Evaluation of the sprouting capacity of *Paulownia* spp.

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Objectives

Paulownia is a plant with very strong sprouting ability. Due this, vegetative propagation of *Paulownia* can be economically effective and technologically simple. On the other hand, high sprouting ability can cause their massive and invasive spread.

This was the reason why we researched the ability of two parts (root and branch) of plants to make sprouts in nine art-type varieties/species of *Paulownia*.

Fig. 1. Germinated cuttings. Root cuttings (on the left side), branch cuttings (on the right side)

Methodology

We investigated:

- seven art-type varieties of *Paulownia*
    1. Paulownia 9501
    2. Paulownia 9502
    3. Paulownia 9503
    4. Paulownia Pao-tong
    5. Paulownia Shan-tong
    6. Paulownia clone in vitro 112
    7. Paulownia bellissima
- two species of *Paulownia*
    1. *Paulownia elongata*
    2. *Paulownia tomentosa*

Fig. 2. Roots grown from cuttings (on the left side); plants grown from cuttings (on the right side)

In early spring:

- 60 pcs of root cutting (length 10 cm) and 60 pcs of branch cutting (length 20 cm) from each variant of *Paulownia* were used.
- the half of the cuttings (root and branch) from each variety was soaked in a growth promoter.
- the cuttings were planted in nursery beds and they were covered by layer of soil about 2 cm
- the germination of new sprout from cuttings was observed each 10-to-15 days from April to September.

Preliminary results

The **greatest sprouting capacity** (around 70 %) was found out in the root cuttings with a growth promoter in *Paulownia* 9501, P. 9502, P. 9503 and P. clone in vitro 112.

The **sprouting capacity was very low** (about 9 %) in root cuttings with/without a growth promoter in species of *Paulownia*.

The **sprouting capacity was very high** (around 50 %) in branch cutting with a growth promoter of *Paulownia* 9501, P. 9502, P. 9503 and P. clone in vitro 112.

The **lowest sprouting capacity** was found out in branch cuttings with/without a growth promoter in species of *Paulownia* (about 2 %).

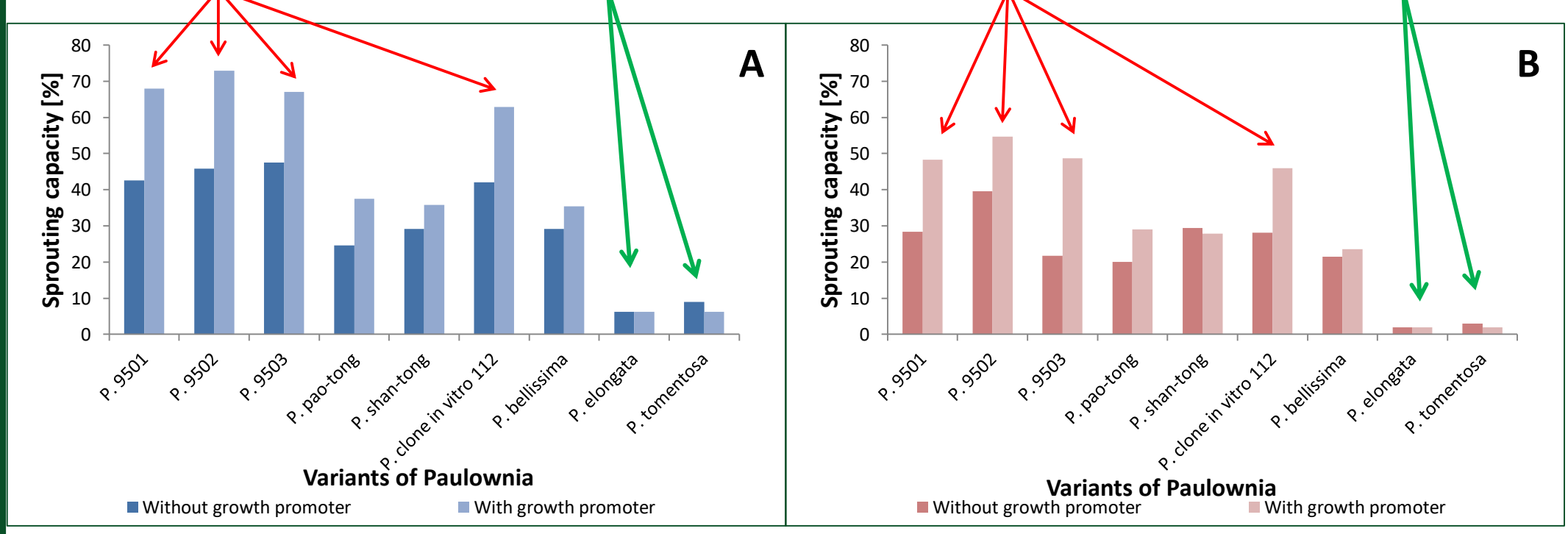

Fig. 1: Sprouting capacity of variants of *Paulownia* according to root cuttings (A) and branch cuttings (B).

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