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Increasing Shelf Life Of Bedding Plants

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Increasing post-production life of bedding plants is a topic which should concern all producers, wholesalers and retailers who handle bedding plants. There are two main fronts on the battle to increase post-production life of bedding plants. One is in the retail area, the other is in the greenhouse production area. The work I will be discussing deals mainly on answering the question "What can I do during production to help the plant once it leaves the greenhouse?", but I also will be briefly discussing the environment in the retail area.

Recent research in bedding plant shelf life studies indicates that a grower may do a number of things to aid post-production quality. One by one, they perhaps will not increase shelf life a great deal, but taken together they can add significant life to the crop. A partial table of grower related activities pertaining to bedding plant shelf life follows. All crops have been grown in cell packs (32/tray), although growing plants in larger containers (e.g., 10 cm pots) can be very beneficial to shelf life. Included are those things which are known to affect shelf life as well as some "definite maybe's".

The lesson behind this little chart is that there really is something you can do to keep your plants looking good even after they have gone out your door. By pouring the heat and the fertilizer to them until the day they are shipped you are doing a disservice to the people who must maintain these plants for the next few days, as well as to the consumer. Studies have shown that bedding plants can become very stretched, chlorotic and unsaleable within 3 to 5 days from

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leaving the greenhouse, especially if placed in a poor area.

Of course, the responsibility for shelf life is not soley that of the grower. The retailer must be aware of how to display plants not only from the sales point of view but also from the plant's point of view. The retailer certainly does not want to lose plants, but often does not realize what is required to keep the plants looking good. In dealing with the retailer, a few suggestions from you may go a long way. Remember the acronymn T-A-G-S. Temperature - maintaining temperatures between 50-70°F is optimum for most bedding plants. Air movement is important for minimizing disease, lowers ethylene levels, and helps lower temperature. Grooming plants is essential every day not only from the point of view of appearance but also to minimize disease on broken leaves, spent flower, etc. Shading of the area is probably the most important aspect in shelf life of bedding plants. Plants growing in small soil volume are bound to dry out rapidly when light intensity is high. Maintenance, not growth, is desirable and a minimum shade level of 60% should be used. In southern areas of the country, 90% shade is not too much.

I know that no one likes to see poor quality plants whether they are in the greenhouse or in the sales area. I believe there a re many things we can do in the greenhouse to help maintain plant quality in the sales area. When we all work on the problem and try to solve it together we can indeed be confident that once the plants are out the door, they are out of mind. □

Production Procedures To Increase Shelf Life

Stage of Growth	Procedure	Significant (S(or Minor (M) Benefit or Variable (?)	Comment
At transplant	Incorporation of a hydrogel substance in media	M	Plants do not require water as often so dry out less
At transplant	Use of as large a container as possible	S	Plants dry out less thus less water stress
Young plants	Use of growth regulators where applicable	M»S	Reduce leaf area thus reduce water loss in sales area
Finishing (final 1-2 wks)	Reduce watering frequency over the last few weeks	S	Acclimates plants for impending water stress
	Reduce fertilizer frequency and/or concentration	S	Excess nutrients in soil will cause plant stretch as well as a potential salt problem
	Lowering greenhouse temperature prior to shipping	S	Helps plants harden off and cope with stress better
	Use of anti-transpirants prior to shipping	M(?)	If plants are under minor stress (i.e. warm temp.) may be helpful. If plants under high stress, little effectiveness