

Agricultural Society's show. He was bred by Mr. W. Gardner, Cashley, Buckley, Stirlingshire, his sire being by Prince of Wales, 673, and his dam, Cashley Bet, 3506, by Prince David, 643.

*Typical White Dorkings.*

*Sections of horns.—See p. 119.*

We re-engage in reduced size from the London Live-Stock Journal the portrait of a distinguished Clyde stallion, first-prize winner at the last Highland and Agricultural Society's show. Prince Lawrence is a bay, foaled May, 1883, bred by Mr. W. Gardner, Cashley, Buckley, Stirlingshire, his sire being Prince George of Wales, by Prince of Wales 673, and his dam Cashley. Bet 3506, by Prince David 643. His present owner is Peter Crawford, Carruchan, Dumfries.

## THE VETERINARIAN.

### DISHORNING-METHODS AND RESULTS.

The first bulletin of the Agricultural Experiment Station of the University of Tennessee is largely devoted to an elaborate paper on dishorning, by the assistant director, Mr. CHARLES S. PLUMB. The general conclusions arrived at are as follows:

1. The most desirable method of fastening an animal for dishorning (1), so as to keep it satisfactorily quiet, is to cast it, bind the feet firmly together, and hold the head in a halter close to the ground, either by the hands, or by placing a plank across the neck; to then remove the horn uppermost, and by means of a rope of sufficient length, fastened where the feet come together, to turn the animal upon the other side, and remove the remaining horn.

2. For removing the horns, an ordinary meat saw, with a set screw in the end of the blade furthest from the handle that will enable the blade to be tightened, but not to turn from side to side, is perfectly satisfactory. A strong running-rope halter, and about 20 feet of three-eighths inch rope are also necessary.

3. The horns should be removed as close to the head as possible, without cutting the skull proper. It is best to cut down from one-fourth to one-half inch of flesh, at the base of the horn. The sawing should be done rapidly, and with long sweeps of the arm if possible.

4. Animals one and two years of age appear to suffer considerably in dishorning. The painful effects decrease by age, so that an animal ten years old may suffer but very little. This is owing to the layer of flesh surrounding the base of the horn, which is much thicker in young than old animals.

Dishorning causes an abnormal increase of pulsation and temperature, which extends over several days. The appetite is also affected during the twenty four hours succeeding.

5. Dishorning is more especially to be recommended for those animals that are what are termed "masters," to be applied to bulls, and to beef animals that are to be kept quiet and closely stabled or shipped.

6. From evidence quoted from other sources, it appears that dishorning is not necessarily a cruel practice, but may be conducted to promote ends that are both humane and desirable in live stock breeding.

The opinion expressed in paragraph No. 4 are derived from the observations which follow:

A represents the horns from a steer of 22 months. These horns were cut off, taken to a professional artist the same day, and drawn at once. In A, fig. 1, is a thin, hard, oily-appearing covering that entirely surrounds the bone; fig. 2 is a thick, fleshy substance, that extends a slight distance up the horn,

this being the material that makes so many horns thick at the base, this layer is quite yielding to the touch. Fig. 3 represents the true bony tissue of the horn, with the cavity in the centre; this tissue is very porous.

B represents a cross-section of the horns of an animal four years of age. The outer layer is 1; the next, or fleshy, is 2, and 3 the inner bony tissue. B and C were drawn after the horns had been cut some days, so that the fleshy matter had shrunken some. However, in an animal four years of age, in our experience, the layer of flesh about the base of the horn is not so thick as that in a younger animal. Further, the animal that appeared to suffer most from dishorning, was the steer 22 months old, whose horns are figured at A.

The horns shown at C are from a cow 10 years old, and present but two striking layers, viz. 1, the outer, hard, bony shell of the horn proper, and 2, the bony structure within. There was almost no flesh about the base of the horn. This animal appeared to suffer from dishorning almost none at all. So far as our experience will enable us to judge, the three sets of horns, A, B and C, represent distinct conditions of development, and the operation of dishorning becomes less and less painful, the more we approach C from A. While there is liability of the wounds about the stump of the horn in A becoming sore, and maturing (suppurating?) for some little time, as occurred in the case of a steer the same age as that of A, they rapidly heal where the amount of flesh is very slight, as occurred with C.

In no case was any substance placed over the part of the horns left on the head. As soon as the horns were removed, the animals were returned to their stalls. The cavities in the stumps if left to themselves gradually fill up, first with blood and serum, and later with bony tissue, and the hairs about the horns gradually cover the stumps.

The veterinary surgeon in attendance during the dishorning of the four animals under experiment, was requested to give his professional opinion, in writing, concerning the general physical effect upon the animals, from thus sawing off the horns. His letter was:

KNOXVILLE, TENN.

As I am called upon to give my opinion as to dishorning cattle, I will say that the operation of amputating the horns is very painful, and not infrequently followed by evil results. It is surely a cruel practice, excepting for disease, fracture, faulty direction, deformity, and to diminish damages from vicious cattle.

A. D. GALBRAITH, D. V. S.

*Why Dishorn?*—The last sentence in the statement of Dr. Galbraith explains why dishorning is practiced. Where several animal animals are turned together, a "master" usually is found that uses its horns remorselessly upon the others. In such cases more or less harm comes from fighting in the way of breaking horns, hooking, etc. Further, a strong master cow will easily keep from the hay-rack or water-trough a dozen others, until she is ready to go. Such a herd of cattle is constantly quarreling, always on the move, never peacefully quiet, excepting at wide range. By removing the horns from the most powerful and vicious of these animals, the entire herd can be made more peaceful. Twenty polled animals will occupy the claim is made, less room either in stalls or in shipping than the same number having large horns. The reason for the removal of horns from the bull is very evident—simply to make the animal more defenceless, and give the herdsman better protection. A considerable number of human lives are lost each year on account of vicious bulls. Certainly we must admit that it is much pleasanter to feed in the manger a polled animal than one with long horns.

Country Gentleman.

(1) Mr. Plumb falls into the error of calling it "de horning"—which we correct in copying.