

EFFECT OF GROWTH REGULATORS ON *CYTISUS*, *GENISTA* TESTED

One of the activities of the Oregon Agricultural Experiment Station is the evaluation of new agricultural chemicals, including rooting compounds. The effectiveness of a comparatively new compound, Jiffy Gro No. 2, was compared with the widely used Hormodin No. 3. An untreated check also was included. Hormodin No. 3 contains 8,000 parts per million of indolebutyric acid in talc, while Jiffy Gro No. 2 contains 5,000 ppm indolebutyric acid, 5,000 ppm naphthaleneacetic acid, and 175 ppm of boron in 50% alcohol.

Softwood cuttings of several selections of *Cytisus* and *Genista* were used in a rooting trial. Experience with other plants had indicated that full-strength Jiffy Gro was too strong for softwood cuttings. Therefore, one part Jiffy Gro No. 2 to nine parts water was the basic dilution. Two other growth-regulating compounds, 2,4,5 trichlorophenoxypropionic acid and Kinetin (6 furfuryaminopurine), were added separately and together to the dilute Jiffy Gro solution to determine if they would enhance rooting.

Cuttings of x *Cytisus kewensis*, *C. procumbens*, x *Genista* 'Lydia,' and *G. pilosa* were used; these cuttings were received from B. O. Mulligan, Director of the University of Washington Arboretum. Because the number of cuttings was limited, it was not possible to conduct a replicated trial with these varieties. Cuttings of *C. scoparius* 'St. Marys' from plants at the North Willamette Experiment Station were used for a replicated trial. The cuttings were inserted in perlite-filled flats covered with 4-mil polyethylene on a wire frame. Bottom heat at 70° F. was supplied by electric cables. In order to lower the air temperature, Saran cloth providing approximately 50% shade was installed over the framework of the plastic house in which the propagating units were placed.

Treatments were applied on July 21, 1966. The rooting results taken on August 26, 1966, are shown in Table 1.

A higher percentage of the plants rooted following the use of each of the hormone treatments, except in the case of *Cytisus procumbens* and *Genista pilosa*, which rooted well without treatment. The rooting percentage was higher for x *C. kewensis*, *C. scoparius* 'St. Mary's' and x *G. 'Lydia'* following the use of the dilute Jiffy Gro No. 2 with or without additives than with Hormodin No. 3. The addition of 2,4,5 trichlorophenoxypropionic acid (TPP) and Kinetin alone or in combination to the dilute Jiffy Gro No. 2 did not enhance rooting.

Table 1. Percentage of *Cytisus* and *Genista* softwood cuttings rooted in 37 days following treatment with various rooting

Variety	No. cuttings per treatment	Hormodin No. 3	Jiffy 1:10	Jiffy 1:10	Jiffy 1:10	Jiffy 1 :10 plus Kinetin 5 ppm plus TPP 2 ppm	Check
				plus TPP 5 ppm	plus Kinetin 5 ppm	%	
<i>Cytisus kewensis</i> -----	19	52.5	63.0	57.8	78.8	63.0	21.0
<i>Cytisus procunabens</i> ----	14	85.7	64.3	85.7	78.5	85.7	85.7
<i>Cytisus scoparius</i> 'St. Marys'							
Replication 1 -----	20	65.0	80.0	90.0	55.0	65.0	5.0
Replication 2 -----	20	20.0	50.0	75.0	60.0	45.0	30.0
Replication 3 -----	20	70.0	70.0	75.0	65.0	90.0	30.0
<i>Genista</i> . 'Lydia' -----	22	31.5	85.5	18.0	90.0	76.5	13.5
<i>Genista pilosa</i> -----	24	70.8	95.8	70.8	66.7	83.3	66.7

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