

## **The Korea National College of Agriculture and Fisheries (KNCAF): Developing Professional Farmers**

### **Overview of KNCAF**

The Korea National College of Agriculture and Fisheries (KNCAF) was established by the Korean government in 1997 to rear professional farm managers leading to the development of agricultural industry and rural communities. The background for the establishment of KNCAF was due to the launch of WTO according to the agreement of UR negotiation in 1995. The era of infinite competition and trade liberalization throughout the world also comes across in the field of agriculture since then. In order to cope with the difficult situation for agricultural areas and to enhance the competitive power of agricultural fields, fostering the professional young farmers leading to the development of agriculture becomes an urgent need in Korea. Therefore, KNCAF was established according to the proposal of the Special Commission on Agriculture, Fishery and Rural Development, which was the presidential advisory committee.

The objective of KNCAF is to raise professional farmers who are equipped with up-to-date knowledge of practices and theories combined so that they may be engaged in agriculture after graduation. As of July , 2014, the graduates of about 3,350 are already leading in the improvement of agriculture all over the country.

KNCAF is a unique national college by which all students are supposed to be boarding in dormitories with full government scholarships for registration and tuition, graduation certificates for junior college, special exemption from military service, and financial support for farm settlements in order to cultivate the agricultural CEOs of the future.

All students attending KNCAF are free from registration fees, tuition fees, and material fees for studying because all the costs are being supported by the Korean government. Furthermore, all students must live in a dormitory for three years, which is also paid for by the government. .

KNCAF provides the opportunity for short-term overseas training to all students and excellent students are given one year of overseas training in agricultural advanced nations such as U.S.A, Japan, Netherlands and Israel etc. Through this overseas program, KNCAF is cultivating specialists and experts in the area of agricultural business equipped with international outlook and up-to-date technologies for agriculture.

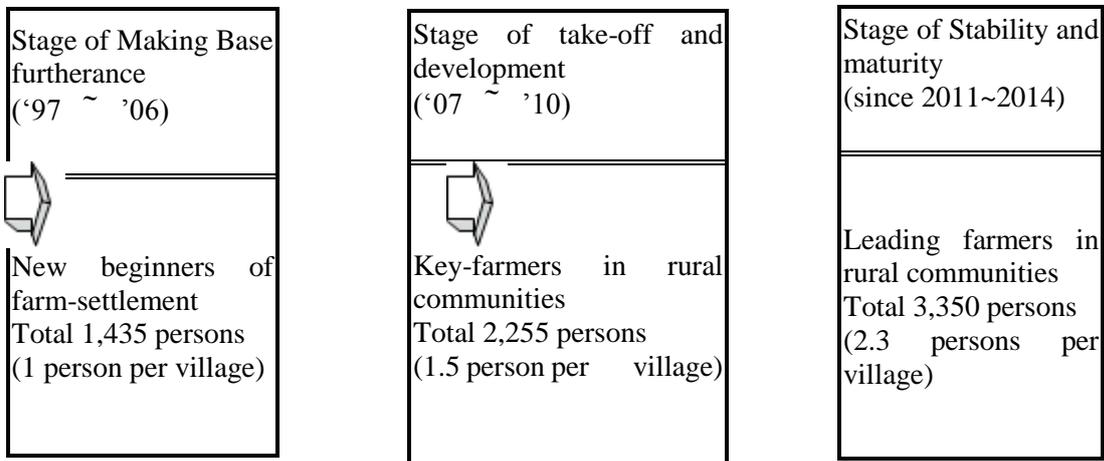
Although there are many universities and colleges which encourage settlement in rural communities, KNCAF is the only one that gives financial aids of up to 200 million won (about US\$150,000) for successful engaging in agriculture.

The students enjoy government support including tuition, supplies, books and room and board during their study at the college. In return, the students will devote themselves to the country by farming for certain period of time (five years). KNCAF is recruiting about 390 students every year in 11 departments in the fields of food crops, medicinal & industrial crops, mushrooms, vegetables crop, fruit trees, floriculture, forestry & landscape architecture, beef and dairy science, swine and poultry science, horse industry, and aquaculture.

## Educational objectives of KNCAF

- (1) Professional farm managers with strong occupational minds.
- (2) Professional farm managers with field-oriented knowledge, updated in technologies with sound managerial ability.
- (3) Professional farm managers with wide international perspective.
- (4) Professional farm managers who can lead in the agricultural development and rural communities

### < Development stages in KNCAF >



KNCAF is running a very unique educational program that harmonizes theory with practical field training in domestic or foreign country's farm experiences. This training program has all students acquire up-to-date agricultural technology and management strategy as well as basic knowledge so that they may play an important role as agriculture CEOs.

## 2. Curriculum programs of KNCAF

### (1) The First year (Basic course)

Students learn the basic knowledge in their first year of studying in KNCAF.

### (2) The second year (Field training course)

Students learn practical and extensive knowledge in agriculture in their second year of studying in KNCAF through field training program in domestic or advanced nations' farm for one year. The goal of domestic and overseas field training program is to have all KNCAF's students put theories into practice and have extensive agricultural knowledge.

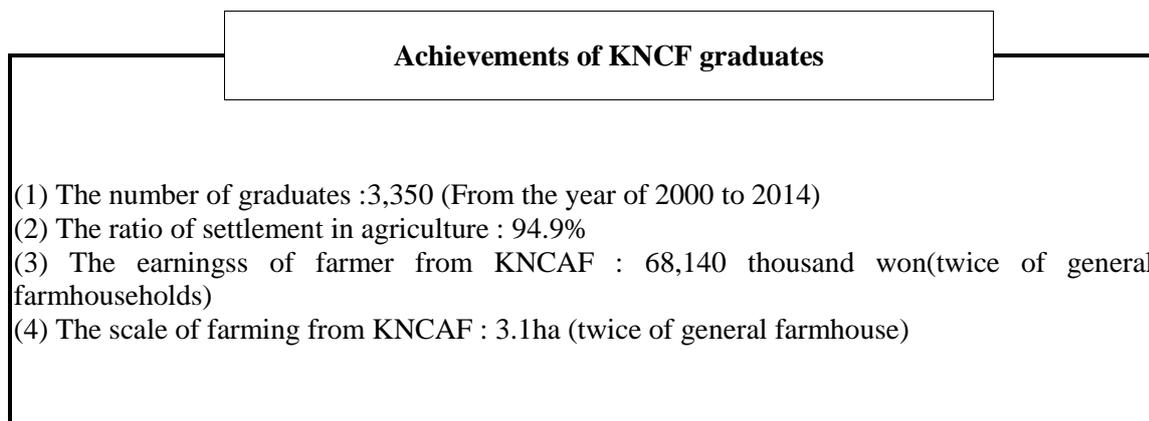
### (3) The Third year (Preliminary course for making business channels)

Students prepare for making business channels at the third year of studying in KNCAF ahead of graduation. At this stage, students learn to design their engagement in agriculture and make a blueprint of their own farm, specifically through a professor's 1:1 guidance. Devotion to the students by the faculty members never stop after graduation; the faculty members maintain contact with the students and provide guidance to the graduates to become successful farm managers. The strong ties between the College and people in the industry is a proud asset of KNCAF made possible through the school's guidance

### 3. Achievements of KNCAF

After its inception as a national college in 1997, the Korea National College of Agriculture and Fisheries (KNCAF) has been at the forefront in educating students who want to become innovative farmers. KNCAF was established by the Korean Government to foster young farm managers who will take the pivotal role in the rural community as the key producers and technology applicators. More than 90% of the graduates are being taken such leadership role in their farmlands.

Most graduates of KNCAF are currently settled in farm villages and are playing important roles as leaders of rural communities. KNCAF is the Mecca for cultivating and training succession manpower in agriculture.



### Appendix: Brief Explanation of Department in KNCAF

#### (1) Department of food crops

Production of food crops especially include rice and barley is essential for providing national basic foods. Maintenance of self-supporting rate of foods above the certain level establishes the national food security as well as the cornerstone of stable development of the nation. Since food crops have high labor-productivity, farmers can attain high incomes through size-optimization of farmlands and mechanization of agricultural works. Curriculum contains physio-ecology of food crops, crop cultivation, soil and fertilization, crop protection, agri-machinery, and farm management.

#### (2) Department of medicinal & industrial crops

Wellness for life and special crops for health care is increasing day by day. These changes in crop physiology, ecology, growth and other agricultural products represent the country on the basis of the basic theory, as well as herbs, yacon, wild plants and medicinal resources, such as special purpose development, production, processing and marketing to focus on education, training and management for professional development aims. In addition, there are the mountainous or agriculture in sloping lands, tourism farms, farm themes to improve farm incomes in the form of agriculture, which shape the future

of Korea's agriculture. Major field crop physiology, ecology, and other basic theories, based on the growth of ginseng, Angelica, Astragalus, such as medicinal plants and herbs, yacon, unloading and other new resources such as crops cultivation techniques, processing, distribution and management are being taught. Based on these excellent education on special crops domestic crop production and through raising farm incomes in agriculture, new ideas can emerge.

### **(3) Department of mushroom**

A mushroom characteristically contains many different bio-active compounds with diverse biological activities. As national income and living standard become increased, mushrooms are enveloped into not only medicinal materials but also health-supporting foods and drinks. Since mushrooms contain special taste and flavor reutilized as health-supporting foods and favored by many customers, they become promising high-income crops. Curriculum in the mushroom department includes spawn production, mushroom cultivation, product distribution, and farm management.

### **(4) Department of vegetable crops**

As national income and concern for food safety become enhanced, the demand for fresh vegetables remarkably increases. Farming vegetable crops provides high income mainly because of year-round production of fresh vegetables in glass houses, which leads to promising fields. Curriculum contains physiology of vegetable crops including fruits, and root vegetables, construction and operation of the plastic film house, glasshouse and soilless-cultivation facility, processing, marketing, and farm management.

### **(5) Department of fruit trees**

High quality fruits are produced in Korea due to four distinct seasons and the big difference in temperature between day and night during the growing stage of fruits. Therefore, lowering the production cost and exploiting international markets will increase the export of fruits. Curriculum contains pruning, fertilization, irrigation, pest and insect control, safe production in apples, pears, grapes, peaches, and other fruits, mechanization, fruit selection, marketing, processing, and farm management.

### **(6) Department of floriculture**

The demand of flowers and ornamental plants is increasing as the living standards of people improve. Therefore, the field of floriculture is emerging as a promising industry. The export of flowers will increase provided that the flower quality and the efficiency of distribution structure are improved. Major fields of the department are subdivided into cut flowers and pot plants. Curriculum contains physioecology, cultivation principle, soil and fertilization, technical cultivation, insect and pest control, post-harvest, marketing and farm management.

### **(7) Department of forestry & landscape architecture**

The Department of forest landscape is the main resource that is leading the nation's Green Growth. The Department was created to train experts who are able to maximize income from the forest by using its resources efficiently and through the acquisition of various landscape production technologies such as nursery, landscaping trees, and bonsai.

### **(8) Department of beef & dairy science**

Continuous increases of national income have promoted the consumption of livestock products to rise. This has resulted in the higher growth of livestock industry relative to other agricultural areas. In accordance with this, the form of livestock husbandry has rapidly changed into a professional

occupation or an enterprise from the past auxiliary occupation. The department of beef & dairy science is subdivided into two specialties, Hanwoo (Korean native cattle) and dairy cattle. The educational aim focuses on implant self-confidence in an efficient farm management and production of a high quality of beef meat and milk by means of learning professional knowledge in ruminant nutrition, breeding, reproduction, hygiene, marketing, etc.

#### **(9) Department of swine & poultry science**

As national income increases, consumption of animal products and needs of safety foods also increase. Recently, the form of animal husbandry is rapidly changed into a professional and an enterprise occupation. Swine and poultry industry becomes a major income source for farmers due to the high rate of professionalization and increased production of animal products. The department is subdivided into two specialties, swine and poultry. Curriculum contains feeds and feeding, breeding and reproduction, livestock housing and facility, livestock hygiene, livestock management, and marketing in each specialty.

#### **(10) Department of horse industry**

The Department of horse industry has been created to nurture skilled workers with specialized knowledge in the field of production, breeding, and training of horses. It also provides a systematic education on various industries that are related with horses.

#### **(11) Department of aquaculture**

Department of Aquaculture educates the students to be experts on marine and freshwater fishes, shellfishes, crustacea, seaweeds, and aquarium fishes which take a growing public interest recently, and lecture to students about new technologies on ecology, cultural techniques, theories and so on. In the second grade, students can choose long-term field works (what they want to learn inside and outside of the country) then acquire know-how on new world-class techniques and management. Students can be professional managers as aquaculture experts who develop fisheries and lead fishing villages with large incomes.