

# Effects of Time of Transplanting on Bedding Plant Flowering



A.M. Armitage  
[pictured]  
Carl Lasco  
Univ. of Georgia  
Athens, Ga.

There are many links in the chain of bedding plant production, and together they result in a flowering annual plant which is a source of pride to grower and consumer alike.

One of the links in the chain is that of transplanting. The seed flat is not very deep nor rich in nutrients, and seedlings should be removed and placed in another growing container soon after emergence. However, sometimes the job of transplanting is put off due to lack of time. The problem is that transplanting is a very important job, and delaying it can delay flowering enough to miss a market. It must be done as soon as plants can be handled. We like to see seedlings transplanted no later than the first true leaf stage; but if competent people are transplanting, then the job should be done when the cotyledons emerge. You must wait at least that long so there will be leaves to use as handles to pull the plant with. Do not handle the plant by the stem, or you may crush it.

Data at the University of Georgia graphically illustrate the effect of transplant time on flowering of many bedding plants this past spring. In general, as spring progresses and light and temperature increase, the total time necessary to flower plants decreases. This is true for long day and day neutral plants (most bedding plants are in these categories), but not true for short day plants. We conducted scheduling tests for bedding plants grown under Southeastern conditions and were not able to do all the transplanting of the final sowing of some crops on time. On flowering, all plants were of

excellent quality, and the only difference between late and normal transplanting was the number of days to flower. The following table illustrates this.

In all these cases, the latest sowing date should have resulted in the fewest number of days to flower. With the species shown, flowers appeared earlier in the second sowing than the first sowing (as expected), but much later in the third.

As seedlings grow in the seed flat, they become more sensitive to being moved, and go through more transplant shock as they get older. Transplanting as soon as the seedling can be handled results in little disturbance, and the plants resume vigorous growth quickly.

These results support the argument for bedding plant plugs. Allowing the plants to grow for a long time in their soil plugs

saves space and money. When plug and all are transplanted to final containers, there is no disturbance of root tissue and, therefore, no shock. As the technology for mechanization of this system evolves and the equipment becomes less expensive, more bedding plant growers will benefit from the plug system of growing.

Not all plants were sensitive to "transplant lag." Impatiens and ageratum flowered earlier at the last sowing although they were transplanted late, but many other plants have not yet been tested. In looking at these results, we recommend transplanting be dictated by the skill of your help. That is, if help is competent, transplant at the cotyledon stage if possible. If you do not have a lot of confidence in your help, transplant no later than first true leaves. Putting off this job is unhealthy — you will be sick if you miss your market!

Plant	Cultivar	Date Sown	Days to Transplant	Days to Flower
Begonia	Foremost Red	1-26	35	79
		2-09	35	65
		2-20	42	82
Verbena	Sangaria	1-26	18	77
		2-09	17	66
		2-20	25	84
Portulaca	Sunglow	1-14	16	62
		2-04	20	56
		2-09	37	72
Dahlia	Redskin	2-09	10	57
		2-24	11	54
		3-09	24	69
Pansy	Universal Mix	1-26	10	66
		2-09	17	65
		2-20	25	77