

for flowers to become double, and this tendency is inherited. Moreover, it is notorious that with hybrids the male organs become sterile before the female organs, and with double flowers the stamens first become foliaceous. This latter fact is well shown by the male flowers of dioecious plants, which, according to Gallesio,¹¹⁹ first become double. Again, Gärtner¹²⁰ often insists that the flowers of even utterly sterile hybrids, which do not produce any seed, generally yield perfect capsules or fruit,—a fact which has likewise been repeatedly observed by Naudin with the Cucurbitaceæ; so that the production of fruit by plants rendered sterile through any cause is intelligible. Kölreuter has also expressed his unbounded astonishment at the size and development of the tubers in certain hybrids; and all experimentalists¹²¹ have remarked on the strong tendency in hybrids to increase by roots, runners, and suckers. Seeing that hybrid plants, which from their nature are more or less sterile, thus tend to produce double flowers; that they have the parts including the seed, that is the fruit, perfectly developed, even when containing no seed; that they sometimes yield gigantic roots; that they almost invariably tend to increase largely by suckers and other such means;—seeing this, and knowing, from the many facts given in the earlier parts of this chapter, that almost all organic beings when exposed to unnatural conditions tend to become more or less sterile, it seems much the most probable view that with cultivated plants sterility is the exciting cause, and double flowers, rich seedless fruit, and in some cases largely-developed organs of vegetation, &c., are the indirect results—these results having been in most cases largely increased through continued selection by man.

¹¹⁹ 'Teoria della Riproduzione Veg.,' 1816, p. 73.

¹²⁰ 'Bastarderzeugung,' s. 573.

¹²¹ Ibid., s. 527.