

triumphs of modern horticultural research, and establishes the fact beyond doubt that the true road to success in the improvement of our fruits is in artificial cross-breeding, aided by a thorough knowledge of the principles of vegetable philology.

It may, therefore, be seen that it is unwise to search for varieties of winter apples superior to those we have, in the Northern countries of Europe. But, summer apples of better quality may be looked for with greater prospect of success in the North than in the South. Our three best summer apples—varieties that are successfully grown in every district in Ontario—Duchess of Oldenburgh, Yellow Transparent and Red Astrachan are each of northern origin. The first two from Russia and the last from Sweden, from whence it was imported into England in 1816.

All things seem to point to the fact that real improvement in the quality and in the commercial value of our fruit, must be accomplished by artificial hybridization and cross-breeding. The few persons who have been engaged in this pursuit have, in most cases, given the most valuable portion of their life-time to this most attractive branch of horticultural science almost without a hope of pecuniary reward. Simply a labor of love.

Would it not, therefore, be well to take some steps for placing scientific cross-fertilization more prominently before our people by sowing the necessity for its pursuit? And at the same time to devise means whereby some substantial remuneration could be obtained by or for those who succeed in producing new varieties of acknowledged superior excellence?

Successful results in cross-breeding are rare, because the conditions of success are not sufficiently known, and also because of the length of time often required for development. Sometimes, indeed, an average lifetime is not enough to test the results of operation's performed in early life. Mr. Arnold lived long enough to know that the "Ontario" apple would eventually take first place in public estimation, but not long enough to see it reach that point. The late Mr. P. C. Dempsey gave the greater portion of his valuable lifetime to this subject, but, unfortunately for the interests of pomology he, too, has been cut off in the midst of his work and before the public could have an opportunity of pronouncing on the value of his very extensive operations in hybridization and cross-breeding. A few persons only know anything of the extent of his operations or who can have any conception of the vast gain to our horticultural wealth which will almost certainly result from his life work.

Under existing circumstances, therefore, we can scarcely hope for that development of the science of cross-breeding which its importance to pomology demands. But if students in this branch of science were assured that extraordinary success would meet with corresponding reward, men in early life having the necessary educational training would engage in this pursuit, and pomology and horticulture would soon be elevated to that position in the scale of natural science to which its importance deserves.

The present system is marked neither by justice to the operators or by common honesty on the part of the people. The work of a man's lifetime is now appropriated by the commonwealth greatly to its advantage, while the producer of this source of wealth is treated with utter neglect. Any person producing a new machine, instrument or process, although it may not have cost one hour's thought, can secure a fair share of the profit arising from its use for his own benefit, while the producer of a new variety of fruit which may greatly enrich a nation cannot legally secure for himself or his family and financial benefit whatever.

Many costly tributes have been presented, or pensions given by the State as tokens of gratitude in recognition of meritorious deeds much less deserving of public gratitude than those rendered by Arnold or Dempsey.

If a respectable gratuity were now presented to the family of the late Mr. Arnold for his successful efforts in hybridizing and cross-breeding and provision made for recognition of similar service to others when the super-excellence of their products may be established beyond doubt, it would, in my opinion, be a satisfactory answer to the question so often asked, "How may our young men be induced to take a greater interest in fruit-growing for profit?"