

which implies that the individuals which are best fitted for the complex, and in the course of ages changing conditions to which they are exposed, generally survive and procreate their kind. With domestic productions, natural selection comes to a certain extent into action, independently of, and even in opposition to, the will of man.

*Methodical Selection.*—What man has effected within recent times in England by methodical selection is clearly shown by our exhibitions of improved quadrupeds and fancy birds. With respect to cattle, sheep, and pigs, we owe their great improvement to a long series of well-known names—Bakewell, Colling, Ellman, Bates, Jonas Webb, Lords Leicester and Western, Fisher Hobbs, and others. Agricultural writers are unanimous on the power of selection: any number of statements to this effect could be quoted; a few will suffice. Youatt, a sagacious and experienced observer, writes,<sup>2</sup> the principle of selection is “that which enables the agriculturist, not only to modify the character of his flock, but to change it altogether.” A great breeder of Shorthorns<sup>3</sup> says, “In the anatomy of the shoulder modern breeders have made great improvement on the Ketton shorthorns by correcting the defect in the knuckle or shoulder-joint, and by laying the top of the shoulder more snugly in the crop, and thereby filling up the hollow behind it. . . . The eye has its fashion at different periods: at one time the eye high and outstanding from the head, and at another time the sleepy eye sunk into the head; but these extremes have merged into the medium of a full, clear and prominent eye with a placid look.”

Again, hear what an excellent judge of pigs<sup>4</sup> says: “The legs should be no longer than just to prevent the animal’s belly from trailing on the ground. The leg is the least

but see some excellent observations on this head by Prof. Huxley (‘Nat. Hist. Review,’ Oct. 1864, p. 578), who remarks that when the wind heaps up sand-dunes it sifts and *unconsciously selects* from the gravel on the beach grains of sand of equal size.

<sup>2</sup> ‘On Sheep,’ 1838, p. 60.

<sup>3</sup> Mr. J. Wright on Shorthorn Cattle, in ‘Journal of Royal Agricult. Soc.,’ vol. vii. pp. 208, 209.

<sup>4</sup> H. D. Richardson ‘On Pigs,’ 1847, p. 44.