

# **National University of Life and Environmental Sciences of Ukraine**

**Kyiv, Ukraine**

## **National University of Life and Environmental Sciences of Ukraine**

**– on the way from the typical Agricultural University to the  
University of Life and Environmental Sciences**

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**Slide 0.** First of all let me thank to all the Conference participants who want to make a lot for GCHERA reforming on this new stage of its development. Special congratulations to all of you, who are sitting here now, during this session.

My presentation is devoted to generalization of experience gained by my University in its transformation in educational, research and innovative spheres.

And now let me start with short historical introduction of National University of Life and Environmental Sciences of Ukraine. Its short name is NUBiP of Ukraine.

**Slide 1.** NUBiP of Ukraine was formed in the 50<sup>th</sup> of the past century having being united Kyiv Agricultural with Kyiv Forestry and Veterinary Institute. As a result a new institution was founded in 1954 – Ukrainian Agricultural Academy, **slide 1.**

In 1990 it won the 1<sup>st</sup> place according to the rating between 108 agricultural Universities of the former Soviet Union.

In 1992 the Academy obtained the status of Ukrainian State University, in 1994 it became the National Agricultural University (NAU), along with this high status the University has been subordinated directly to the Cabinet of Ministers of Ukraine as self-managed higher educational establishment. Besides, wide autonomy rights, granted to the University, particularly concerned its international activities.

During 2000-2008 the following subdivisions joined National Agricultural University: Crimean Agrotechnological University (as a Southern Branch of NAU) and other regional scientific, research and experimental divisions (as separated subdivisions of the University), *slide 1*.

In 2008 NAU was renamed into National University of Life and Environmental Sciences of Ukraine and received a research status.

**Slide 2.** The Basic Institution of NUBiP of Ukraine is in Kyiv, the rest structural divisions are spread geographically all over Ukraine, as shown in *slide. 2*. The University's Regional Educational Institutes and Colleges, Technical Schools and Consulting Offices, Stations and Educational and Research Farms are located in 7 different regions of the country and in peninsula of Crimea.

**Slide 3. The main directions of scientific activities of NUBiP of Ukraine are the following.** it means that the University is multisectoral institution, it focuses on food, agricultural and environmental issues.

**Slide 4-5.** The main structural divisions of the University are the Educational and research institutes (ERI). Each of them includes Research Institutes and faculties. If to consider just Kyiv Territorial Center of NUBiP of Ukraine (without its structural regional subdivisions), nowadays there are 12 Educational and Research Institutes, 12 Scientific and Research Institutes and 24 faculties, 45 Scientific and Research Centers. Regional subdivisions (as was shown before) also have their structural particularities and are coordinated from Basic Institution in Kyiv.

**Slide 6. Today NUBiP of Ukraine trains:**

- approximately 40 thousand students by 43 specialties, including 13 specialties taught in English;
- over 600 PhD students, post-doctoral fellows and students-seekers – by 48 specialties;

- about 5 thousand specialists in the production area in the Institutes of Continuing Education annually.

**Slide 7. Educational process and scientific research is provided by over 3000 scientific-pedagogical and pedagogical staff including.** Their main characteristics you can see on slide 7 and 8.

**Slide 9.** Scientific elaborations of the University scientists are great contribution into the development of Agroindustrial complex of Ukraine. There are new high-productive breeds and hybrids of agricultural crops and others.

Publishing activities of NUBiP of Ukraine is also fruitful direction. For example, during 2010 we have prepared 128 monographs, 187 manuals and textbooks, 5447 research papers etc.

Besides 64 specialties for Doctor Degree and 68 – for PhD degree are offered by the following scientific domains: Physic-Mathematics, Chemistry, Biology, Engineering, Agriculture, History, Economics, Philosophy, Law, Pedagogy and Veterinary Medicine.

**Slide 10.** I would like to pay special attention to the International cooperation of NUBiP of Ukraine with foreign countries considering its role as a host University as well as taking advantage of broad learning, practical and scientific experience from the foreign educational institutions.

More than 3 thousand specialists from different foreign countries were trained at the University during the previous decades. There are students from 14 countries who currently study at the different faculties by the different educational and qualification levels (Junior Specialist, Bachelor, Specialist, Master and Post-Graduate) as of 2010, *slide10.*

From 1990 till nowadays the NUBiP of Ukraine keeps on establishing close cooperation with leading Western universities concerning: modernization of its structure and functions, curricula; mastering a large number of new specialties, developing a system of graduate education; straightening the role of research, information and telecommunication, innovative components of educational activities and their integration

with the problems of production area etc. These universities are: in the USA – Yale University, Iowa State University, Louisiana State University, Penn State University, California State University, Purdue State University and others; in the countries of European Union – Humboldt University (Germany), Wageningen University (the Netherlands), Ghent University (Belgium), Prague University, Warsaw University of Life Sciences (Poland), University of Toulouse (France) and others; and great number of other universities worldwide, particularly in Japan, China, South Korea, Russia, Kazakhstan etc.

Moreover we have met significant support and encouragement from the World Bank, US Agency for International Development (USAID), US Information Agency, some EU organizations, leaders of abovementioned universities and Ukrainian Diaspora. And I want to express sincere appreciation to all of them.

**Slide 11.** The University is also a member of University Associations, Councils and other Non-Governmental Organizations (*slide 11*). We highly appreciate the role of ICA, GCHERA and other organizations and institutions all over the world in modernization of our University's activities.

**Slide 12. The most significant results of this collaboration are the following:**

- introduction of graduate education system (Junior Specialist, Bachelor, Specialist, Master);
- official recognition of the reformed educational system of our University by the abovementioned Universities and cooperation with many of them within Programs of Double Diplomas (*slide 12*) – 41 student currently study by this Program in 5 foreign Universities of EU countries and Japan in 2010. And the University is about to enter into agreements with a number of other Universities;
- assistance in formation of Ukrainian legislation concerning higher education, research, innovative and information activities (extension);

- **slide 13.** over 30 new specialties were set up during the last 20 years (there are 43 nowadays, there were 13 in 1990) (*slide 13*);

During the indicated period of time the University saturated typical applied agricultural sciences (like agronomy, animal science, veterinary medicine, plant protection, mechanization of agriculture) with fundamental issues of ecology, ecobiology, biotechnology and biochemistry, quality and safety of food and agricultural products and environment, information science and telecommunication, climatology, legal and social development of rural areas and their architecture, life quality and safety, technical and technological, financial and economic sciences etc.

The need for these changes was dictated by time. Thus, production area had to be completed with food science and technologies, plant and animal products processing, quality control. Besides market economy also made us transforming the way of thinking in terms of business requirements to specialists in sphere of finance, taxation, accounting, management of the organizations, foreign economic activities, agricultural marketing etc. And all the students graduating from the University have to meet these requirements to be competitive in labor market.

All these (and many others) specialties, which are typical for the classical universities, were set up in order to accomplish this task. Only combination of fundamental and applied sciences enabled initiation of the adaptation of sustainable nature management and biodiversity system, alternative energy sources use, introduction of adaptive agricultural technologies in terms of climate changes, adjusting the system of food and forage quality and safety control, updating an equipment and technology in production, processing and storage of agricultural products etc.

All these changes enabled us to create a new model of the University where educational activities were combined with research, scientific and innovative activities;

And last but not least – our Global Consortium of Higher Education and Research for Agriculture (GCHERA) was formed in our University in 1998.

**Slide 14.** Our Master's Programs are particularly successful; they allow bachelors of any professional direction to get specialized in different areas (*slide 14*). Master course may offer several peculiarities by following directions: industry-oriented, research-oriented, teaching direction, managerial and other areas. Special assistance in these Programs we have received from Penn State University, Iowa State, Louisiana State University and others.

**Slide 15.** Along with the number of specialties available at the University, the amount of students of Master Degree courses has also been increasing in many times, as shown in *slide 15*.

**Slide16-18.** There are also newly-created educational and research laboratories, centers and institutes, educational and research farms (station), scientific and innovative centers etc. (*slide16-18*). All of them combine educational, research and innovative activities of the University with the problems of production area. On the other hand, production area is able to adjust research and educational activities, becoming a customer for some particular investigations. To this end the University makes the most out of more than 30 thousand hectares of its lands, where all the stages of production, processing and storage of many types of agricultural products (crop production, forestry, animal husbandry, fishery, poultry farming, alternative energy, food and fodder processing) are represented (*slides 16-18*).

**Slide 19.** Thus, nowadays NUBiP of Ukraine is an important educational, research and production complex, which resembles “planetary” interaction of its structural subdivisions (*slide 19*). Its center contains modern labs and equipment, where fundamental and large-scale applied research is conducted; the regional structures are specialized in applied research of local level and scientific and innovative activities which also can lead directly to the manufacturing application. This type of universities is presented in many developed countries, and their key task is to prepare specialists of high technology specialties in order to meet future needs and challenges of economy and science.

**Slide 20.** As a conclusion, I would like to remind that the research Universities of Agriculture and Life Sciences have to play the key role in global problem of food security solving. It was the main topic during the meeting of the FAO's High level External Committee on Millennium Development Goals in Rome just one month ago, in May.

The most significant challenges facing the University of Agriculture and Life Sciences nowadays in terms of global development are (*slide 20*):

- *The impact of global climate change on world production and food security ensuring*, a growth of emergency situations in Nature, the emergence of new plant, animal and human diseases in some regions. Some certain regularities in these climate changes must be identified in order to develop appropriate measures of slowing down the growth and anticipation of negative effects on the Nature.

- Nowadays there is an *increasing problem of food, air, fresh and sea water quality and safety deterioration*. That's why we can't talk about normal agricultural growth without paying attention to parallel issues of environmental improvement. These facts cause food prices increasing and reduce its accessibility to more and more people. Thus, ecological component of rising in food prices has to be compensated not only in agriculture but also in other sectors of economy;

- *A struggle against the rising number of starving people in the world*. According to the recent FAO's data, today their number makes up about 1 billion, and the number of undernourished people has reached almost one third of total world population; annually 10 million children do not live till their 5<sup>th</sup> birthday due to malnutrition. Hunger and undernourishment are the reasons of rebellions, and sometimes even of terrorist acts, it also causes the diseases spreading, having an impact on intellectual abilities and duration of life etc.

Activities carried out against hunger by international organizations (United Nations, World Bank etc.) didn't result in successful outcomes, and a new strategy for global and regional actions that would allow solving this problem need to be developed for the subsequent period of 10 years.

- *Soil fertility remediation*: fertile soil is God's gift to people, but unfortunately they do not appreciate it and lose it catastrophically (and often irreversibly). This is one of the reasons for food shortage growing and its prices increasing. In this case we also need a global strategy (action plan) on soil conservation;

- *Rational use of Planet's biomass in terms of energy conservation*. Some time back the problem was about intensive destruction of forest areas on the planet, today a considerable amount of fat and carbohydrate of biomass, which are the basic components of food products are used for bioethanol, biogas, and biofuel production. Consequently, some specific international nature management standards for countries exporting oil, natural gas and food must be established. These problems require the development of fundamentally new economic and food policy in terms of global nature management.

**Slide 21.** The Universities of Agriculture and Life Science should play a key role in solving the above mentioned problems, because their mission consists in training the specialists and providing the scientific support of food and agricultural technologies (*slide 21*). Nowadays former Agricultural Universities get transformed into Universities of Life Sciences, of Natural (Biological) Sciences and Environment, of Nature Management etc. And this is a worldwide tendency. There are also many University Associations (both global and regional ones). These universities should network in order to join their efforts more actively to face new global challenges, to prepare specialists according to the principle of negative prevention, this actually is one of the tasks for International organizations of agricultural universities, such as GCHERA and other Regional University Associations. Another important role of the Life Science Universities is participation in social and cultural development of rural areas. And now it's proper time to join their efforts and intellectual capacity globally in order to solve above mentioned issues.

Our universities are becoming global Centers for scientific, technological and cultural advance in particular areas of economy and are joining efforts not only of educational and research institutions but also private business. This could be reached by



means of creation of scientific and technological parks, technopolises, complexes, concerns, associations etc.

**Slide 22.** Such a Corporation “International Scientific Park “Environmental Biosafety and Life Quality” is being established on the basis of the NUBiP of Ukraine. Today the financial organizations which are the participants of our Park have allocated significant financial funds for its functioning (*slide 22*).

We hope that the representatives of the universities and companies who are the participants of the 7<sup>th</sup> World Conference of GCHERA could also organize a Scientific Park. So we invite you to the cooperation.

**Slide 23.** Thank you very much for your attention and let me thank to Mr. Philippe Choquet, GCHERA President, and to all the members of the Conference Organizing Committee for its great organization! (*slide 23*)