material for illustration. But it is not so generally known that cross-fertilization *from other varieties* is necessary for a good crop of some apples and pears, as the Bartlett for example, although the fertilized varieties themselves have perfect flowers. The enormous waste of plant energy in the great production of pollen by wind-fertilized plants is well shown by the results of four year's experiments with Indian corn at Cornell University. By plucking out the staminate flowers from every alternate row not only was there enough pollen produced on the other rows to fertilize all the plants but the yield of the whole was increased nearly 20%.

Darwin discovered long ago that atrophy of seeds was frequently accompanied by a gain in size and quality of fruit as a whole. It is interesting to know that it is now an object of ambition among scientific fruit-growers to develop varieties with small seeds or none. Recent triumphs in this direction are the Navel Seedless orange and the Lincoln Coreless winter pear. The proportion of pulp to seeds has been greatly increased also in raspberries and tomatoes.

Our young botanists ought to be so instructed in the principles of variation and heredity that they would be on the lookout for useful variations and know how to propagate and improve any useful variety they might observe. No more interesting or useful object could be set up before the minds of our young botanists than some achievement of this nature.

He would be a public benefactor to an extraordinary degree who should obtain a variety of Fife wheat which would mature a little earlier in Manitoba so as to escape the September frosts. It would be a benefit, too, to develop a tomato or a melon or a lima bean that would mature anywhere in lower Ontario, or a variety of strawberries that would mature a fortnight earlier or later than those varieties we already have, and so extend the season of our enjoyment of this most luscious fruit.

The improvement of some of our wild plants offers a wide field for usefulness. Some aspiring young Canadian botanists might be encouraged to take hold of the may-apple for instance, and see what could be done with it. Most of us know what a rich flavor the fruit of this plant has and also how scarce the fruit is. If a study were made of the conditions under which the plant thrives best, by judicious culture and selection we should probably be able in time to increase the productiveness of the plant and the size of the fruit. Though we cannot do this work itself in schools, we can at least give the minds of our young people a set in this direction, so that they may do some such work afterwards.

The home is the crystal of society, the nucleus of national character, and from that source, be it pure or tainted, issue the habits, principles, and maxims which govern public as well as private life; the nation comes from the nursery; public opinion itself is, for the most part, the outgrowth of the home; and the best philanthropy comes from the fireside. —*Samuel Smiles.*

SCHOOL-LIFE.—We fall into the habit, not a few of us, of thinking that school-life is all preparation, all grinding for an inevitable test. But in many important aspects there is a finality in the record of our school-days, and it is a poor form of education that does not take this finality into account. Seven to ten years of plain living and high thinking, an epoch complete in itself—that is the minimum of happiness and innocence to which every boy and girl is entitled. —*The Educational Times.*