

ready appeared by ploughing a single deep furrow around it, up the perpendicular side of which the grub could not climb. This plan was stated to have been adopted with some success in some localities on the invasion of the Army-worm in 1861, the furrows in some instances being almost filled with the arrested worms, which were destroyed by dragging a heavy log of timber, or some equally efficacious implement over them.—Eds.]

## IS IN-AND-IN BREEDING ADMISSABLE.

Its advocates point with triumph, to the example of Robert Bakewell with his Longhorns, and Col. Samuel Jaques with his Creampots; but it should be remembered that every man is not a Bakewell or a Jaques; to prove which it is only necessary to state a well known fact, viz: that after the death of Bakewell, the Dishley Longhorns rapidly degenerated, and have now become extinct; and, since the death of Col. Jaques, the Creampots are going the same way. No man has as yet, been found skillful enough to keep them up to the high standard they attained under the management of their illustrious originators. Chas. Colling tried it with the Shorthorns, and the fact that Comet (155), the best bull of his day, was deeply in-and-in bred, would seem to be sufficient evidence that in-and-in breeding was not only admissible, but highly advantageous. But Comet had a deformed shoulder, and he never sired so good an animal as he himself was. Colling bred from Favorite to the sixth generation. But Favorite is represented as a bull of great size and substance, and rather coarse. For this reason, it was desirable to give his stock more fineness of form than he himself had, and in-and-in breeding would have this effect. His great substance and stamina would admit of it, while at the same time the produce of an animal, with less substance and vigor, would have been utterly ruined. The Rev. Henry Berry tried it with good success, for a while, but many of his animals became entirely impotent, and he was obliged to throw in a strong cross to remedy the evil. Mr. Thomas Bates bred his Duchess tribe strictly among themselves for twenty years, and obtained what he most desired, viz: great uniformity. But many of his best heifers were hopelessly barren, and he was obliged much against his will, to resort to a new strain of blood, which he obtained in Belvidere, whom he purchased of Mr. Stephenson. As a result of this cross, his animals received new vigor, while at the same time their peculiar firmness and style was retained.

The editor of the Albany Cultivator, writing

on the same subject, quotes the following remarks from Mr. Berry: Close breeding impairs the constitution and affects the procreative powers. In in-and-in breeding I believe that the procreative power fails first or chiefly on the part of the male.

The editor has the following remarks in regard to the stock of Mr. Robinson: Mr. Robinson purchased a stock of pure Shorthorns for his estate in Scotland, and pursued strictly the course of in-and-in breeding; the consequence was his cattle soon became feeble and delicate, very bad breeders, and many died of consumption. By resorting to Mr. Colling's stock and the use of one of his bulls for a few years, his stock was renovated and assumed their former beauty and vigor.

Mr. Stephens in the Farmer's Guide, has some remarks on this subject so much to the point, that I copy them entire:

The immediate effects of breeding in-and-in, or employing animals nearly allied by blood to procreate their kind, are remarkable. The bone becomes very small, of condensed texture and fine quality. The skin is so thin as to receive the appellation of papery so open of texture as to be sensible to the least change of temperature; and hence animals bred in-and-in are very susceptible of catarrhal affections, and on which account are liable to consumption. The carcass is much reduced in size, and the disposition to fatten increases to such a degree that an animal may be said to be always in a condition to be slaughtered. The hair is short, smooth and thin set, and the wool short, thin set and watery; and both hide and fleece lose a large proportion of weight. The body assumes a change of form, the barrel being beautifully rounded, but seems stuffed, as it were, with the skin. The extremities are very fine, the head and hoofs small, the ears thin and broad and the head of the sheep is almost bare of hair of a blue color, very liable to be scalded by the heat of the sun, and attracted by the fly. The necks of cattle and sheep are thin, and draw with a downward curve between the head to the top of the shoulder. The eyes are often affected with wateriness. Lameness frequently ensues in one of the limbs. The constitution is entirely much weakened. I have seen many animals that were in-and-in bred, and they were either small in size, or deficient in constitution and these last died prematurely. In one instance, although the animal escaped both these defects, he had a nervous affection of the eyes.

From the above facts we may infer that in-and-in breeding may be pursued, where the animals have great substance and vigor—especially if they are somewhat coarse, or when sometimes the case, the breeder wishes to concentrate some particular strain of blood. In either case it must be pursued with great caution, and must not be carried too far. Some