

Multiple-headed Ornamental Cabbage and Kale

James L. Gibson and Brian E. Whipker

Introduction

In order for the public to fully enjoy the intense color of the upper-central leaves of ornamental cabbage and kale, they virtually have to be directly over the plant. Planters which are filled in the winter by these ornamental vegetables bring life to the fall garden, but the majority of them are raised and the vibrant center colors cannot be viewed from afar. Landscapers have used mounds or raised beds with a slope so that passers-by can appreciate the winter color (Figure 1). These situations are effective in the display of the plant, but are there other options in making the upper-central leaves more visible? For the past two years, NCSU floriculture researchers have investigated cultural techniques to produce multiple head ornamental cabbage and kale.

Pinching Origin

During the fall of 1997 multi-headed curly kale that looked proportional to the pot, and had enough center color to make them marketable, were observed at a North Carolina greenhouse. Kevin Mull of Southern Gem Greenhouses in Shelby stated that these plants were unintentionally produced due to meristem damage, but the plants were being purchased by landscapers for local garden installation.

Multiple heads can be produced by multi-plugging, damage to the meristem or growing tip in the plug tray, or insect feeding on the meristem, which causes axillary shoots to become dominant on the plant like with a pinched poinsettia.

Pinching Research

The plant growth regulator (PGR) Florel has been shown to induce lateral branching on some herbaceous plants. A small PGR study was conducted to compare manual pinching to 3 nodes with Florel sprays in the fall of 1998. Florel sprays as high as 750 ppm did not induce lateral branching and concentrations as high

as 1000 ppm had no effect on plant height, therefore pinching was determined to be the optimal method to achieve multi-heads. Both an ornamental cabbage and kale cultivar were used in the study, and it was determined that ornamental cabbage was the preferred plant to work with because it sends out distinct shoots, whereas the ornamental kale cultivar produced adventitious shoots from below the soil surface after being pinched. These shoots were numerous, thin and insignificant, and do not increase the aesthetic value of the crop. To achieve success with multi-headed cabbage, plants should be pinched at an early stage (7 to 10 days after potting).

In the fall of 1999 differences between a 2 node or a 3 node pinch on ornamental cabbage were investigated (Figures 2, 3). The cultivars used were 'Osaka White' and 'Rose Bouquet'. Three plugs per pot were also planted resulting in a large, mound-like shaped plant with three uniformly sized heads. Spraying Sumagic at 16 to 32 ppm, 2 to 3 weeks after potting is recommended for the multi-plugged product. The three-headed cabbage was more aesthetically pleasing to the researchers, but the double headed kale can make for a unique fall product (Figure 4). If growers are to produce the multi-headed cabbage, fertilization rates should be increased to 250 ppm N for the pots with multiple plugs, while 200 ppm N is suitable for pinched plants. If lower leaves do turn yellow they will have to be removed by reaching into the center of the break and snapping off the petioles.

The Final Product

Once the plants are of size and have color they can be planted in planters, baskets, patio pots, or in garden soil (Figures 5, 6).

For more information about cabbage and kale visit the NC State website at: <http://www.ces.ncsu.edu/floriculture/>



Figure 1. The upper-central leaves are more visible when planted on slopes.



Figures 2 and 3. Ornamental cabbage plants pinched at the third node; 3 headed 'Osaka White' cabbage.

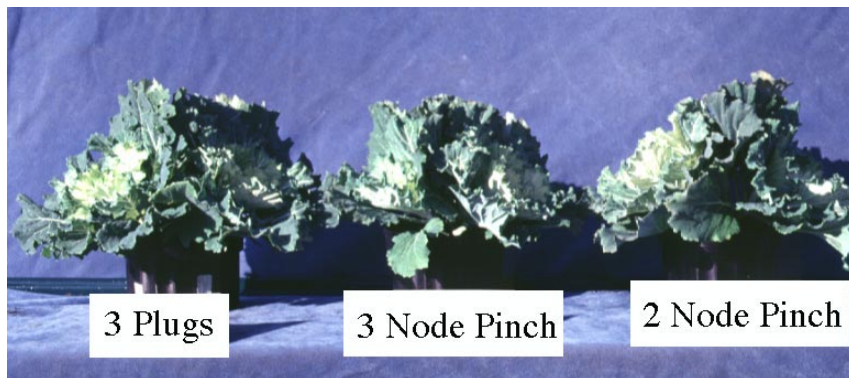


Figure 4. Multi-headed ornamental cabbage: 3 plugs (L), 3 node pinch (M), and 2 node pinch (R).



Figures 5 and 6. Multi-headed ornamental cabbage in a patio pot; in a garden setting.