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Perbanyakan Ruskus (*Ruscus hypophyllum* L.) secara *In Vitro*

In Vitro Propagation of Ruscus (Ruscus hypophyllum)

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ABSTRACT

These experiments were aimed to obtain optimum medium for micropropagation of Ruscus. There were two experiments consist of in vitro shoots proliferation, shoot elongation and rooting. The experiment of shoot proliferation performed by inducing adventitious shoots from explant in the Murashige and Skoog (1962)(MS) basal medium supplemented with combination of plant growth regulators BAP (0.0, 0.5, 1.0, 2.0, 4.0 and 6.0 mg/l) and IAA (0.0, 0.1, 0.2 and 0.4 mg/l). The elongation and rooting of plantlets were induced in the different concentration of the MS basal medium (0.5, 1.0 and 2.0 strength) combined with IBA (0.0, 1.0, 2.0, 3.0 and 4.0 mg/l). Both experiments were arranged as completely randomized design with 15 replications.

Adventitious shoots were produced in all medium supplemented with BAP with or without IAA. However MS medium supplemented with BAP 1 mg/l or 2 mg/l combined with IAA 0.2 mg/l were the best. The number of adventitious shoots in these medium were 9.2 and 9.4 shoots after 8 weeks cultured respectively. Increasing concentration of BAP more than 4 mg/l decreased number and size of adventitious shoots. The plantlets produced in the proliferation medium were then transferring to the next treatments for elongation and rooting. The best medium for elongation and rooting were medium with half strength of MS with or without IBA. Acclimatization conducted by transferring the rooted plantlets on the medium containing sterilized soil and rice husk charcoal (1:1). After 4 weeks acclimatization, 60-100 percent of plantlets were survived and growth, depend on treatments.

Key words: Acclimatization, adventitious shoot, micropropagation, rooting, Ruscus hypophyllum L.

PENDAHULUAN

Ruscus hypophyllum L, famili *Liliaceae* adalah salah satu tanaman hias yang mempunyai prospek untuk dikembangkan di Indonesia. Tanaman ini termasuk tanaman tahunan yang berasal dari daerah Mediterania. Daun *Ruscus* amat unik dan estetik serta dapat bertahan lama sehingga sering digunakan sebagai *filler* pada rangkaian bunga atau dekorasi ruangan (Kigel *et al*., 1981; Ziv, 1983). Disamping digunakan sebagai tanaman hias, tanaman ini merupakan tanaman obat untuk beberapa penyakit (Brown, 1995).

Perbanyakan *R. hypophyllum* di lapang biasanya dilakukan dengan cara pemisahan anakan (Ziv, 1983). Perbanyakan dengan cara ini membutuhkan waktu yang cukup lama dan jumlah anakan yang dihasilkan sedikit. Perbanyakan secara cepat melalui kultur jaringan adalah salah satu anternatif untuk mengatasi permasalahan perbanyakan tanaman (Holdgate, 1977; Wattimena *et al.* 1992). Keberhasilan regenerasi pada tanaman hias sekerabat dengan Ruskus, yaitu famili Liliaceae melalui induksi tunas adventif telah banyak dilaporkan (Sheridan. 1968; Hussey, 1976; Hughes, 1981; Takayama dan Misawa. 1982). Walaupun demikian keberhasilan perbanyakan *in vitro* untuk tanaman berkayu seperti *Ruscus* sangat jarang dipublikasikan. Pada penelitian ini dilakukan perbanyakan *Ruscus* melalui induksi tunas adventif, pemanjangan planlet dan perakarannya, serta keberhasilan aklimatisasi di lapang.

BAHAN DAN METODE

Bahan Tanaman

Tanaman *Ruscus* koleksi Departemen Budidaya Pertanian, IPB dalam pot diameter 25 cm, ditumbuhkan di Rumah Kaca, Kebun Percobaan IPB Pasir Sarongge, Cianjur, 1100 m di atas permukaan laut. Tanaman tersebut telah berumur 6 bulan yang diperbanyak melalui pemisahan anakan atau rizhome.

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