Table 6. Effects (in %) of mixtures (M) on the rooting of broad-leaved trees (A), *Ficus schlechteri* (B) and *Dianthus* sp. (C)

Species	M1	M2	M3	M4	M5	AS 1 standard
A	91.7	92.3	90.4	95.6	93.5	87.8
B	55.0	50.0	55.0	60.0	65.0	75.0
C	87.3	88.5	–	92.4	–	83.8
Average	78.0	76.9	72.7	82.7	79.3	82.2

A – *Acer saccharinum Pyramidale, Prunus kurilensis Brilliant, Prunus padus Colorata*
B – *Ficus schlechteri*
C – *Dianthus* sp. (cv. Tanga, Virginia, Helas, Esperance, Sacha)

In the fruit woody species represented by two species, viz. *Actinidia arguta* and cherry rootstocks of the type P-HL-A, rooted cuttings had a yield of 20–86.7%, with benzolinone concentrations of 0.05 to 0.01%, which was an increase by 18.3 to 57.9% against the control. In the case of the allochthonous species *Cotoneaster horizontalis* and *Philadelphus coronarius*, a concentration of 0.1–0.2% of this substance ensured a stimulating effect of 96.7–100%. In the case of the latter species, this represented an increase by 37% against the control (Table 4). The total effectiveness of the benzolinone samples studied, in comparison with that of the control, showed a percentage increase in the rooted cuttings from 3.4% in the well-rooted species *Forsythia intermedia* to 104.1% in the problematic rooting of *Viburnum farreri*. By its effectiveness benzolinone was comparable with, and finally somewhat superior to, Stimulator AS-1 (Tables 4 and 5).

A higher yield of rooted cuttings was achieved in two-, but mainly three-component combinations of benzolinone with indole butyric acid (IBA) and fungicides on the basis of the active ingredients captan and *Trichoderma harzianum*. IBA in the mixture exerted a synergistic action on the effectiveness of benzolinone, which became evident not only in a higher yield of rooted cuttings but also in an improved root system of stimulated cuttings. The representation of fungicide components in the mixture, and their use for the sterilization of substrates, had a positive influence principally on the protection of the basal parts of the cuttings, thus preventing their infection and early mortality. The higher effectiveness of three-component than two-component mixtures in the propagation of *Dianthus* sp. and *Ficus schlechteri* is evident from Figs. 1 and 3 and in the case of deciduous woody species *Acer saccharinum Pyramidale*, *Prunus padus Colorata* and *Prunus kurilensis Brilliant* from Tables 5 and 6. A synergistic effect on the root quality of *Ficus schlechteri* cuttings was evident in the three-component combination benzolinone + IBA + Supresivit, enhancing their yield up to 65%, which is a highly significant increase by 62.5% in comparison with the control (Fig. 3). An excellent result was also obtained in the propagation of carnations. As there is a problem of varieties with different rooting capacity, declining in the order Tanga, Esperance, Virginia, Helas and Sacha (Fig. 2), a positive and significant effect of the mixture was observed mainly in well-rooted cuttings of category I (Fig. 1). With the two-component mixture benzolinone + IBA, the percentage increase in rooted cuttings in all the five cultivars of carnations represented an increase by 7.4%, with the mixture benzolinone + captan it was 17.1% and with the three-component mixture

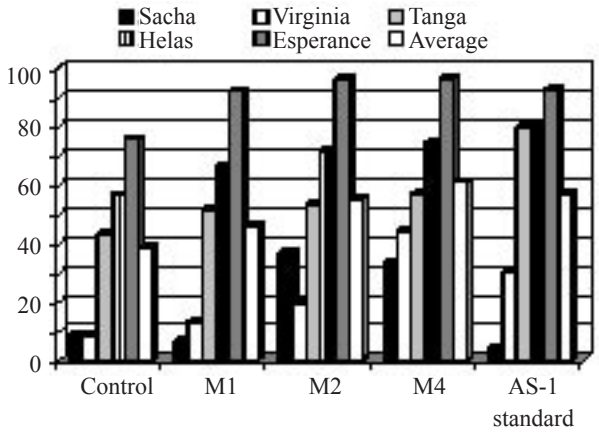

Fig. 1. Effects (in %) of mixtures (M) on the well rooted cuttings of *Dianthus* sp. (cv. Sacha, Virginia, Tanga, Helas, Esperance)

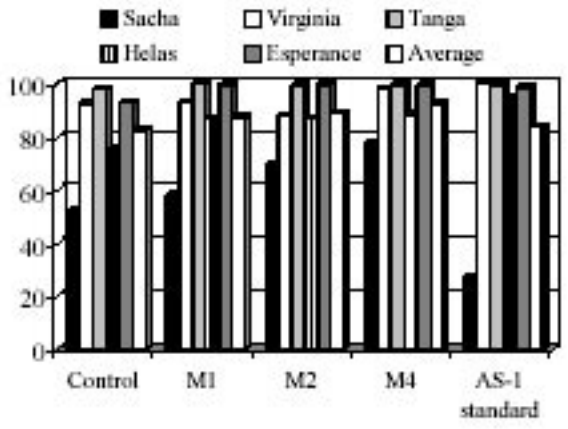

Fig. 2. Effects (in %) of mixtures (M) on all rooted cuttings of *Dianthus* sp. (cv. Sacha, Virginia, Tanga, Helas, Esperance)