

RESULTS OF EXPERIMENTS WITH PLANTS TO BE INTRODUCED IN THE NEAR FUTURE
TO GERMANY F.R. / EUROPE *)

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1. E v o l v u l u s a r b u s c u l a

General aspects

Family: Convolvulaceae. Origin: Mediterranean area, in natural habitat a perennial, flowering from May to October (similar to *C o n - v o l v u l u s s a b a t i u s*). Bushy growth; leaves elliptical, 2 cm long, with very short petioles, slightly hairy underneath, alternate. Flowers blue, with a white throat, 3 cm in diameter, borne in clusters at the nodes, very numerous; they open in the morning and close in the evening.

Experiments

Propagation is only satisfactory when fully vegetative cuttings are used; the presence of buds delays root formation and subsequent growth. Fast growing when given enough light, at temperatures over 16° C and when potted in commonly used industrial media, such as "Einheitserde P". Up to now, plants propagated in Oct./Nov. have been successfully grown for sale in the beginning of May (Mother's Day), thus amounting to a cultivation period of about 6 months.

Growth regulator experiments for improving plant quality: in the first trials, best results were achieved with "Gartenbau-Cycocel" (chlormequat) with spray application, but with slight leaf damage. Therefore, further tests were carried out. Preliminary results showed that leaf damage can be avoided through early application. Depending on season, best results when cycocel applied one to two weeks after the last pinching (see Fig. 1).

Further tests are in preparation to produce flowering plants in winter (Jan./Feb.).

Conclusions

E v o l v u l u s a r b u s c u l a is an attractive plant for hanging baskets indoors or in a sheltered position outdoors during the summer season. Plants are very drought-resistant, recuperating fully even after the soil was totally dry.

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2. Helichrysum bracteatum 'Diamond Head'

General aspects

This particular form of *Helichrysum bracteatum* was found in New South Wales in Australia and was brought into cultivation by John Wrigley, former curator of the Canberra Botanical Gardens. In its native habitat, the climate can be described as being subtropical.

Family: Compositae/Asteraceae. Compact growth, plant height about 20 cm and 60 cm in diameter. Leaves soft, slightly hairy, about 5 cm long and 5 mm wide. Flower heads are bright golden yellow and papery, 3 cm across and held on 12 cm stems above the rounded plant. Flowers appear throughout the entire summer season; they open in the course of the morning and close slightly in the evening or when wet.

Experiments

Until now, best propagation method is by tip cuttings at a rooting temperature of 18 to 22° C. Subsequent growth is quite good at 12 to 16°. Peat-based media have proven especially suited for both propagation and further cultivation.

Tests with newly conceived peat-based media, such as "Floraton 3" and "Floraton 2" have further improved both rooting and subsequent growth (see Fig. 2). Well-fertilized media have proven to be better than those with a low nutrient content.

Current experiments: influence of daylength on the growth of stock plants and cutting production (bud-free?).

Conclusions

Helichrysum bracteatum 'Diamond Head' is well-suited as a bedding plant, in rock gardens and in hanging baskets. It is easily grown, prefers full sun, but tolerates partial shade. A further use might be as an everlasting in dry flower arrangements, when the flowers are harvested in the bud stage.

3. Ursinia speciosa

General aspects

Family: Compositae/Asteraceae. Origin: South Africa, there an annual, in flower from July to September. Growth herbaceous, bushy, height 30 to 40 cm; leaves pinnate or bipinnate, alternate; flower heads on 10 to 15 cm stems, ray flowers russet with a yellow base, disk flowers dark, almost black, later yellow due to pollen. Flower heads open in the morning and close in the late afternoon.

Experiments

Easily propagated by tip cuttings or stem cuttings; cultivation in

commonly used industrial media such as "Einheitserde P"; in the spring, flowering plants can be grown from cuttings within 3 months.

At high temperatures under glass (e.g. in April), plants often tend to get leggy; therefore, the use of growth regulators is advised. Three chemicals were tested: "Alar 85" (daminozide), "Gartenbau-Cycocel" (chlormequat) and "Bonzi" (paclobutrazol). Only the use of Alar led to good results (see Fig. 3).

First seed harvest in 1985, sown in spring 1986: progeny split up into many different colors and growth types, these are to be cloned in 1986/87 to produce new cultivars.

Conclusions

Ursinia speciosa is a good summer-flowering plant for bedding uses, slopes and perhaps rock gardens or in hanging baskets; it requires full sun and even moisture.

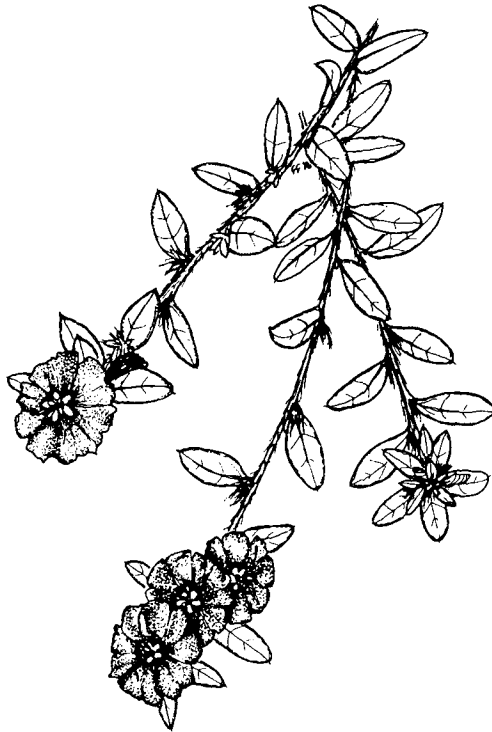
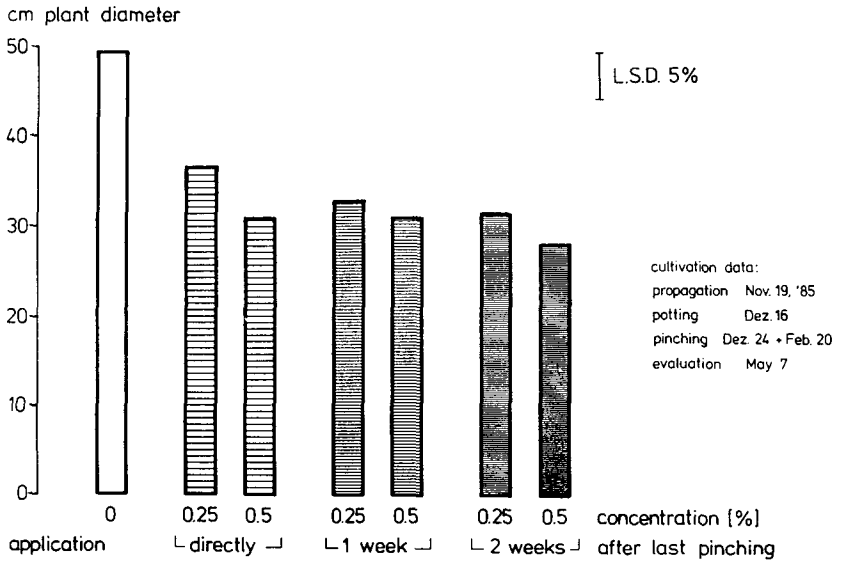
In the near future, new clones, which were selected from seedlings, will be available.

References

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Figure 1

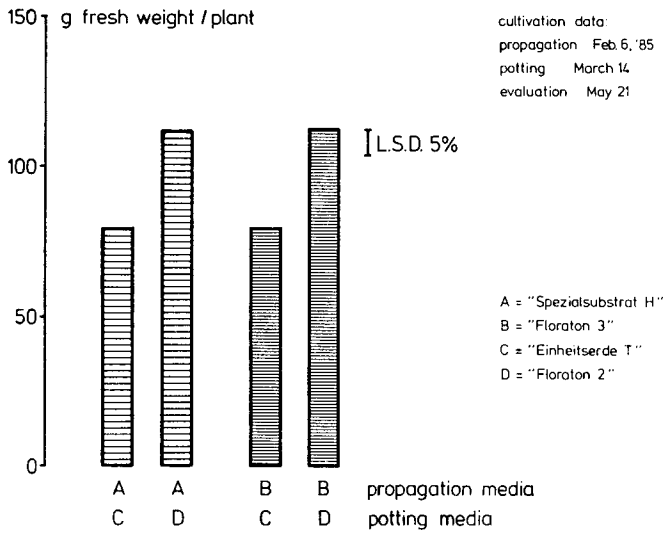
Growth of *Evolvulus arbuscula* after treatment with "Gartenbau-Cycocel" (chlormequat) at different application dates (see fig. 1a)



Evolvulus arbuscula

Figure 2:

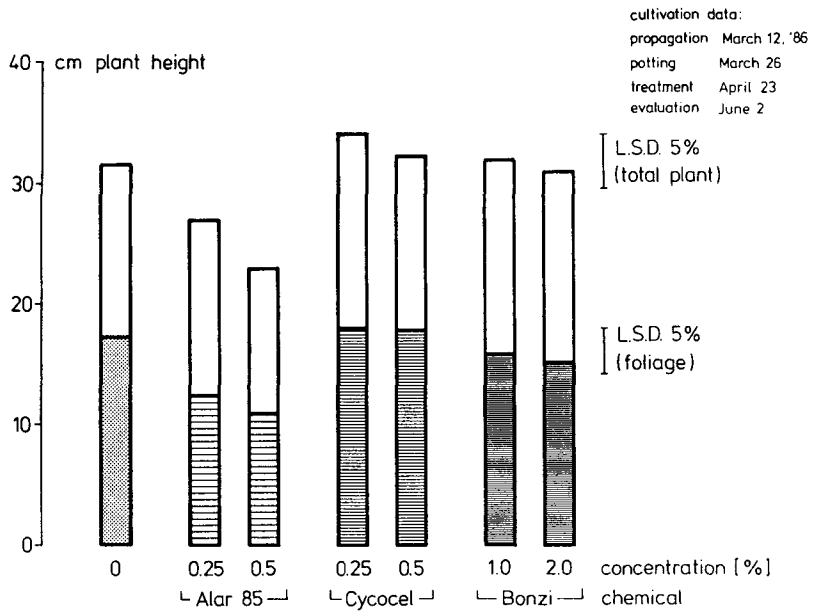
Growth of *Helichrysum bracteatum* 'Diamond Head' in different propagation and potting media



Helichrysum bracteatum (Vent.) Andr.
'Diamond Head'

Figure 3:

Growth of *Ursinia speciosa* after different treatments with growth regulators



Ursinia speciosa DC.