

# Studies on the Appropriate Light Environment and Concentration of Growth Regulators for the Culture of Flower Pot Plants of a Jeju Native Plant, *Polygonatum odoratum* D.

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## Objectives

In recent years, many countries are trying to obtain genetic resources as many as possible and to develop them for the purpose of using them for the life of mankind, but we are at the beginning stage in the research development of native plants in our country.

So several experiments were conducted to study the development of flower pot plants with high quality of a native plants, *Polygonatum odoratum* var. *pluriflorum*.

## Materials and Methods

The rhizomes of *P. odoratum* divided into four groups that was excellent size(25.9g/ea), large size(12.0g/ea), middle size(7.5g/ea), small size(4.9g/ea). and they also planted five rhizomes per pot(two rhizomes in the middle size per pot ) in the volcanic ash soil in the pots (size:length 20cm × width 12cm × height 10cm) early in March ,2001 , and treated with several concentrations of growth regulators at leaf emergence date on April 13 and cultivated under the fifty percentage of shading in plastic house until October. Other plants were cultivated at many levels of light environment in the open field.

## Results and Discussion

In order to have the high quality pot plants, the rhizomes must be drenched once with many of growth regulators. Many of pot plants with a good flower and leaves produced in the experimental plots of 50mgL<sup>-1</sup> of cycocel and the best pot plants with many of the dwarf leaves also produced in the experimental plots of 200mgL<sup>-1</sup> of diniconazol in the volcanic ash in the pots, respectively.

The other kinds of growth regulator were not the best for the flower pot plants of *P. odoratum*.

Moreover, In the light environment, many of the pot plants, *P. odoratum* had grown better at thirty percent shading environment than at the lighting of the open field in the spring and the autumn, while the plants had grown better at fifty percent shading environment than at the open field in the summer.