COMPOSITION OF THE APPLE.

PROF. F. T. Shutt, Chemist of the Central Experimental Farm, Ottawa, has issued his report for 1894. In addition to other interesting points, he has given the chemical constituents of the apple. Taking an average of four varieties, viz.: Duchess, Wealthy, Fameuse and Spy, he gives the following result:—Water 86+, organic matter 12+, ash .28, nitrogen .0428.

In the same varieties, the average percentage of important constituents of the ash was:—Phosphoric acid 8+, potash 55+, soda 2+, oxide of iron 1+, lime 4+, magnesia 4+.

It is noticeable that potash is the chief component of the ash, being over half, and about six times the phosphoric acid; but in the apple leaves it is only double. The ash of the fruit is chiefly found in the seeds and walls of the ovary, comparatively little being found in the flesh. Evidently, therefore, the small apples extract as much fertility from the soil, and draw upon the strength of the tree about as much as the large ones.

For the supply of nitrogen, Prof. Shutt recommends barnyard manure, or the turning over of some leguminous crop, for in addition they furnish humus, which is of great mechanical benefit. Besides this, he considers that as the period of growth and fruit development in the apple is comparatively long, organic manures in most instances will probable give better returns than those containing more soluble forms of nitrogen, such as nitrate of soda, or sulphate of ammonia. For the potash, he commends wood ashes, which, in most parts of Canada, afford the cheapest form in which to purchase this constituent, besides being in a condition rendering it easily available. If wood ashes are not easily obtainable, kainit and muriate of potash may be substituted. For the phosphoric acid, bone meal and superphosphate may be used. Bone meal contains 2 or 3 per cent. of nitrogen, in addition to the phosphoric acid, but requires a great length of time in the ground to give up its constituents; its effects last longer. For this reason it is often advocated for orchard fertilization.

Chrysanthemum Culture.—It should be borne in mind, that though plants have to be pinched back a time or two to render the plants bushy, every successive crop of shoots will be weaker than their predecessors. If the pinching back is done after mid summer, only weak shoots are produced, and this means weak flowers. Another point to be cared for is to preserve the old leaves as long as possible. When the plant loses its leaves early, the flowers are liable to be particularly small.—Meehans' Monthly for June.