



Why you can't save seeds from hybrids.

You shouldn't save seed from hybrid vegetables because they won't produce true in the next generation. This is indeed a fact. To understand this completely, you must understand what a F-1 hybrid is. The simplest way to define an F-1 hybrid is to take an example. Let us say a plant breeder observes a particularly good habit in a plant, but with poor flower colour, and in another plant of the same type he sees good colour but poor habit. The best plant of each type is then taken and self-pollinated (in isolation) each year and, each year, the seed is re-sown. Eventually, every time the seed is sown the same identical plants will appear. When they do, this is known as a 'pure line.' If the breeder now takes the pure line of each of the two plants he originally selected and cross pollinates the two by hand the result is known as an F-1 hybrid. Plants are grown from seed produced and the result of this cross pollination should have a good habit and good colour.

This is the simplest form of hybridization; there are complications, of course. A completely pure line can sometimes take seven or eight years to achieve. Sometimes, a pure line is made up of several previous crossings to begin to build in desirable features and grown on until it is true before use in hybridization.

To summarize, an F-1 hybrid is the result of crossing two pure lines to achieve the desired result. This seems a lot of trouble to go to but there are definite advantages. Scientific and accurate breeding programs have made it possible not only to bring out the outstanding qualities of the parent plants, but in most cases, these qualities have been enhanced and new desirable characteristics added to the resultant hybrid plants. In addition to qualities like good vigor, trueness to type, heavy yields and high uniformity which hybrid plants enjoy, other characteristics such as earliness, disease resistance and good holding ability have been incorporated into most F-1 hybrids. Uniform plant habit and maturity, coupled with uniformity in shape or size have made hybrid vegetables extremely suitable for mechanical harvesting.

We can't expect to get all these advantages for nothing. Because creating F-1 hybrids involves many years of preparation to create pure lines and these pure lines have to be constantly maintained so that the F seed can be harvested each year, seed is more expensive. The problem is compounded because to ensure that no self pollination takes place, all the hybridizing of the two pure lines sometimes has to be done by hand. So you often have to pay more for your seed or get fewer in a packet. Seed is often collected by hand too to ensure that each plant is as productive as possible.

