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## New Seed Varieties

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# **New Seed Varieties**

**Larry A. Sagers**

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**Thanksgiving Point**

- **Where seeds come from is a story that is old and new; simple but very complex.**

- **Where seeds come from, who helps combine and selects their genetics and how they eventually get to the package that you plant from is a fascinating international story.**

- **Daunting, careful, painstaking work creates new vegetable and flowers each year.**

- **Seeds have been around since plants have been on the earth.**

**These tiny embryos have the plants in miniature and the stored energy to let them grow. In the genetics of the seed is the mystery.**

**Like all living organisms, the code determines what will grow.**



**For some varieties the process is simple. They are open pollinated, meaning they are genetically true to their parentage.**

**Others are crossed to create hybrid varieties that will differ from either parent.**

**Some gardeners refuse to grow hybrids because they claim the varieties are created artificially.**

**Remember, hybrids occur in nature and increase the genetic variety of many organisms.**

**The strict definition of a hybrid is the cross between different species or genera.**

**More loosely defined, a hybrid is a cross between different subspecies or cultivars.**

**The closer the parental relationship,  
the more successful the hybrid.**

**Parents differing only in pigmentation usually produce a normal hybrid.**



**Some crosses produce sterile hybrids; just as the mule is the sterile offspring of a mare and a male donkey.**

**Offspring of different plant species are usually sterile, but can be reproduced by cuttings or grafting.**

**Chemical, temperature or irradiation treatment makes some sterile hybrid plants fertile.**

**So why do many gardeners look for  
new hybrids for their gardens?**

## **Successful hybrids**

- Show hybrid vigor**
- Are larger and faster growing**
- Show superior colors**
- Have desirable ornamental characteristics**

**They may also be more resistant to insects, diseases or other problems.**

**Most corn, tomatoes, bananas, and sugar beets today are hybrids that bear much larger fruit than their parent stock.**



**Farmers improved crops through the ages by saving seeds from the best plants to sow the following year.**



**Crop improvement was slow but sure. American horticulturist Luther Burbank selected and bred new varieties and many others continue this work.**

**Breeding new varieties is now even more sophisticated**

**Goldsmith Seed operates a multinational organization that develops and produces flower seeds for sale around the world.**

**Their display and research facilities are in Gilroy, California but they have farms and other facilities in Michigan, Guatemala, Holland and Kenya.**

**The development of a new flower variety starts inside their greenhouses and continues through many stages until it finally reaches your landscape.**

**Jeannine Bogard, a Goldsmith Seed manager, shares the seed story of their display gardens and field trials.**

**Goldsmith seed is a breeder and primary producer of seeds. We do not sell them directly to the consumer but our varieties are some of the best known in the industry.**

**We grow our seed in production facilities in Central America and Africa.**



**The reason we have farms in so many areas is to provide a way to increase our seed very rapidly because we always have good production weather somewhere.**

**After we have sufficient quantity of seed, we can then sell the seed to other companies that then sell it to consumers.**

**We are always looking for new and different varieties.**

**The process is not easy and is often very time consuming.**

**The fastest we have ever been able to get a new variety introduced to the public is five years.**

**That is very unusual and as only possible because we only had to change a color and already had the existing gene pool.**

**New varieties usually take much longer to develop.**

**We plan for an average of fifteen years and plant breeders usually pass their genetic line down to successive breeders.**



**Keeping new developments in the pipeline is important so you can use them to introduce new characteristics into your plants.**

**If you had to start over each time it would take decades for each new variety.**

**Part of the challenge of breeding plants is trying to decide what the trends will be in the next decade or two.**

**Right now look for smaller, more compact plants that lend themselves to culture in containers and other planters.**

**Landscapes are smaller and people want them to be more colorful around their patios and other areas.**

**We also want to accommodate those who are trying to change their displays several times each year.**

**That means we need plants that  
flower early and keep flowering  
until they are replaced.**

**Low maintenance is also important.**



**One important characteristic is that the flowers will deadhead themselves.**

**That means less work for the homeowner or the commercial landscaper and the beds look better.**

**We are working on getting that characteristic into marigolds and other flowers.**

**The future of the plant world is  
dynamic and exciting.**

**What changes will come are impossible to predict but like everything else in life, changes will come.**

**These changes are part of the excitement of growing a garden each year.**