

that many individuals of the breed which is to be improved should be raised; for thus there will be a better chance of the appearance of variations in the right direction, and individuals varying in an unfavourable manner may be freely rejected or destroyed. But that a large number of individuals should be raised, it is necessary that the conditions of life should favour the propagation of the species. Had the peacock been reared as easily as the fowl, we should probably ere this have had many distinct races. We see the importance of a large number of plants, from the fact of nursery gardeners almost always beating amateurs in the exhibition of new varieties. In 1845 it was estimated⁴³ that between 4000 and 5000 pelargoniums were annually raised from seed in England, yet a decidedly improved variety is rarely obtained. At Messrs. Carter's grounds, in Essex, where such flowers as the Lobelia, Nemophila, Mignonette, &c., are grown by the acre for seed, "scarcely a season passes without some new kinds being raised, or some improvement effected on old kinds."⁴⁴ At Kew, as Mr. Beaton remarks, where many seedlings of common plants are raised, "you see new forms of Laburnums, Spiræas, and other shrubs."⁴⁵ So with animals: Marshall,⁴⁶ in speaking of the sheep in one part of Yorkshire, remarks, "as they belong to poor people, and are mostly in small lots, they never can be improved." Lord Rivers, when asked how he succeeded in always having first-rate greyhounds, answered, "I breed many, and hang many." This, as another man remarks, "was the secret of his success; and the same will be found in exhibiting fowls,—successful competitors breed largely, and keep the best."⁴⁷

It follows from this that the capacity of breeding at an early age and at short intervals, as with pigeons, rabbits, &c., facilitates selection; for the result is thus soon made visible, and perseverance in the work encouraged. It can hardly be an accident that the great majority of the culinary and agricultural plants which have yielded numerous races are annuals

⁴³ 'Gardener's Chronicle,' 1845, p. 368.
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⁴⁴ 'Journal of Horticulture,' 1862, 406.

⁴⁵ 'Cottage Gardener,' 1860, p. 45.

⁴⁶ 'A Review of Reports,' 1808, p.

⁴⁷ 'Gardener's Chronicle,' 1853, p.