

# The Present Condition and Future Prospect of Development and Use of Wildflower

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## 1. The definition of wildflowers

The definition of wildflowers of Korea means all the wildflower that grow in Korea and ground cover plants, and it includes annuals, perennials, bulbs, kind of herbs, woody plants, kind of mosses, kind of grass, and water plants. The native plants mean the spontaneous plants that grow in the field and mountains on its own in broad definition, and indigenous plants in narrow definition. But plants that grow in Korea and brought in from other countries are called naturalized plants.

## 2. The number of species of native plants and wildflowers.

The number of all the native plants in Korea are reported to be 170family, 897genus, 2, 898species, 705subspecies, 928varietas, 301forma, 23hybrid and approximately 4, 158 kinds(Changbok Lee, 1976). If we add 436 kinds of plants from other countries that naturalized and became native plants of Korea, about 4, 600 kinds are naturally grown in Korea(Yoon and Lee, 1996). According to other reports, 201family, 1102genus, 3, 347species, 4, 577 kinds are distributed in Korea(Young-Ro Lee, 1973). Among the native plants of Korea, special plants that grow only in Korea are *Abeliophyllum distichum* Nakai, *Abies koreana* Wils., *Hanabusaya asiatica* Nakai, *Megaleranthis saniculifolia* Ohwi, which are counted to be 61family,

172genus, 339species, 46varietas, 22forma, about 407 kinds are grown in total, among these native plants 224 kinds are grown in South Korea and 107 kinds are grown in North Korea(Lee, 1983). These special plants are distributed in Korea as following, 75 kinds in Hahnra mountain, 46 in Giri mountain, 46 in Bakdu mountain, 36 in Woolneug island, 34 in Goomkang mountain, 23 in Soulack mountain, 22 in suburb of Seoul Korea, 16 in Bailyang montain, 16 in Gwangneung Kyunggi Province, 16 in Nahngnim mountain, 14 in Koonja mountain Gwesahn County, 14 in socklee mountain, 12 in Boochunkowon, 12 in Gwanmobong, and 12 in Bakwoon mountain.

### **3 .Native plants that can be developed as the garden plants**

Plants that can be used as flowering plants among these native plants of Korea are 593 kinds, which are reported as for a flower bed, a flowerpot, an ornamental, al cutting flower, a court hanging up, a ground plant, a potted tree, a roadside tree, besides these a lot of other kinds of plants can be used as flowering plants. Also, among these plants, woody plants is 373 kinds, perennail plants is 141, annual plants are 52 kinds and bulb plants are 27 kinds. If these are divided into the region of an ornamental, flower plants are 369 kinds, foliage plants are 14.6%, fruit plants are 9.7%, the rests are 13.2%(Yoon and Lee, 1996)

### **4. The present condition of the development and collection of Korea native plants in the department of agriculture of U.S.**

The plants that can be used as bonsai material among the native plants of Korea are 89, and 335 kinds. The U.S. National Aboritum(U.S.N.A) researched about 592 kinds to develop the native plants of Korea as flowering plants from 1984 to 1989, and developed about 44 kinds as the flowering plants until 1993(Lee, 1996). Also, people from England and France imported and grew a lot of plants (1999). Some of the people who

participated in the collection and research in Korea are Sylvester G. March of U.S.N.A(chief horticulturalist at that time), Barry Inger who used to work in chunripo greenhouse in Korea for two years, Paul Myer(chief of greenhouse currently)from Moris Arboritum of Pennsylvania University, Peater Bristol from Ohio state greenshouse, Dr Bill Thomas from Longwood garden, Anthony Kirkham from Royal Botanic Gardens Kew of England and PeterBoyce. To proceed this matter the U.S. embassy in Korea sponsored a meeting in Lotte hotel in july of 1985, some of the people who attended are Eve Blackwell, president of the Dupont company in Korea , employees of U.S. Embassy and Ralph B. Gifford , the agricultural attach. All the famous plant scholars of Korea at that time participated, and some people involved in collection and research of plants of Korea. A few days later, the gala was held by the dupont company in the house of president located in sungbook city, and another gala was held by the U.S. embassy. These events all helped in collection and research of Korean plants for past five years.

##### **5. The present condition of the research of Korea native plants.**

The native plants of Korea weren't considered very seriously. But people started to concentrate on research of native plants since 1985. As people started to show interest in research since 1980 and USNA get involved in research for 5or 6 years since 1985, people started research rapidly in Korea. About 197 different researches were going on from 1976 to 1996 and is assumed to be about 300different researches done until present time. The researches were categorized into the following different areas, variety of kinds, shapes, and biology of the environment of the growing fields, breeding, biology of growth, and flowering, general method of propagation, propagation method of tissue culture and researches about the growth control. All the places used for researches were 33 different places, in total of 196 kinds of plants used for research are native orchids, grass plants, rhododendron plants, reciprocal affection flowers, lilys, kumgang bellflower, bellflower, herbaceous flowers,

flowering tree and ornamental trees are included. The native plants that are mainly studied are -----.

The direction of the future research should focus on how native plants can be used in the industry of flowering plants as a resources plants. Also in order to use and develop the native plants more effectively, there should be major development in the markets of Korea, and the appropriate policies and support for research are in demand. To survive in the international competition, native plants that have unique characteristics of Korea need to be specially developed and should be exported to oversea markets. Especially the cultural standard of the export countries and favored plants for flowering has to be investigated, colors of flowers and the use of flowering plants need to be considered. Also, the improvement of different species need to be studied to protect the native breed and other countries' breed. According to the research done in 1991, plants used for growth of bonsai are reported to be 89 kinds, 335 species. The native plants that have the most growth value are potted trees, seokbujak, miniascapes and the native plants used for these are epiphytic plants and evergreen anuannual plants which include pungnan, nadopungnan, seokwi, seppulseokwi, sachulnan, byongarinan, seokgok and kongjagaenan.

## **6. The problems of using native plants as a garden plants**

The problems of using the native plants as flowering plants are listed as following, plants that are very rare having the crisis of becoming extinct, destroying of ecosystem due to digging those plants up in any wild fields, very low value of growth even with the potential of growing as the flowering plants, not quite established method of breeding and growth, distribution of the native species without the development of the original species, big fluctuation of the prices, very tall height of these plants, and the color of flowers not being splendid enough for flowering plants.

## **7. The development task of the native plants.**

The tasks of developing the native plants as the flowering plants include the followings. The 초장 has to be small, the color of the flowers has to be as splendid as the flowering plant species, promising species that have certain characteristics internationally has to be developed, the breeding methods need to be studied in more organized way, the usage of proper soil and fertilizers need to be developed, methods that can produce flowers all year long, and flowering and the growth of species need to be studied, the way of adapting the native plants that are selected from the wild field need to be studied, proper selection of growing fields, breeding of species by bringing in similar species of flowering plants from other countries, selection of good qualities of breeding, development of plants for potting and transferring need to be studied. In order to do that, flowering plants that are developed from each different countries need to be obtained, selection of variable species and better quality species, breeding in between good qualities of species and variable species among the native plants need to be selected and developed.

## **8. The advantages of developing native plants as flowering plants.**

The advantages of using the native plants in landscape are their appropriateness in weather and soil, well adaptability, fast growth potential, fast reproducing of ecology preparation, low production cost, and easy maintenance. And the landscape can be done in the native field. Also it has a superior value in the international competition of genetics.

## **9. The basic conditions of the native plants for use as the ground plants.**

The basic condition of the native plants to grow as the ground plants are

good quality of surface that can cover the ground, strong adaptability in environment, perennial plants, easy maintenance, generally creeping plants in which the stem can crawl than the root bundle plants, beautiful shape, color, and texture, strong reproducing ability after cutting, no presence of poison that can harm animals and people, the availability of view effects and strong reproducing ability after resting, leaves being tough and green, strong plants that can survive in any kind of soils, good survival ability after transferring.

#### **10. The main conditions of the usage of the native plants.**

The following are the main conditions required for the use of flower landscape. The environment has to be the same as the native field after considering the biologic characteristics at the time of design. Also the aspects of biology, usefulness and growth potential need to be considered. The fertilizers need to be applied even for the native plants. The location and depth of wires or different cables under the ground need to be researched. The native plants should not be dug out directly from the fields to use for the landscape to avoid harming the natural ecosystem. The native plants that are going to be used need to be planted in the areas that are appropriate for growth of the native plants.

#### **11. The biologic characteristics of the growth environment of the native plants**

**Plants that are appropriate for cold areas**

- In general, plants that grow in the high altitude
- Native plants that grow well in the dry areas-----
- Native plants that grow well in the wet areas-----
- Native plants that grow well in the beach areas-----
- Native plants that grow well in the shadow or half shadow-----

Problems in growing of the native plants

A lot of areas are needed because a lot of different species are grown.

Since it is hard to predict the amount of demand, well planned growth is very difficult.

It is difficult to obtain different species.

The products are not well categorized.

There is a possibility of destroying the ecosystem because of the plants being dug out in the wild fields.

It is not easy to produce a lot of amounts due to lack of enough knowledge about the growth.

The price is not stable.

Some of the possible native plants for export are-----

And these plants are rare plants and protected in the wild filed of Korea.