

These proliferous variations, of which a yet greater number might be noted, occur as individual variations, in which case they may be classed under teratology; but, as occurring as a normal function of certain groups, may possess a further significance.

These divergencies, as great as they may be, occur not only in species, but also within larger groups, such as genera and orders, and enforce the conclusion that in domesticated plants man has asserted a dominancy which must be recognized as producing change, even as insect agency has produced change in the natural line of development, and that for agricultural classification of plants human influence is to furnish the key.

THE TUBERCLES ON THE ROOTS OF LEGUMINOSÆ.

BY W. J. BEAL.

NOTE.—The paper by this title was read by its author and then withdrawn for further investigation, before publication.

THE VALUE OF LEAVES.

BY JOHN J. THOMAS.

THE brief paper which I offer for this year consists merely of a few illustrations of the value of leaves on the growth and ripening of fruit—a matter well understood, but rarely appreciated to its full extent.

A distinct illustration was presented to me many years ago, in the loss of all the leaves of a plum-tree near midsummer, by what was termed leaf blight. The plum was a small and very sweet variety, known as the small Yellow Gage. When the leaves dropped, the plums were about two-thirds grown, and they had not acquired any of their sweet flavor, the taste being bitter and immature. The heavy crop of small specimens was conspicuous on the bare branches, and the fruit remained stationary in size and unchanged in quality for about three weeks, when a new crop of leaves came out. The young green plums then resumed growth, gained their naturally rich, golden color, and their sweet and honeyed flavor.

A less striking instance recently occurred on a bush of the Missouri Currant, which was entirely divested of its foliage by the span currant-worm before the currants were half grown. In a few weeks the abundant rains caused a new growth of leaves, and the bush is now fully clothed, with the result that the fruit has reached full size and perfect maturity.