

New Varieties For Today's Market

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With bedding plants being the fastest growing sector of floriculture in the United States, new varieties are needed to meet the changing requirements of the commercial grower, as well as the bedding plant consumer. There have been increases in the number of F1 hybrid varieties available that offer new crops, colors, and performance improvements, thus improving upon existing bedding plant species.

The methods of bedding plant production as well as the distribution of bedding plants have necessitated changes in our industry. All the changes have provided Goldsmith Seeds with an opportunity to produce varieties that exceed the requirements of our customers.

Goldsmith Seeds' chain of distribution for F1 hybrid seed renders many tiers of customers, each with their own distinct requirements for a variety. Seed is sold directly to seed brokers, who in turn sell the seed directly to growers. Seeds are then grown out and sold to garden centers and other plant merchants in packs and other containers. The flowering plants are then purchased and used by landscapers and consumers.

To ensure that we exceed the requirements of all customers in the chain of distribution, several criteria are assessed before introducing a variety: a wide adaptability to climates and day length for both greenhouse and garden performance, seed production requirements, and seed quality .

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With the advent of plug production, the chain of distribution has changed, as well as magnifying the germination requirements for a variety. Many growers purchase plugs rather than buying their own seed. This has resulted in more seed being purchased by fewer growers. With this revised structure, the plug producer greatly influences those varieties that are available in the market. Regardless of the performance of a variety, if it is not producible in a plug, the chances of survival in the market are reduced.

INDUSTRY INFLUENCES

The key to success is introducing new varieties that reflect the changing requirements of the bedding plant industry. Some of these industry influences are crop time, diversity, performance, and customer preference.

Crop Time. Crop time directly affects the cost of production. With a shorter crop time, quicker crop rotations can be accomplished. This is an important factor in a highly competitive market. The challenge from a breeding perspective is to develop a hybrid that is earlier to bloom without sacrificing garden performance. The recently introduced 'Antigua' dwarf African marigold, *Tagetes erecta*, met this objective. 'Antigua' is earlier than other dwarf African marigolds, while still exhibiting strong garden performance. The variety maintains a 10-12 inch height in the garden, with good basal branching habit, and proportional flower size.

An additional feature of the 'Antigua' marigold is day length neutrality. Marigolds typically are produced in early spring, requiring short days to initiate flowering. Production of African marigolds has extended into both summer and fall markets. 'Antigua' marigolds enable growers to supply African marigolds without the added expense of black clothing to ensure bud set and proper crop time under long-day conditions.

Diversity. Diversity is a very strong influence on new variety selection, both with traditional bedding crops as well as developing new classes. With growers expanding their shipping areas, their customer base has become more diverse. A broader product line is essential for their distinct clientele.

Multibloom geraniums, *Pelargonium xhortorum*, introduced a diverse class of geranium with a shorter crop time. Producing twice the flowers as an ordinary F1 seed geranium, it brought a new appearance to seed geraniums. Compared to the original F1 hybrid geranium, Sprinter hybrids introduced 20 years ago, Multibloom hybrids decreased crop time to 10 weeks from 16 to 18 weeks, compacted plant size, and added unique colors. Growers can produce quicker crop rotations with a more adaptable variety, resulting in a more profitable crop.

With a need for diversity in petunia, Goldsmith Seeds will be introducing a new class of petunia, the milliflora. The milliflora petunia is unique; it is a true miniature petunia, with the plant being proportional in size with the flower. The advantages to the producer are, that the compact habit decreases the need for growth regulators, which in turn reduces cost. Earlier crop time and excellent pack performance compared to other F1 hybrid petunias gives quicker turns and a high-quality product. For the consumer, mini petunias bring diversity as well as a plant with very good garden performance. Mini petunias continue to produce multiple blooms throughout the season, while maintaining an attractive plant habit.

Primula obconica also has potential for diversity and has been available for years as an F1 hybrid for bedding plant and florist crop producers. Production has been decreasing in recent years though, due to the skin irritation caused by the chemical, primen, that is carried in the leaves. In response, Goldsmith Seeds will be introducing, a primen-free F1, *Primula obconica*. Without the risk of primen irritation, this new variety will help revive a declining, but much desired crop.

Performance. Garden performance as well as greenhouse performance are important factors for continued customer satisfaction. Bells dwarf snapdragons, *Antirrhinum majus*, took a class of bedding plant and enhanced it with a drastically improved garden performance. Equipped with a peloric flower form rather than a standard snapdragon form, Bells snapdragons bloom longer into the season, giving the consumer a more desirable plant. The peloric flower form allows the plant to avoid seed set, thus giving more flower production. Brighter colors give an added appeal to the consumer, as well as a compact, well-branched variety for the grower.

Cyclamen is an expanding crop with developments on diversity. The majority of cyclamen are now produced as an F1 crop rather than an open-pollinated crop. The improvements of the F1 hybrid of decreased crop times and increased uniformity and flower quality have popularized the F1 cyclamen. With the advent of F1 cyclamen, three types emerged: Sierra hybrids for 6-inch container production, Laser hybrids intermediate for 4- to 5-inch production, and Miracle hybrids mini for 3- to 4-inch production. By developing three classes of cyclamen hybrids,

growers have the opportunity to choose types that complement their production techniques and clientele.

Customer Preference. *Impatiens wallerana* continue to be the leading bedding crop, with consumer preference continuing to increase. They are relatively trouble-free, perform in a wide variety of conditions, and provide a magnificent show of color. Presently, Accent impatiens series is offered in 20 distinct colors. Consumer color preferences can change rapidly. With 3 to 5 years needed to develop a new variety, it is important to have a wide color range available so the product is available to respond to fluctuating color preferences. The influence of the consumer requires the continued development of new colors in this series.

Mechanization. As the number of plugs produced increases, so does the technology used for production of bedding plants. To facilitate the mechanization used in production, seed is now sold in many product forms such as coated, primed, and pelleted. The challenge to seed producers is to offer enhanced seed that maintains the necessary germination standards.

New varieties meet the opportunities our industry provides. Goldsmith Seed continues to breed new varieties to stay abreast of our dynamic industry. Through extensive trials for germination quality and greenhouse or garden performance, varieties are introduced that exceed the requirements of all levels in the chain of distribution. The end result is a company in the industry offering the best varieties for the producer for the maximum enjoyment of the consumer.