

Bedding Plants

Introduction

Hundreds of different annuals, perennials, herbs, and vegetable transplants can be grown and sold as bedding plants. In general the term ‘bedding plant’ refers to any herbaceous plant that is produced and sold for planting in the landscape, garden, or large containers (such as patio pots).

A single commercial greenhouse business may produce as many as 500 different kinds of plants in the spring. Some of the most common ornamental bedding plants include begonia (*Begonia* spp.), geranium (*Pelargonium* spp.), impatiens (*Impatiens* spp.), marigold (*Tagetes* spp.), pansy (*Viola* spp.), and petunia (*Petunia x hybrida*). Tomatoes (*Lycopersicon esculentum*), peppers (*Capsicum annuum*), and cole crops (*Brassica oleracea*) are popular vegetable transplants.

Marketing

Bedding plants are as much a marketing business as a production business. Growers must be willing to develop their own marketing strategies and to adjust production to changing consumer preferences. Potential retail markets include farmers markets and direct sales from the greenhouse or farm. Wholesale markets include local garden centers, landscape contractors, discount stores, grocery stores, farm stores, and roadside stands. Bedding plants are also popular sale items at Kentucky’s produce auctions, where prices can range from wholesale to retail levels, depending on buyers.



Market Outlook

Bedding plants, especially flowering annuals, have proved to be a stable and growing area in the floriculture industry. Sales of bedding plants rose sharply in the early 2000s as the consumer demand for landscape and gardening plants increased. Average sales of annual bedding plants were \$17.15 (wholesale value) per U.S. household while sales of herbaceous perennials were \$6.38 (wholesale value) in 2005. The economic situation in the 2000s has contributed to continued consolidation in the bedding plant industry with fewer and larger bedding plant producers. Opportunities still exist, however, for mid-sized and niche growers committed to market research and analysis.

In general the trend in bedding plants is moving towards larger containers. In past decades the majority of bedding plants were sold in ‘packs,’ i.e. trays containing 18 to 48 individual cells. Today the number and value of packs sold is actually declining while the market for potted bedding plants is rising. Today 4-inch and 6-inch pots are the most popular size

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for retail bedding plants. Landscapers are the only consumers still demanding packs in large quantities. Hanging baskets and patio pots are also increasing in market share, especially those with multiple species. These ‘instant gardens’ appeal to busy professionals and urban consumers with limited gardening space. Large containers fetch a higher price relative to the inputs needed to produce them, thus giving the grower a better potential for profits.

Production Considerations

Site selection and planting

A heated greenhouse structure is necessary for producing most bedding plants. Crops requiring short production periods may be produced in a cold frame, high tunnel, or in an unheated greenhouse. Plants are generally propagated from seed sown from late December to March, or bought in as rooted cuttings (referred to as ‘plugs’) received February to April.



One major production decision facing new growers is whether to invest in the equipment necessary to grow their own plants from seed or to purchase transplants (plugs) from another producer. Growers who purchase transplants, rather than growing them in-house, are referred to as bedding plant “finishers.” This is an option many small to medium growers choose. Growers who purchase plugs may still opt to produce some of the more easily grown crops from seed.

There are numerous commercial growing substrates available and there is no single best formulation for growing quality bedding plants. The choice of mix can depend on a number of factors including grower preference, cost, and type of irrigation. Some growers, usually the larger established growers, choose to create their own custom mixes on-site. However, this requires expensive, specialized equipment.

Timing production properly to have a wide

assortment of species ready when the market demands is critical to profitability. Growers must carefully schedule each crop to make sure it will reach the desired stage of growth at the appropriate time. There are many resources available to help growers with this complex task. Reference books and extension articles are good sources of comprehensive information on bedding plant scheduling. The breeder or marketer companies that supply the bedding plant seeds and cuttings are good sources for variety-specific scheduling recommendations. All reputable companies will provide technical support to their grower customers.

Pest management

Greenhouse conditions that favor plant growth also favor the rapid build-up and spread of insects and diseases. Potential disease problems include damping-off, root rots, powdery mildew, fungal leaf spots, and impatiens necrotic spot virus. Common insect pests include thrips, aphids, mites, fungus gnats, shore flies, and white flies. Caterpillars can also be a problem in greenhouses with open sides. Prevention and careful monitoring are the keys to insect and disease control. Weed control under benches and around the greenhouse will also help reduce insect pests and disease problems; however, herbicides must never be applied in greenhouses when crops are present. Allowing the greenhouse to freeze in the winter will help prevent pests from overwintering. Growers must remember to drain all water lines in the fall to prevent damage to plumbing components.

Post-production

Consumers expect flowering bedding plants to be blooming at the time of purchase. Proper post-production care is essential to maintaining a quality product up until purchase. Plants ready for sale should be kept cool and shaded from direct sun to extend their shelf life. Ideally, plants should be sold within 3 to 5 days after removal from the greenhouse.

Economic Consideration

The production of bedding plants can be a highly profitable venture, with gross sales as high as \$10 per square foot of greenhouse bench space, or typically \$500,000 per acre. However, this is a high risk business with significant start-up costs, as well as demanding labor and management. Initial investments include greenhouse construction, production system costs, and equipment.

The cost of a production-ready greenhouse, excluding land costs, can run from \$5 per square foot for a Quonset-style poly house to over \$20 per square foot for glass panel houses. Production costs and returns vary greatly depending on crops grown, greenhouse size, production system, and marketing strategy. Producers should develop production cost estimates specific to their situation. Useful sample budgets for bedding plant production costs are available from Rutgers University .

Selected Resources

On the Web

- Controls for Greenhouse Ornamental Insect Pests, ENT-421 (University of Kentucky, 2004) <http://www.ca.uky.edu/entomology/entfacts/ef421.asp>
- Greenhouse Business in Kentucky – A Review of Crops and How to Begin a Business (University of Kentucky, 2002) <http://www.uky.edu/Ag/HLA/anderson/greenhousesinkentucky.pdf>
- Managing the Greenhouse Environment to Control Plant Diseases, PPFS-GH-01 (University of Kentucky, 2004) http://www.ca.uky.edu/agcollege/plantpathology/ext_files/PPFShtml/PPFS-GH-1.pdf
- Selected Resources and References for Commercial Greenhouse Operators (University of Kentucky, 2002) <http://www.uky.edu/Ag/Horticulture/anderson/greenhousereferences.pdf>

- Commercial Floriculture Information Center (North Carolina State University) <http://www.ces.ncsu.edu/depts/hort/floriculture/>
- Commercial Production of Vegetable Transplants, B-1144 (University of Georgia Cooperative Extension, 2010) http://www.caes.uga.edu/Publications/displayHTML.cfm?pk_id=6248
- Crop Budgets for Producing Cuttings and Rooted Liner Trays (University of New Hampshire, 2001) <http://ceinfo.unh.edu/Agric/AGGHFL/CutBudgt.xls>
- Floriculture (Purdue University) <https://sharepoint.agriculture.purdue.edu/agriculture/flowers/default.aspx>
- Greenhouse Costs of Production Budgets (Rutgers, 2005) <http://aesop.rutgers.edu/~farmmgmt/GreenHouse/Greenhouse-Index.html>
- Growing and Marketing Bedding Plants, ANR-0559 (Alabama Extension, 2004) <http://www.aces.edu/pubs/docs/A/ANR-0559/ANR-0559.pdf>
- Integrated Pest Management for Greenhouse Crops (ATTRA, 1999) <http://attra.ncat.org/attra-pub/gh-ipm.html>
- Post-production Quality of Bedding Plants (Auburn University) <http://www.ag.auburn.edu/hort/landscape/PostBP.htm>

In print

- *Ball Red Book, Vol. 2: Crop Production* (17th edition). Debbie Hamrich, ed. 2003. Ball Publishing. 736 pp.

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For additional information, contact your local [County Extension](#) agent