the brook to the filter or the filter may be made in a water-tight container which is buried in the brook to such a level that the surface of the brook water is always slightly above the top of the container. In this way water is being freshly supplied to the filter at all times. A pipe from the bottom of the filter leads to the main storage basin. As many receiving barrels as desired may be joined together and more than one filter barrel may be used if it is desired to filter the water fast.

At the bottom of the filter barrel put a four-inch layer of coarse gravel and on top of that a second layer of fine. Follow this with three layers of sand each ten inches thick, the first layer coarse, the next finer and the top layer quite fine. Level each layer off well before putting in the next. Both sand and gravel should



Three Good Young Oxen.

These are the kind J. A. Cerswell, of Bond Head, Ont., breeds in his flock.