NEW CUT-FLOWERS YOU SHOULD CONSIDER

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Research on cut flowers continued this summer with data being gathered on such diverse species as *Veronicastrum* and *Oxypetalum*. Two large projects are also being carried out at the present time.

ASCFA Trials: We have been harvesting many new species this summer. Some exciting cultivars are being evaluated as part of the ASCFA TRIALS PROGRAM. Entries included a wonderful new sunflower, celosia, agastache and didiscus. Most of our harvesting has been completed and the results of the Georgia trials, as well as those of other trialees, were presented at the Annual Meeting in Burlington this November.

Woody Plants: Excellent data are being generated on *Buddleia*, *Callicarpa* (Beautyberry), *Ilex* (holly) and various species of *Salix* (pussy willows and red/yellow stem willows). The major work with Beautyberry and buddleia is being concentrated on postharvest life. If the vaselife of buddleia can be increased, there is no limit to the potential of this species. The work for this year will be completed in November and data will be published in this newsletter.

The following is some specific cultural information for those interested in trying their hand at these plants.

Ammi majus
False Queen Anne's Lace
2-3' tall
White
Europe, Asia, N. Africa
Apiaceae

Relatively new to the cut flower market, *Ammi* is now produced throughout the United States and Europe. Approximately six species occur but only *A. majus* is grown commercially. The white flowers are similar to the common roadside weed, Queen Anne's Lace, thus its common name. Although native to the Old World, the species appears to be as adaptable to Alabama as to Arizona.

Harvesting of *Ammi majus* requires the use of gloves and protective clothing. The sap of the cut stems may result in contact dermatitis in sensitive individuals.

Propagation:
Seed: In the greenhouse, chill seed at 40-45°F for 1-2 weeks prior to sowing. Sow in 200 cell plugs or directly to the field. In controlled environments, cover seed lightly and place at alternating day/night temperatures of 68/86°F. Germination of prechilled

seed placed at alternating temperatures is approximately 75-80%, otherwise germination may be well below 50%. Germination occurs in 7-14 days. Approximately 1/16 oz. of seed is necessary for 1000 plants.

Seed may be sown directly in the field in the fall (this is a must in southern areas) or early spring. Temperatures may fall to as low as 18°F during the winter. Night temperatures should be consistently below 50°F for best germination. Sow 0.35 ounces per 100 linear feet (3.5 oz/1000 ft²). The seed are small (54,000 seeds per ounce) and spacing is often dictated by available equipment. Germination is often better in the field than in the greenhouse because of natural alternating temperatures. If sown in the field in the summer, chill the seed prior to planting. Two to three successive sowings, two weeks apart are often used.

Growing on:
If not direct sown, transplant seedlings to 2-3" diameter containers approximately three weeks after sowing or maintain in 200 cell plugs for 4-5 weeks. Fertilize with 50-75 ppm nitrogen after transplanting. Temperatures of 58-62°F are recommended to establish the seedlings. Place in the field when plants are large enough to handle (approximately three weeks after transplanting).

Environmental Effects:
No photoperiod response is known. Plants do not perform well at temperatures above 85°F and are best handled as a winter crop in zones 8-10. In areas where summer temperatures are not excessive (zones 3-6), it is a useful summer crop. Total crop time from greenhouse sowing to flowering in the field is approximately 15 weeks[3].

Field Performance:
Yield: Plants transplanted to 12" centers yielded 4-6 stems/plant at Maryland[1]. Spring planting is important because plants should be 3-4' tall prior to budding up. If they flower before 3', they have probably been planted too late. Plants which were transplanted on April 2 in Kentucky flowered in late May. Eight to 12 stems per plant with stem lengths of 18-24" occurred over a 4-5 week harvest period[3].
Spacing: Direct sow in fall (South) after danger of heavy frost in the North (see propagation section for rates) or transplant 9-12" apart. If spring planting, transplant no later than April 20 in South, May 15 in Midwest, May 21 in the North. Late frosts, after warm spring temperatures, may result in significant losses.
Support: Plants can grow 5-6' tall and should be supported with at least one tier of mesh, two layers if spring rains are common. Without doubt, torrential rain storms will occur the day before harvest. Each small perfect blossom collects water and without support, plants will no doubt decide to lie down in the mud. The lateral stems do not always grow straight, and although the twists and curves cause problems with bunching, they are handsome and should still be marketable.

Greenhouse Performance:
Transplant to ground beds in January and February for flowering plants in May and June. Start plants under night temperatures of 60-63°F to establish the crop. After 2-4 weeks, reduce night temperatures to 55-60° until flowering.

Stage of Harvest:
Harvest when approximately 80% of the flowers in the umbel are open. Flowers cut too early (50% open stage) do not take up water and tend to wilt. The flowers should be a crisp white with only the slightest green tint and no hint of pollen shed. Once pollen sheds, flowers decline rapidly. This is an excellent local item because it is difficult to cut at the proper stage if plants are to be shipped long distances. Some growers cut the initial center flower with only a 6-12" stem length allowing the secondary flowers to bloom on 20-24" long stems.

Post Harvest:
'Snowflake' has 2-3" wide flower heads and grows 3" tall. 'White Dill' has been selected from the species and bears flowers which are slightly whiter, otherwise, plants are the same.

Related Genera:
Daucus carota, Queen Anne's Lace, is a popular filler for eastern and southern growers. The species is biennial and two years are necessary for efficient flowering. Many growers are simply cutting from roadside populations, which if done too aggressively, may result in significant decline in plant numbers (although to decrease numbers of this species, many roadharvesters would have to pick until doomsday!). Plants may be easily grown from seed and planted in the field. Populations can be continued through self seeding.

Reading:
1. Healy, W. and S. Aker, 1989. Cut flower field studies, 1989. Horticulture production series, Co-op Ext. Serv., Univ. of Maryland.

2. Nau, J. 1989. Ball culture guide, the encyclopedia of seed germination. Ball Seed Co., Chicago, IL.

3. White Mays, *L. Ammi majus*. False Queen Anne's Lace. Proceedings of the 4th national conference of specialty cut flowers. Cleveland, OH :87-90.