

Study on Ornamental Industrialization of Korean Endemic Plants

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Korea has many kinds of plants: total 4,071 species included 576 endemic plants. Since early times, some of Korean endemic plants have been used as edible materials, medicines and ornamental plants. The ornamental value of Korean endemic plants is high and they have much merit as new ornamental crops. In Korea, the market of native ornamental crops is going on bigger and bigger. Especially, the reason of positive estimation on potential strength of Korean endemic plants as ornamentals is rarity and friendly mind of Korean. But almost all of endemic plants has bad characteristics such as high plant height for pot materials, long growing period to commercial goods, many problems to constructing year-round production system and reducing quality than commercial crops up to now.

There are many research reports on ornamental industrialization of endemic plants by improving the bad characteristics and mass production. First of all, investigation of spontaneous environment is the basic method for developing the cultivation conditions. Also seed germination is the basic of mass production. *Megaleranthus saniculifolia* has very long dormancy period; it has second dormancy. The breaking dormancy was done to vernalize two times by temperature variations.

Cuttings and tissue culture was investigated to make mass production system. It was carried out to develop the quality on endemic plants as commercial level. In *Hanabusaya asiatica*, the big problem is the concentration of anthocyanin in leaves at reproductive stage on growing life. Finally, all leaves turn to brownish black and fall down before flowering. The regulation of light quality, blue with far-red spectrum, was greatly reducing the anthocyanin concentration in leaves.

The big point of ornamentals industrialization is the construction of year-round production system. The vernalization period of breaking dormancy on *Megaleranthus saniculifolia* and *Hanabusaya asiatica* was investigated to increase or reduce the contents of enzymes; catalase, peroxidase. The proper vernalization period was 90 days on *Hanabusaya asiatica* and 50 days on *Megaleranthus saniculifolia* at 4°C celsius.

Genetic engineering method was applied to improve the bad characteristics for making commercial goods. Delay gene of senescence was inserted to *Hanabusaya asiatica*. Finally breeding will be a good methods for development of Korean endemic plants as high quality commercial crops.

Korean endemic plants have much potential strength as ornamentals by industrialization.