

FUTURE AGRARIANS' PROFESSIONAL  
TRAINING OPTIMIZATION IN UKRAINE'S  
HIGHER EDUCATION BASED ON GREAT  
BRITAIN'S EXPERIENCE

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**ABSTRACT**

The article deals with the optimization of professional training future agrarians in higher educational institutions of Ukraine based on the experience of Great Britain. The aim of the article is to analyse the main contexts of improving future agrarians' training in higher education institutions of Ukraine based on the experience of Great Britain. The goals of the article are to compare the current provision of future agrarians' professional training both in Great Britain and Ukraine; to consider the principle requirements for future agrarians' training in Ukraine; to highlight the contexts of optimization of future agrarians' training in higher education institutions of Ukraine grounding on the experience of Great Britain. As a result of the research, we have come to the conclusion that the optimization of future agrarians' professional training in Ukraine based on the practices of British higher agricultural education providers should be implemented in such context as the state, regional and university ones. It is reasonable to create a positive image of agriculture and agricultural education within the state context. Regionally it is useful to develop cooperation of universities and local agribusiness. In the university context the documents such as "Ukrainian Subject Benchmark Statement: Agricultural and Food Sciences" and "Ukrainian Employability Profile: Agriculture and Related Industries" should be designed to cover the peculiarities of work in the agri-food sector and provide educational and career guidance. The variability of forms, methods, and means of teaching and learning combining traditional and innovative aspects is also of great importance. All mentioned above will contribute to the optimization of the educational process and increase the

effectiveness of training future agrarians on the ground of all stakeholders' interaction as it takes place in Great Britain.

**Key words:** agricultural education, future agrarians, Great Britain, higher education institutions, methodological and educational toolkit, professional training, Ukraine, university.

## **АНОТАЦІЯ**

### **Оптимізація професійної підготовки майбутніх аграріїв у вищій освіті України на основі досвіду Великобританії**

У статті розглянуто напрями оптимізації професійної підготовки майбутніх аграріїв в Україні на основі британського досвіду. Метою цієї статті є аналіз основних контекстів удосконалення професійної підготовки майбутніх аграріїв у вищих навчальних закладах України на основі досвіду Великої Британії.

У результаті дослідження в роботі згідно з поставленими завданнями проведено порівняльний аналіз сучасного забезпечення професійної підготовки майбутніх аграріїв закладами вищої освіти Великої Британії й України; розглянуто основні вимоги до професійної підготовки майбутніх аграріїв у вищих навчальних закладах України; висвітлено основні контексти (державний, регіональний, університетський) оптимізації підготовки майбутніх аграріїв в Україні на прикладі досвіду Великої Британії.

У межах державного контексту необхідно створювати позитивний імідж сільського господарства й аграрної освіти; розробити й увести освітньо-кваліфікаційний рівень «Бакалавр з відзнакою» з додатковим роком стажування на виробництві.

Діяльність у регіональному контексті має сприяти співпраці закладів вищої аграрної освіти з представниками фермерства, агробізнесу, суміжних галузей з надання консультаційних послуг, вирішенню питань місцевих територій і населення, харчової безпеки, екології, земле- й природокористування.

В університетському контексті доцільно розробити «Вихідні положення академічних стандартів для аграрних наук і наук про продовольство» для чіткого й сучасного обґрунтування змісту, завдань, очікуваних результатів, відповідних навчальних програм і профілі «Придатності до працевлаштування у сільському господарстві й суміжних галузях» для висвітлення особливостей роботи в агропродовольчому секторі, освітніх і кар'єрних орієнтирів.

Пропонуємо оптимізувати навчально-методичний інструментарій підготовки майбутніх аграріїв на основі варіативності форм, методів, засобів і прийомів навчання, творчого й обґрунтованого поєднання традиційних та інноваційних аспектів навчання та викладання, збільшити сферу використання інформаційно-комунікаційних засобів.

У результаті проведеного дослідження ми дійшли висновку, що напрацювання британських педагогів є корисними для впровадження у

вітчизняну теорію й практику професійної підготовки якісних кадрів для вітчизняного агропродовольчого сектору.

**Ключові слова:** Аграрна освіта, Велика Британія, заклади вищої освіти, майбутні аграрії, навчально-методичний інструментарій, професійна підготовка, Україна, університет.

## INTRODUCTION

Nowadays Ukraine is a participant of current processes of European integration and globalization. These events and intense competition in the domestic and world labor markets as well as renewal rates of agro-food products, production processes, and equipment in agriculture make new requirements for the future agrarians' professional training, its compliance with the needs of society overall and internal needs of the individual in particular.

It is reported that agrarians "have to produce in a more efficient and profitable manner, in a volatile market environment and at the same time, they have to live up to sustainability requirements" (*SWG SCAR-AKIS*, 2017).

International researches confirm that agricultural education impacts positively on the agri-food sector on the whole (Gibbon, 2012; Heanue, & O'Donoghue, 2014; Ison, 1990; *SWG SCAR-AKIS*, 2017). We also consider that the professional training future agrarians in higher education institutions is one of the most important means that can provide the Ukrainian economy with new specialists for the industry, and consequently will cause certain industry updating as a whole.

Overall, the level of future agrarians' training at leading universities of Ukraine is highly rated (Sporysh, 2015). However, experts note that there is a shortage of qualified agricultural specialists at all levels in Ukraine (*Yedyna kompleksna*, 2015). There are several factors negatively affecting future agrarians' training to be overcome by modern higher agricultural education in Ukraine. They are the gap between the results of educational services provision and the needs of agricultural sector; the lack of proper academic and financial autonomy of higher education institutions, and low salaries of academic staff. Practical knowledge, skills and competences of agricultural universities and colleges graduates are inadequate, and their training is too theoretical. The education system lacks an international component and modern teaching technologies, while in some cases pedagogical techniques and scientific activities are far behind world practice. Those mentioned also adversely affect the quality of specialist training (*Yedyna kompleksna*, 2015, p. 75).

Therefore, creative development and implementation of the best practices of world-leading countries, in particular the United Kingdom, as one of the internationally recognized leaders of higher agricultural education is sensible and relevant, as it will create the conditions for providing a basis for improving the professional training of future agrarians in higher education institutions of Ukraine.

With regard to scientific research, features of the current state and future directions and prospects of human resources training for Ukraine's agricultural production are widely discussed (Zhuravskaia, 2009; Kostrytsia, 2009; Lesyk, 2014; Lushchik, 2017; Oleksenko, 2011).

Most scientists are of the opinion that the leading direction of pedagogical science in the field of agricultural education is the preparation of future agrarians not only for effective professional activity but also for the full development of the individual. However, the contexts of optimization of future agrarians' professional training in Ukraine's higher education institutions based on the experience of Great Britain are not well represented, and the issue remains a challenge.

### **AIM OF THE ARTICLE**

The purpose of the article is to analyse the main contexts for improving professional training future agrarians in higher educational institutions of Ukraine on the basis of Great Britain's experience. The goals are as follows: 1) to compare the current provision of future agrarians' professional training in higher education institutions both in Great Britain and Ukraine. 2) To highlight the principal requirements for future agrarians' professional training in higher education institutions of Ukraine. 3) To consider the contexts of future agrarians' training optimization in Ukraine's higher education institutions based on Great Britain's experience.

### **METHODOLOGY**

The methods of analysis, educational research, classification, comparative analysis were used.

### **RESULTS AND DISCUSSION**

Leading scholars take the view that the preparation of highly educated agrarians is an undeniable fundamental factor in the qualitative transformation and renewal of Ukrainian agro-industrial production, ensuring the comprehensive development of rural areas, meeting high social living standards, etc. (Zhuravskaia, 2009; Kostrytsia, 2009; Lesyk, 2014; Oleksenko, 2011).

On the one hand, agricultural university education is an important means of training highly professional personnel for the industry of any country. On the other hand, it is generally acknowledged that the dominant factor influencing agricultural education is the development of agriculture and related industries since they are "customers" and "consumers" of agricultural specialists concurrently. So, a brief comparison of agriculture both in the UK and Ukraine is sensible.

The factual evidence shows that nowadays agricultural businesses across the UK contribute to improving the quality of life. They not only meet people's quality food requirements, but they also affect positively on their well-being, provide conditions for rest and recreation, develop the rural territories, enrich urban space with greenery, protect natural heritage and environment. Employment in the UK's agriculture amounts to 1.135% in 2018 as for *The World Bank Data*.

Ukraine's agro-food production has historically played an important role in the country's economy. It is considered that our country has good preconditions for the

development of a significant agricultural sector. Experts note that agriculture alongside IT is now one of the key drivers of Ukrainian economy (Kovalova, 2019). In addition, the share of agriculture in the employment structure of Ukraine is 15.253% (*The World Bank Data*, 2018).

In considering the agricultural sectors of the two countries, it is worth noting that the UK's one is small relative to the UK economy as a whole in comparison with the Ukrainian one. Agriculture, forestry, and fishing value-added (current US\$) amounts to 16.053 billion in the United Kingdom and 13.263 billion in Ukraine in 2018. But there is a difference in the GDP of agriculture value-added. Ukraine's indicator (10.137%) is higher than the UK's (0.568%) one. However, there is the bigger productivity of the UK's agriculture (on average in 10 times) in comparing with Ukraine's one. Agriculture, forestry, and fishing value-added per worker (constant 2010 US\$) is 47,811.695 in the UK while it is 5,099.263 in Ukraine (*The World Bank Data*, 2018).

It can be explained with low efficiency of resources using, outdated equipment and machinery, obsolete technology and lack of high-qualified employees capable of implementing new managerial approaches and world best practices in Ukraine. Higher professional agricultural education is one of the important means that can provide the economy with new professionals, which will consequently contribute to the renewal and development of the agricultural sector.

Therefore, we consider it advisable to address the current provision of training future agrarians in the UK and Ukraine.

Agricultural education providers of Great Britain have a number of specific features that are considered in more detail below. Thus, training future agrarians is delivered by further education colleges / FECs, monotechnics (Harper Adams University, Royal Agricultural University, and Writtle University College), and at the faculties of universities. The three mentioned monotechnics train 20% of the industry's specialists. At the same time, further education colleges are also important providers of agricultural education and train at least 40% of agricultural students (often in cooperation with higher education providers). Further education colleges are of particular importance to the local area, both in the field of student engagement and in business relations. The other 40% of agricultural education is provided by the departments or faculties of universities (*Review of provision*, 2007).

According to the information from Universities and Colleges Admission Service in the UK, 43 providers – universities and colleges – deliver higher education undergraduate courses on agriculture and agricultural sciences (UCAS, 2018). In general, the number of students studying agriculture and related subjects in the academic years 2017 - 2018 amounts to 18680 people (*Higher Education*, 2018). In addition, agriculture is considered to be the UK's fastest-growing subject and a smart career choice (Truss, 2016).

Nowadays, higher agricultural education in Ukraine is delivered by the network of 22 higher agricultural education institutions, including 17 universities (12 of them have the status of national and 1 research one), 2 academies, and 3 institutes in the structure of universities (*Statystychno-analitychni doslidzhennia*, 2019, p. 4).

At the present stage agricultural higher education institutions prepare future agrarians in accordance with the list of knowledge areas and specialties updated and significantly close to the European requirements. So, knowledge areas “Agrarian sciences and food” covers 8 specialties, namely: Agronomy, Plant Protection, and Quarantine, Gardening and Viticulture, Food Technology and Processing of Animal Products, Forestry, Gardening and Landscaping Design, Aquatic Bioresources and Aquaculture, Agro-Engineering. In addition, agricultural higher education institutions train specialists in such specialties as Finance, Banking, and Insurance; Economics; Accounting and Taxation; Veterinary Medicine; Veterinary Hygiene, Sanitation, and Expertise; Electricity, Electrical Engineering, and Electromechanics.

It should be noted that, compared to 2017 in 2018, the number of Bachelor’s degree specialties increased from 49 to 51, and Master’s degree from 44 to 46 ones (*Statystychno-analitychni doslidzhennia*, 2019, p. 7).

Among students enrolled in full-time undergraduate courses 60.8% study agricultural specialties, 17.9% study economic ones, 2.5% – building and construction, 3.8% – food and processing, 2.6% – computer technology, and 12.4% study other specialties (*Statystychno-analitychni doslidzhennia*, 2019, p. 19).

Lviv National Agrarian University, State Agrarian and Engineering University in Podilia, Sumy National Agrarian University, Uman National University of Horticulture, Kharkiv Petro Vasylenko National Technical University of Agriculture and National University of Life and Environmental Sciences of Ukraine offer the widest range of specialties to applicants (Skydan, & Samoilenko, 2016, p. 77).

Analysis of the full-time students’ enrolment rates reveals that students’ admission to specialized agricultural specialties as well as other ones tends to decrease steadily. It is undoubted that the dynamics of student contingent of Ukraine’s higher education institutions, including agricultural universities, has been significantly influenced by the demographic situation regarding the decrease in the number of secondary school leavers (demographic bottom in 2018) (*Statystychno-analitychni*, 2019, p. 35).

Agricultural education understandably must be integrated into the socio-economic process, as it is to solve the problems of competitive, efficient and socially-oriented industry development. Thus, substantiating the conceptual scheme of future agrarians’ training in higher education institutions of Ukraine, V. Oleksenko emphasizes that future agrarians, in addition to their specialty and high qualification, must have some personality characteristics, among them: to think independently, to see future difficulties and to look for ways to overcome them rationally; to acquire competencies consciously, understanding how and where they

can be applied; to adapt to rapidly changing life situations, to be able to generate new ideas, acquire new knowledge independently and apply it skilfully and practically to any problem; work with information productively, to be able to find, analyse, and collate information with similar one, to hypothesize, make generalizations and conclusions (Oleksenko, 2011, p. 117).

Thus, in general, updating future agrarians' training in higher education institutions should focus on bringing up highly qualified and skilled professionals, which navigate modern professional innovations easily, think independently and critically, are ready to research, capable of self-fulfilment in professional activity.

Reforming and developing Ukrainian higher education in general, and agricultural one in particular, the national heritage and traditions of higher education should be preserved, as well as European and world integration with the Bologna process should be followed.

When it comes to the national vector of agricultural education improvement, we support N. Kostrytsya's opinion. "The agrarian component as a specific feature of social relations in Ukraine has always taken a significant place in the formation of the Ukrainian national consciousness. In this regard, the participation of Ukraine's higher agricultural education in the Bologna transformations should be aimed at preserving the best national traditions in the education and training system" (Kostrytsia, 2009, p. 257).

Priority measures for improving higher agricultural education are defined at the state level (*Yedyna kompleksna*, 2015, p. 76). "Taking into account that education should be proactive, today it has the task of providing the agricultural sector with highly-skilled, competitive and mobile professionals in the labour market, who could work in the new socio-economic conditions, act independently and make optimal decisions in irregular situations, command perfect modern production technologies. Therefore, the first and foremost task facing higher education institutions today is to ensure the quality of education in accordance with the requirements of modern agro-industrial production. Agricultural education is a powerful scientific and educational complex that provides agricultural producers with the necessary personnel, develops university science, promotes sustainable development of rural territories" (*Statystychno-analitychni doslidzhennia*, 2019, p. 4).

A comparative analysis of the agricultural sector of Ukraine and Great Britain, as well as future agrarians' professional training in higher education institutions of these countries, demonstrate a significant difference between the two countries and their educational systems. In 2005 Ukraine accepted the Bologna Accords, but the whole process of educational changing is not completed. The process of globalization goes on. Moreover, one of the state policy principals in the area of educational system of Ukraine stipulates "international integration and integration of higher education system of Ukraine into the European higher education area,

provided that the achievements and progressive traditions of the national higher education are preserved and developed” (*Pro vyshchu osvitu*, 2014).

We believe that British education has valuable pedagogical accomplishments in the field of future agrarians` training in the broadest sense. Therefore, this provides us with a basis for outlining ways to solve problematic issues in Ukraine’s higher agricultural education, taking into account the best practices of high agricultural education in the United Kingdom.

In the light of mentioned above, the British experience of training future agrarians in higher education institutions of Ukraine can be implemented in the following contexts: state, regional, and university ones.

The state context covers creating a more positive image of agriculture and agricultural education. There is no bias towards agriculture in general and agricultural education in particular as a non-prestigious and unpopular career in British society unlike in Ukrainian one. “In farming, as in gardening, I happen to believe that if you treat the land with love and respect (in particular, respect for the idea that it has an almost living soul, bound up in the mysterious, everlasting cycles of nature) then it will repay you in kind”, – HRH, the Prince of Wales (En.wikipedia.org, 2019). By the way, the Prince, who is President of the Royal Agricultural University, meets students, staff and industry specialists and inquires about practical activities and workshops held at the University’s Rural Innovation Centre. In general, he promotes education, innovation and knowledge exchange in agriculture. He emphasizes the undeniable importance of agricultural education and agriculture for the successful development of the United Kingdom (*Royal Agricultural University*, 2017).

It is worth mentioning that at the UK’s governmental level it is pointed out that “British food and farming is a fantastic brand, recognised and admired around the world” (Truss, 2016). The new British generation is constantly motivated being excited about farming. Nationally a lot of opportunities are seen and represented in farming through agricultural education – like new technology, increasing sustainability and adding value through the food chain. “By opening itself to the widest pool of people, this great industry is harnessing all the available talent” (Truss, 2016).

Media also stimulate the increasing popularity of higher agricultural training in Great Britain. In particular, BBC Countryfile has devoted a set of episodes to young people in agriculture (*Young Farmers Compilation*, 2016).

Therefore, the implementation of measures supporting Ukraine’s agriculture and agricultural education at the highest level, as well as by the mass media, will create the preconditions for increasing the attractiveness of work in agribusiness, the acquisition of agrarian professions in higher education.

The state should support and develop greater autonomy of universities by implementing one of the methodological foundations of the new Law on Higher Education of Ukraine. Ukraine’s universities have the potential and foundation to



care for the content and quality of education, developing their training programmes for future agrarians independently. In this case, it should be recalled that British higher education institutions have broad autonomy in curriculum design, reflecting a high degree of public confidence in universities.

As new standards for higher education are currently being developed and implemented in Ukraine, we share A. Naidonova's opinion on the feasibility of introducing a Bachelor Honours Degree (Naidonova, 2015), which exists in higher agricultural education in Great Britain, with an additional year of training at an enterprise that will facilitate early meaningful collaboration between employers and potential agrarian professionals.

In the regional context, the experience of British higher education institutions on providing advisory services to the local community, farmers, businesses, agricultural production, and local authorities will be useful for Ukraine's universities. Thus, it is a question of forming in the market environment the image of an educational institution capable of being supportive to production and the general public.

Following the British example, it is the universities' domain to become both creators and translators of the latest knowledge, technology, industrial and management experience in agriculture and related fields at the local level. Both sides benefit from the cooperation of universities with different representatives of local communities. The university community has a basis for conducting research and validating their results by engaging in solving the region's problems. Another important aspect covers the educational process, which is enriched by a practical component.

In the university context for updating future agrarians' training Ukraine's agricultural institutions should intensify their educational and career guidance work aimed at delivering young people with information about the role of agriculture, agricultural education and industry experts in overcoming environmental and food security issues, intensively run by UK universities. They organize relevant events, field trips, open days, etc. (*Royal Agricultural University*, 2017). Ukrainian universities should make greater efforts to educate and involve students in activities concerning existing and potential food security risks, encouraging young people to find ways to overcome the issues (annual Global Challenge on Food Security and Agriculture, international youth agro summits, Google Science Fair and many more).

Another important step that is able to modernize the image of Ukrainian agricultural education, which can be borrowed from British providers, is the rebranding. In addition to traditional specialties, education institutions in the United Kingdom are offering new ones, emerging by demand for rural employment diversification: in the fields of agro-tourism, alternative energy, environmental agriculture, consumer sciences, etc.

Ukraine's agricultural universities should develop academic and student mobility by

expanding relationships with national and international educational, research and business partners, as is the case in Great Britain. For example, the Royal Agricultural University collaborates with British institutions and with institutions in China, Hong Kong, the United States, South Africa, New Zealand, Canada, Australia (*Royal Agricultural University, 2017*).

There is now a leaving from the traditional interpretation of agrarian professions in the context of the “human-nature” system, caused by a change in the activity orientation of the agricultural specialists, and coming closer to the “human-human” system. Increasing ties with the world of work, the development of social dialogue, the expansion of cultural boundaries have led to an increase in the role of communication in the professional activities of agrarians. In view of the above, the issue of advanced study of foreign languages (both by students and academic staff) in Ukraine’s agricultural education institutions is updated in the light of future agrarians’ communicative competence development. Foreign languages proficiency gives an opportunity to get acquainted with world scientific achievements, experience, as well as to enter the world educational space.

It is sensible to develop “Ukrainian Subject Benchmark Statement. Agricultural and Food Sciences” consensus-based and drawing on the example British “Subject Benchmark Statement. Agriculture, Horticulture, Forestry, Food, Nutrition and Consumer Sciences” (*Subject Benchmark, 2016*) for a clear and up-to-date substantiation of the nature and specifics (content, objectives, goals, expected learning outcomes, etc.) of Ukrainian training programmes. British document lays the foundation for the design of future agrarians’ training programmes and anticipates the expected learning outcomes of bachelor’s degrees in terms what they need to know, do and understand on completion of their studying.

Developing new mono- and multidisciplinary modular programmes in Ukraine’s agricultural higher education institutions that are proactive and meet the needs of rural employment diversification is an important task. Modern employment market determines that fact that the practice of deep division of labour in agriculture and the corresponding system of training highly specialized workers have run its course. Although the traditional discrete-disciplinary model of learning has a number of advantages, it is impossible in its frame to fully address some of current important challenges, such as: ensuring the integrity of students’ acquisition the modern content of education, as well as the obtainment of systematic knowledge, skills and competences (Lesyk, 2014).

Based on both British and Ukrainian scholars’ researches, there is a necessity of transition from disciplinary to interdisciplinary and transdisciplinary thinking and practice in general and in the field of higher agricultural education in particular. In terms of interdisciplinarity, any problem is considered not in isolation but in context as part of a particular system. Comparing disciplinary and interdisciplinary education, D. Gibbon draws attention to a range of peculiarities. The basis of disciplinary agricultural education is the development of technical means; teaching

(with a dominant teacher's role); individual experts' researches; positivist-realistic epistemology; problem solving and logic of reasons. Interdisciplinary agricultural education focuses on the development of adaptive productivity based on adaptive learning; joint researches involving farmers; constructivist epistemology; not just eliminating the problem, but improving the situation; logic of intentions (Gibbon, 2012, p. 97).

Considering agricultural education as the basis for research in agriculture it is noted that the disciplinary approach leads to researches focusing on biophysical parameters taken out of context; developed solutions; invariant, absolute results; controls and manipulation of the environment; attempts at social engineering. In contrast, interdisciplinary education promotes researches leading to structural changes; discussion of potentialities and tasks within the limits of human intentionality; adaptive efficiency and adaptive management, adoption of multiple perspectives; controversial conditional results, creation of teams, groups, coalitions, platforms, networks; co-evolution of society and environments, etc. (Gibbon, 2012, p. 97).

Transdisciplinary training involves learning and solving problems based on the joint participation of different community parts to solve the complex problems of society. Since solutions are developed in cooperation with many stakeholders, peer-to-peer learning takes place, the knowledge of all participants is enhanced (Gibbon, 2012, p. 96).

Therefore, it is fundamental for any agriculture degree to integrate the natural sciences, the disciplines focusing on the productive sectors, and those meeting social, economic and environmental needs based on sustainable development. As the subject of agricultural activity is human, economic and nature jointly, it is the multidisciplinary approach in the process of education and research that enables British agricultural graduates to be competitive in the modern labour market. In general, Ukrainian scholars interpret interdisciplinarity as the development of integrated courses in which individual scientific disciplines are brought together under a common concept or general framework (Zhuravskaia, 2009, p. 149). We support N. Zhuravskaia's opinion that the application of an interdisciplinary approach is aimed at educating students' broadmindedness, lateral thinking, ability to solve common cross-sectoral problems, to see the relationship between fundamental research, technology and production needs as well as the ability to evaluate effectiveness of innovation and organize its practical implementation (Zhuravskaia, 2009, p. 149).

Practical implementation of various programmes in the field of agriculture and related industries, including training specialists in economics, environmental production, consumer sciences, food safety, green tourism, etc. in Ukraine's agricultural higher education institutions as is the case at British universities will contribute to improving the quality of agriculture management, food security, rural development both the particular region and the country as a whole. Programmes

diversification would allow Ukrainian students, like the British ones, to focus on mastering the courses most corresponding to career and personal preferences (Lushchuk, 2017).

Improvement of module education at Ukrainian universities in training future agrarians (following the UK's practices) is an important element of integration of fundamental and professionally-oriented disciplines. Modularity embodies the principle of flexibility and adjustment to the needs of the practice, facilitates deployment of proactive learning while training professionals with advanced skills both in basic sciences and in the field of technological development of agricultural-industries. The aspects of management, economics, environmental interactions, sustainability, and bioethics, as well as agrarians' responsibility for the wider consequences of agricultural activities, are of great importance.

Based on the British experience, Ukraine's agricultural universities should increase the elective component of future agrarians' training, allowing students to select learning modules independently according to their personal preferences and professional aspirations. Such an approach can increase students' motivation and interest in learning, develop a sense of responsibility for their future.

While designing programmes the practical component, for example, a managed placement or work-based learning should be increased. This involves high education institutions cooperation and interaction with potential employers in the development of both training programmes and "industrial attachment". It can create prerequisites for minimizing the divergence between the theoretical and practical training and bringing learning content closer to the real demands of the labour market.

Learning in the professional environment is one of the main points for awareness, and sometimes for students' rethinking of personal value system. It is a common tradition for British higher agricultural providers to incorporate practical learning projects with agricultural enterprises ("practice learning"). This includes making it procedurally possible that students learn (more) outside the classroom, next to (general) traineeships. Research results show that students learn a lot from practical settings in which they work for, or together with enterprises. They gain many different competences. In general, they are very enthusiastic about working in real-life business cases. The entrepreneur gains by getting fresh, open-minded ideas and interesting new 'work forces' (SWG SCAR-AKIS, 2017).

During "industrial attachment" students' training is directly merged with professional activity and as a consequence, their assessment and acceptance of professional values occur more actively and "personally". In general, the better the students' work placement system, which links theory to practice, the higher the quality of training.

It is advisable Ukrainian agricultural higher education institutions together with all stakeholders to start creating "Ukrainian Employability profile: Agriculture and related industries" such as the UK's "Employability profile: Agriculture, Forestry,

Agricultural Sciences, Food Sciences and Consumer Sciences” (*Employability profile*, 2007), which would highlight the peculiarities of work in the agro-food sector, provide educational and career guidance and, accordingly, contribute to the formation of young people’s deliberate career choices and the qualitatively new staffing of agriculture.

In addition, it is advisable to deploy an inter-university Career Service for students and alumni. British agricultural universities, where such ones operate, are examples. University Career Service offers guidance and career advice to students and graduates. This ensures that future agrarians receive up-to-date knowledge whilst making valuable contacts with industry employers. It provides access to a wide range of resources about occupations, employment, and study opportunities, a large list of job vacancies on the university’s job portal; provides one-to-one guidance from a professionally trained career adviser; offers email advising on specific queries and CV checking service; organizes skill training sessions focusing on CV writing and interview skills; holds annual careers fairs open to all students and so on (Royal Agricultural University). According to statistics, 90% of the Royal Agricultural University graduates are in employment within six months of leaving it, being regularly recruited by some of the world’s leading organisations (*Royal Agricultural University*, 2017).

Given the rapid ageing of the acquired knowledge in the agricultural sector, it is appropriate to shift the emphasis from reproductive methods of knowledge development to the formation of a culture of self-development, the use of productive methods and approaches to mastering relevant knowledge and skills. In other words, it is necessary to optimize the educational and methodological toolkit for training future agrarians based on the variability of forms, methods, means, and techniques of training, a creative and reasonable combination of traditional and innovative aspects of learning and teaching.

Traditional educational paradigms based on reproductive learning are being replaced with new innovative pedagogic methods both in Great Britain and Ukraine.

Currently, the leading educational model of training future agrarians in British higher education institutions is the “learning paradigm”. It is characterized by shifting from the passive acquisition of learning material, facts and routines to the active application of ideas to problems. This approach is implemented in three main areas. First, agrarian students must be given more autonomy by the development of flexible, learner-centred curricula as opposed to teacher-centred one. This enhances students’ responsibility, develops their leadership, innovation, creativity skills.

Second, the emphasis must be placed on the application of concepts or knowledge to problem situations of industrial, developmental, environmental or organizational nature, and reaching an agreement about the problem in working with people. That is the creation of a problem-determined learning system, where the essence of the

problem and the needs of the learners determine the content of the training (Ison, 1990, p. 8–9).

One of the agrarians' professional training efficiency criteria, along with their ability to increase productivity and modernize production is the ability to lifelong self-learning, personal and professional development. So, third, greater responsibility and power given to the students encourages them to understand the real world better (Ison, 1990, p. 8–9).

Mentioned above covers the necessity to implement many different formats for teaching and learning for the development of students' subject-specific knowledge and abilities, and generic skills into the educational process of Ukrainian agricultural universities. It is a good idea to deliver students both traditional lectures and their more modern interpretations, focused on the principle of active learning: press conferences, debates, lectures using multimedia presentation, etc. A fact of great importance is the integrated development of practical classes in and outside the laboratory (defined broadly and including a range of specific facilities), workshops, field works, visits to commercial and industrial agribusiness, consumer organisations, public services, policy-making bodies and research organisations etc., creating opportunities for work experience as a logical complement to the theoretical component.

The British tutorials (individual and group; supervised and practical ones) as one of the ways of interaction among teachers and students have significant didactic potential in the context of Ukrainian agricultural education.

The application of step-by-step discussion and controlled discussion, as well as the student-led seminars, presentations, debates and so on, can contribute a lot to updating the traditional seminars in the Ukrainian agricultural education system.

Generally speaking, priority should be given to teaching and learning formats, focused on creating, analysing and solving problems arising in agricultural production related to certain technologies application and also forcing future agrarians to act in accordance with current situations, to be responsible for socio-economic, environmental and food secure impacts, to enhance the development of sustainable agriculture and rural areas.

It is an important point that methodological toolkit (forms, methods, means) of training future agrarians in Ukraine can be improved by introducing progressive forms of education approved in the UK. Traditional paradigms both in Great Britain and Ukraine based on “presential” education, when the student is actually present in the classroom, are being enhanced with new innovative pedagogic methods and remote learning. Examples are: blended learning (integrating presential and virtual methodologies), mobile learning (when students work from different devices like tablets, notebooks, and smart mobiles), and flipped classrooms (when students develop videos for fellow students to gain better comprehension on a certain topic). We also mean such forms of learning with ICT tools as online lectures, web conferences, webinars, multimedia presentations, as well as applying *Moodles*

(Modular Object-Oriented Dynamic Learning Environment) and *PRSs* (Personal Response System), effective feedback by emailing, electronic assessment of learning outcomes and individual work, etc., which are widely used by UK's agricultural education providers. The researches illustrate that methodologies that allow students to prepare the lessons beforehand with a focus on exchanging ideas and experiences during presential lessons are very effective. However, for a successful learning process, the application of ICT learning tools should be concentrated on providing adequate conditions for interaction and exchanging knowledge and views among the participants.

Therefore, fascination with ICT should in no case displace the forms of interpersonal interaction between the teacher and students or students with one another.

In general, it is necessary, according to British experience, for Ukraine's higher education institutions to create conditions for effective integration of ICT in the process of training future agrarians, namely: to develop and enact the infrastructure which covers various possibilities for students and teachers information access; integrates students and teachers knowledge and capabilities; changes both content and nature of teachers' and students' activity in the educational process, emphasizing more active, creative and responsible role of learners.

Another aspect of meaningful use of British agrarians training practices, which cannot be ignored, is the distance education. Pointing out that agriculture is a particularly difficult area for distant education at a higher level, since while theory can be taught at a distance, ultimately agriculture is a practical science and needs land and equipment, British scholars remark that even practical scientific skills can be taught at a distance with innovative technologies (Cook, 1998).

As the role of distance education in the world is increasing, the development even particular elements of future agrarian training programmes for distance teaching and learning, as is the case in Great Britain, could be the first step in the further deployment of distance agricultural education in Ukraine.

## **CONCLUSION**

As a result of the research, we have concluded that the experience of British agricultural education providers is useful for implementation into Ukraine's theory and practice of highly qualified agrarians training.

From this standpoint, the principle contexts for optimization of future agrarians' professional training in higher education institutions of Ukraine should be state, regional and university ones. The implementation of mentioned above can facilitate to resolve the shortcomings of higher agricultural education, optimize the educational process and increase the efficiency of future agrarians' professional training based on the cooperation of students, staff, and representatives of the agricultural sector due to taking into account the requirements and aspirations of all stakeholders.

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