



Winter Annuals: A Cure for the Common Cold

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Did you know that three of the past five American winters have been the warmest in recorded meteorological history? The winter of 1999-2000, for instance, averaged 38.4°F, five degrees warmer than the average U.S. winter (December 1 through February 28). Although this general value means little to specific regions of the country, it symbolizes a “stretching of the season”, where winter feels more like fall and spring begins with warm days in late February and early March. What does this environmental trend suggest for greenhouse growers? The answer is to consider expanding and diversifying the list of winter annuals grown in order to meet consumer demand in the non-traditional gardening periods of mid-November to early March. The southern half of the United States is the ideal region to take advantage of the production of winter annuals, but other areas

where winter annuals will flourish include the mid-Atlantic states, coastal areas of the Northeast, and much of the Pacific Northwest.

Homeowners increasingly regard late fall and early spring landscaping as a way to enjoy year-round gardening. As a result, people are rethinking their approach to this "dormant" part of the year. The reality is that home landscapes often become battered and worn-looking following summer's heat. This leads to a heightened disinterest in gardening at that time, but great anticipation for ways to enjoy the garden in early fall. The cool season signals return visits to the retail greenhouse for new plants to revitalize the landscape. Winter annuals are actually quite versatile and bring life to fall and spring gardens. As temperatures and daylength increase in April and May, these plants are removed and replaced with the more familiar summer varieties.

A winter annual is simply a plant that provides color and/or texture in the landscape between the first and



Color bowls with plants from the Fall Magic® series are specifically designed for the fall and winter seasons.



Biennial cardoon is valued for its texture and foliage color as well as cold hardiness.

Table 1. Recommended winter annuals by season.

Late fall to early winter (October to mid-December)	Winter (mid-December to mid-February)	Late winter to early-spring (mid-February to mid-March)	Early-spring (mid-march to mid-April)	
			Seed propagated	Vegetatively propagated
Ornamental cabbage and kale 'Osaka' 'Nagoya' 'Peacock'	Kale 'Toscano' 'Red Bor' 'Red Russian'	Dusty miller 'Silver Lace' 'Silver Dust' 'Cirrus'	Calendula 'Bon Bon' 'Fiesta Gitana'	Osteospermum 'Cape Daisy' 'Side' 'Symphony'
Snapdragon 'Rocket' 'Sonnet' 'Tahiti'	Cardoon (<i>Cynara cardunculus</i>)	Stock 'Cinderella' 'Midget'	Sweet alyssum 'New Carpet of Snow' 'Easter Bonnet' 'Snow Crystal'	Nemesia 'Bluebird' 'Compact Innocence' 'Innocence'
Pansy 'Crown' 'Majestic' 'Delta'	Chard 'Bright Lights' 'Ruby Red' 'Gourmet Burgundy'	<i>Dianthus chinensis</i> 'Carpet' 'Telstar' 'Floral Lace'	Sweet pea (<i>Lathyrus odoratus</i>)	Calibrachoa 'Lirica Shower' 'Million Bells'
Viola 'Penny' 'Babyface' 'Sorbet'	Sedge and sweet flag <i>Carex</i> spp. Acorus 'Ogon' Acorus 'Variegatus'	Primrose (<i>Primula polyantha</i>)	California poppy (<i>Eschscholzia californica</i>)	Verbena 'Twilight' 'Babylon' 'Tapien'
Mustards 'Red Giant' 'Mizuna' 'Southern Curled'	Herbs Parsley Sage Lavender cotton	Pansy 'Crystal Bowl' 'Universal' 'Fama'	Wallflower (<i>Erysimum cheiri</i>)	Diascia 'Sunchimes' 'Little Charmer' 'Coral Bell'
Lettuce 'Red Sails' 'Red Fire' 'Oakleaf'	Perennials <i>Ajuga reptans</i> <i>Bergenia cordifolia</i> <i>Lamium maculatum</i>	Viola 'Penny' 'Babyface' 'Sorbet'	Nasturtium 'Alaska' 'Jewel'	Argyranthemum 'Sugar Baby' 'Harvest Snow' 'Butterfly'

Recommendations for the use of cultivars are included in this publication as a convenience to the reader. The use of brand names and any mention or listing of commercial cultivars, products, or services in this publication does not imply endorsement by North Carolina State University nor discrimination against similar cultivars, products, or services not mentioned.

last frosts. There are now numerous species that can be grown to establish yourself as a winter annual specialist (Table 1). Not only are there a lot of traditional fall crops like pansies, violas and snapdragons, but there are also mustards, cold-hardy kales, and the highly profitable perennials, herbs, and grasses that compose the Fall Magic® series. Biennials make excellent winter “annuals”, since they offer cold-tolerance in fall and winter and flowers in spring. During the winter months, these species provide color and texture for the most dismal part of the year. In early spring, the traditional offering of plants such as alyssum, primrose, and stock has been expanded to include seed-propagated California poppies, English daisies and calendula, and new vegetatively-propagated species like osteospermum, calibrachoa, and diascia.

What are some of the benefits in growing winter annuals?

- Winter annuals offer an alternative to the ubiquitous poinsettia and Easter lily, and they are often easier to produce and schedule than these potted crops.
- Most crops grown for the cold season can be produced outdoors on pads or in minimally heated greenhouses, thus eliminating large heating costs.
- Diseases are often less of a problem on the outdoor production pad because of increased airflow and lower humidity.
- There are more predators outside to prey on crop-damaging pests.

- Seed is relatively inexpensive and can be germinated easily.
- Some of the fall and early spring crops have rapid growth rates that can potentially increase the number of production turns.
- Year-round production means year-round traffic through your retail establishment.

Marketing

How do we market these plants? Our challenge as grower-retailers is not only to inform customers of new selections but also to promote only those plants that will perform well in the landscape. One way to do this is to break down the winter season into intervals that reflect what can be grown in the garden, categorizing by month plants that have proven themselves for that time of the year. Table 1 lists plants according to their garden or container performance at specific times of the winter season. Although this list was developed for gardens in mild climates and may not be applicable to all conditions throughout the U.S., don't be afraid to experiment with plants that you think have the potential to grow well in your region. One of the best ways to ensure plant survival in the winter landscape is to base consumer planting time on the first and last frost dates of the year, as well as consider the minimum temperatures for the cool season months.

In the grower-retailer environment, customer traffic from early November to early March is minimal. Although customers do not plant outdoors during this time, they still have a need for flowers. Northern



Landscape performance of the cold-hardy kale 'Red Bor' is superior.



In this patio pot, plants were chosen based on their ability to match pot color.

growers have the biggest challenge during this period because of snowfall and biting cold. Why not produce combination plantings for protected locations such as glassed patios, sunrooms, and screened porches? In this case, the main goal is to coax customers to the retail area in November, January, and February. Customers are already visiting your greenhouses in December to buy poinsettias, and this is an ideal time to exhibit winter annuals. Make sure your display gardens and planters incorporate winter annuals, and have combination containers and flats available for sale during the holiday season.

Many consumers have learned that fall is the best time for planting woody plants. It is our job as greenhouse growers to educate them as to the benefits of planting winter annuals in fall. This has occurred to some extent already; we now see much more fall pansy production than spring production in the Southeast. While on the topic of woody plants, remember to include woody plants as focal points in containers. Woodies withstand winter weather well, and there are lots of small shrubs that have interesting berry and bark that look good with fleshy winter annuals. Euonymus, red twig dogwoods, and small conifers are good choices as foundation plants in a winter planter. Also, consider planting bulbs in these large containers for bright spring color.

Most people do not walk their yards in winter, but they do notice the lack of color in the areas closest to their home. These are usually the places that they pass every day going from house to car. These pockets that once held summer bedding plants or fall mums are the ideal location for winter annuals. Often, these pockets are protected from wind and cold, and winter annuals seem to do well in these microclimates. As homeowners come home from a hard day at work there is nothing like seeing life in the winter garden. It gives people a hint of spring and reminds us all that gardening should be a year-round activity.

Spring fever hits most Americans about a month before it's safe to plant flowers outdoors. Rather than turning away early-bird customers who are asking for warm-season annuals before the last spring frost, provide them with transportable, ready-to-go container gardens to give them a taste of spring. While the big box stores are offering only seed and bulbs, your business has a jump on the market with these "spring fever gardens".

Production Pointers

Two key aspects of winter annual production are plant size and the importance of acclimatization from a greenhouse environment to an outdoor situation. The crucial thing to remember is that larger plants withstand harsh climatic conditions much better than small ones. However, large plants can suffer if moved too quickly from the greenhouse to the outdoors.

In general, most winter annuals are grown indoors for a period of time in order to germinate seed or establish plugs in cell packs or small pots. These can be sold as small plants, or they can be transplanted into larger pots or mum pans when they outgrow their containers. These large plants are usually moved outside to control growth and acclimatize on the production pad. As temperatures drop, retail growers can sell consumers well-established plants in larger containers. Not only do these perform better in the winter landscape, but they often bring higher profits.

Landscapers have influenced homeowners' tastes by adding lots of large, colorful plants to subdivision entryways and corporate landscapes. By demonstrating the proper way to display winter annuals, landscapers have shown consumers the value of purchasing large, vivid, and texturally stimulating species. Furthermore, landscapers aren't afraid to change the landscape palette frequently by removing tired plants and replacing them with eye-catching annuals. Homeowners have begun to adopt this "rip and replace" mentality, and this can only benefit the retail greenhouse grower.



Outdoor production of ornamental vegetables is recommended as cool temperatures intensify foliage color.