

Any one who will attentively consider the abstract now given, of the experiments made by many observers in several countries, will, I think, be convinced that by grafting two varieties of the potato together in various ways, hybridised plants can be produced. It should be observed that several of the experimentalists are scientific horticulturists, and some of them potato-growers on a large scale, who, though beforehand sceptical, have been fully convinced of the possibility, even of the ease, of making graft-hybrids. The only way of escaping from this conclusion is to attribute all the many recorded cases to simple bud-variation. Undoubtedly the potato, as we have seen in this chapter, does sometimes, though not often, vary by buds; but it should be especially noted that it is experienced potato-growers, whose business it is to look out for new varieties, who have expressed unbounded astonishment at the number of new forms produced by graft-hybridisation. It may be argued that it is merely the operation of grafting, and not the union of two kinds, which causes so extraordinary an amount of bud-variation; but this objection is at once answered by the fact that potatoes are habitually propagated by the tubers being cut into pieces, and the sole difference in the case of graft-hybrids is that either a half or a smaller segment or a cylinder is placed in close opposition with the tissue of another variety. Moreover, in two cases, the young stems were grafted together, and the plants thus united yielded the same results as when the tubers were united. It is an argument of the greatest weight that when varieties are produced by simple bud-variation, they frequently present quite new characters; whereas in all the numerous cases above given, as Herr Magnus likewise insists, the graft-hybrids are intermediate in character between the two forms employed. That such a result should follow if the one kind did not affect the other is incredible.

Characters of all kinds are affected by graft hybridisation, in whatever way the grafting may have been effected. The plants thus raised yield tubers which partake of the widely different colours, form, state of surface, position and shape of the eye of the parents; and according to two careful observers they are also intermediate in certain constitutional