CALLUNA AND ERICA PRODUCTION AND DISTRIBUTION

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Calluna and *Erica* present different ornamental qualities from most other plants with which we work. There are many species of *Erica*, only four of which are hardy in northern climates and one of these, *E. cinerea*, is marginal. *Calluna vulgaris*, typically called heather, has provided over 200 named cultivars in a variety of color, texture, and form not seen elsewhere in a single species. Those who took the Plant Propagator's trip to England in 1973 will well remember this diversity.

Within their relatively dwarf stature, growth habits vary from distinctly upright to completely prostrate. Flower colors include clear white, near reds, a clear pink and all shades of rose and lavender. Flowering time is unbelievably diverse. On Long Island we have blooms in the garden in every month of the year except May. Textures vary greatly but probably the most pronounced characteristic, particularly of *Calluna vulgaris* is its extremely wide range of foliage colors. They offer unlimited potential for creation of color contrasts in formal or informal arrangements.

PRODUCTION

The production, from propagation to the finished plant, presents no unusual or difficult problem. The plants take to any efficient and sanitary system of culture in the field, or preferably, in containers. If one observes a few key procedures which will be discussed, the quality and production time should be readily controllable — at least it is under the northeast conditions in the U.S.

PROPAGATION

Propagation is by cuttings, taken primarily from field plants any time that good viable wood is available. Under our particular schedule we stick cuttings from mid-October to early November. You can expect to obtain 90-100% rooting of *Calluna* with the exception of very few cultivars and 70-100% success with *Erica*. Soft wood cuttings of *Erica* taken earlier give better rooting. *Erica vagans*, in particular, will do appreciably better if taken while tips are still growing and soft.

One major problem can occur if cuttings of *Calluna* are taken well into the winter and the stock plants are in the open

field. The low humidity of clear, cold fronts dehydrates *Calluna* foliage when frost is below their shallow root zone and there is no snow cover. There may be difficulty in finding good cutting wood.

Generally rooting in the fall months varies between 10 and 25 days from the easiest to the most difficult cultivars. The cuttings should root well in most any clean, well drained medium. A mixture of peat and perlite is excellent as long as the peat is prevented from getting soggy. Both *Calluna* and *Erica* grow well in straight peat. Moreover, in this medium they separate with minimal disturbance for the initial transplanting.

Intermittent mist can be used but is not needed late in the year. Any of the more difficult to root cultivars which we stick in September are rooted under mist but not the vast majority stuck after mid-October.

Most any size cutting, including heavy main branches, will root but our experience has been that the smallest cutting which can be handled will produce a much more even quality of end product and the production time will be no longer, if as long, than with larger cuttings. Moreover, much less propagation space is required. A 2 ft flat will hold 300 cuttings with ease. The small side cuttings torn off with a small heal are fine as long as one does not get too far into the plant and take the weaker shoots hidden from the light. Generally, it is as well and sometimes better to take a tip cutting of the most recent growth 1″ to 2″ long and readily snipped off with a finger or thumbnail.

The preparation of the cutting is confined to stripping the needles from the lower half, which though not essential, does permit more ease in sticking and less disease potential. Also the small wounds created in the process of stripping the leaves seem to promote rooting. There is no need for a fresh cut on the base of the cutting.

Cuttings of *Calluna vulgaris* receive no hormone treatment and are simply washed in a solution with either Captan or Benlate. *Erica* cuttings receive a moderate hormone. We have found the commercial liquid mixture Dip N' Grow — diluted 1 to 10 effective with relative ease of uniform application.

GROWING ON — INSIDE

As soon as the cuttings are rooted and hardened off, the propagation flat is moved into a growing-on house. They transplant well when just barely rooted but, because they grow so well in the propagation flat and can be separated without any great setback, we use this crop as the "fudge factor" in our winter transplanting schedule. We transplant them in December or

January as time permits. This timing does not seem to be a significant factor in achieving the finished product on schedule.

The rooted cuttings with a nice root ball are planted into 3" peat pots in flats in a Cornell-type medium of half Canadian sphagnum and half coarse vermiculite, to which we add 2½ lb dolomite lime, 2½ lb gypsum, 2½ lb superphosphate, 2 tbsp iron and 6 lb of Acid Electra per cubic yard. At transplanting or before, the top of the cutting is cut in half to assure multiple basal bud breaks and a good quality plant.

The transplants are grown on in double layer plastic houses heated by hot air distributed by overhead vented poly tubes and with the circulation fan going continuously for inside air movement and good disease control. The heat comes on at 70°F daytime and about 65°F nighttime with fans bringing in outside air at 85°F. While in the growing house no additional nutrients are added.

All plants are pruned heavily again in March or April, then 1 to 2 weeks prior to transplanting outside.

No insecticide is used on *Calluna* under cover. With *Erica carnea* and *Daboecia* (related to *Erica*) one should watch for spider mites as the house heats up later in spring. We use one or two preventative sprays of Pentac. We do not find a need for fungicides on *Erica carnea* or *E. cinerea* but have a regular 3 to 4 week spray program on *Calluna* and *Erica tetralix* while in the heated house.

Benlate can be a great help in disease control of these plants but do not get carried away and use it where there is no need. After some years of using Benlate alone we have some cultivars which never gave us the least difficulty before showing serious branch diseases above the soil line. Manzate 200 has been very effective with these disease problems.

During their stay in the growing house of 6-7 months, the plants are maintained primarily by hand irrigation. Most cultivars of both *Calluna* and *Erica* do as well or better on an automated capillary watering system with little or no hand touch up irrigation. Hand irrigation is heavy and infrequent, starting with intervals of about every 2 weeks in January and every 8 to 10 days by April to every 4 to 5 days in June or early July when the pots are full of roots and the fan is running all day long. *Calluna* and *Erica* are used to take up any slack in our transplanting schedule. They seem to suffer the least loss of growth by holding them in a hot covered house until last.

GROWING ON — OUTSIDE

When the plants are transplated into 6" plastic containers outside (under 50% shade for the first 1-3 weeks) we use a U.C.

type mix of 50% Canadian sphagnum and 50% clean, local concrete sand with 2½ lb dolomitic lime, 2½ lb gypsum, 3 lb superphosphate, 1½ tbsp iron and 2 tbsp fritted trace elements per cubic yard. For nitrogen, we add a 6 gr Agriform tablet of 14-4-6 per plant at planting. We apply another 6 gr tablet in late July or early August, and another about the end of October. The latter application, made a few weeks before winter cover goes on, becomes at least partially absorbed by fall and covers the plants' need adequately well through the following spring season.

Outside irrigation is overhead with 1 inch of water added every 2 days during the warm part of the growing season and with water reaching each plant from all four directions.

The pesticide program outside is similar to that used under cover. For *Calluna* — no insecticides are used but either Benlate or Manzate 200 is applied once a month. This is one of the keys to consistent quality. A plant marred by disease will have trouble catching up. For *Erica carnea* — no preventative fungicide — but a miticide — is used on all stock plants and any plants grown on to larger size.

One more pruning is made on *Erica carnea* and its hybrids before the end of July. If later it would interfere with flower bud development. All other *Erica* and *Calluna*, except the very dwarf and tightly growing rockgarden forms, are pruned about the end of August or early September before growth stops completely. Those plants, perhaps 5%, set aside for fall sale are not pruned.

The plants are overwintered in quonset huts under a single layer of white polyethylene. Captan and/or Benlate with a good latex sticker are used for Botrytis control under this cover.

MERCHANDIZING

The typical retail sale is by impulse based on their eye appeal. Impulse sales are heavy from late March to early April when the *Erica carnea* are in full bloom and the many beautiful winter foliage colors of *Calluna* are available. Sales fall off sharply in May with no flowers showing and the new growth obscuring the foliage charm of individual cultivars. Sales build up again in the low traffic period of June to August as individual cultivars of *Calluna* come into their particular flowering primes. They slow down in late summer with few cultivars in bloom, then pick up again as foliage colors begin to show with the shortening days in October.

These plants sell themselves at retail. In order to have these plants in front of the ultimate consumer in the right quantities at the right time some special approach is required. There are

so many nice colors, shapes and forms, you cannot bide your time and expect your retailers to slowly learn them all. You have to help things along. We use a form of semi-consignment sale where the retailer designates a given amount of space which we keep stocked with plants much like the breadman. We bring in fresh goods — those coming into bloom and remove those flowered out and unsold about every 3-4 weeks. A label provides considerable information and we furnish a display sign which ties to the label and assists the customers in their selections by listing the principal characteristics of each cultivar.

We get paid, as with our normal sales arrangement, for the plants we deliver less a credit for all returns in good condition. At the season's close there is a final pick up and credit balance for all leftover plants.

Under this sales method, the retailer gains in several ways. He has less risk and need not take his normal full mark-up to obtain his typical return. He has a colorful display that brightens up his retail sales area when it most needs it. He has very productive use of his space. The large display gives the customer greater selection and sells many more plants particularly in the quiet periods of very early spring and mid-summer. On the other hand he is responsible for maintenance and, in the heat and drought of mid-summer when *Calluna* plants are in full growth and full bloom and using a maximum amount of water, irrigation cannot be managed carelessly or the plants are instantly in trouble to the retailer's loss.

From the grower's viewpoint, it is of great value in introducing and selling new and unknown products. A given retailer who sells 800 to 1000 *Calluna* and *Erica* plants from a grower-managed display over a full season would probably sell noticeably less than 200 under procedures where the grower waits for the retailer to order. The effect on retail sales of the eye-catching large display is readily observable by the rapidity of sales from a freshly stocked display versus the very few sales when it falls down to the last few scattered plants which might be all that is ordered on the retailers own initiative. The grower exercises full control over the time when specific cultivars are on display in the retail yard. Equally important is the entry for sales of other plants occasioned by the delivery to restock this display.

This approach has been successful for us and might well be considered, perhaps in modified forms, as appropriate and beneficial for a number of other plant groups.