Розділ ІІ

ОСВІТА ДОРОСЛИХ У КОНТЕКСТІ ПОРІВНЯЛЬНО-ПЕДАГОГІЧНИХ ТА ІСТОРИКО-ПЕДАГОГІЧНИХ ДОСЛІДЖЕНЬ

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AGRICULTURAL PERIODICALS AS A MEANS OF FUTURE AGRARIANS TRAINING IN UKRAINE (THE LATE NINETEENTH – EARLY TWENTIETH CENTURY)

Summary. *The role of agricultural periodicals for the emergence and development of national science and education was defined as a single source of information before the appearance of mass communication as an only adjuvant between theoretical researches and their practical implementation. The importance of thorough analysis of the informational role of periodicals for better understanding and systematization of scientific knowledge in agricultural education of our country was outlined in order to improve comprehension of the transformations and changes that occur in the modern scientific community of universities and to improve training of future professionals and researchers.*

Key words: *agricultural education, agricultural periodicals, agricultural students, information support, means of teaching, professional training, professionals.*

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СІЛЬСЬКОГОСПОДАРСЬКІ ПЕРІОДИЧНІ ВИДАННЯ ЯК ЗАСІБ НАВЧАННЯ МАЙБУТНІХ АГРАРІЇВ В УКРАЇНІ (КІНЕЦЬ ХІХ – ПОЧАТОК ХХ СТОЛІТТЯ)

Анотація*. У статті досліджено роль сільськогосподарських періодичних видань у становленні й розвитку вітчизняної науки та освіти, як єдиного на той час засобу масової комунікації, проміжною ланкою між теоретичними дослідженнями і їх практичним впровадженням на місцях. Окреслено важливість необхідності ґрунтовного аналізу інформаційної ролі періодичних видань для кращого*

розуміння й систематизації наукових знань у аграрній освіті в нашій державі з метою кращого розуміння тих перетворень та змін, які відбуваються в університетському науковому середовищі в наш час і для більш ефективної підготовки майбутніх фахівців та науковців.

Ключові слова: *аграрна освіта, засіб навчання, інформаційна підтримка, професійна підготовка, сільськогосподарські періодичні видання, студенти-аграрії, фахівець.*

Introduction. The development of education in any country is the determining factor in the level of growth of intellectual potential in the society and creates conditions for the scientific, technical and socio-economic progress. At all times, education must use the best achievements of science, technology and innovations for the successful training of future scientific and industrial personnel. Modern high-quality advanced education system adapting its citizens to a society that is constantly changing, allows the country to rise to a higher level of development to become a truly independent and self-sufficient state.

After studying the notion of completion in the scientific literature we found that the training of agricultural students in their future development was quite a long process from the emergence of agricultural schools and associations, experimental fields for training and exchange of experience between agricultural specialists before the appearance of the first higher agricultural institutions. Modern students receive comprehensive theoretical and practical knowledge based on years of experience of many researchers and enthusiasts practitioners who for years conducted supervision, gained experience through scientific experiments and realized practical guidance of agrarian economy. The results of this work is reflected in different periodicals that were represented as the only source of information before the advent of modern information technology, served for the exchange of results between the various agricultural agencies and institutions, shared information about the best international experience.

Periodic agricultural publication from the start have become a powerful tool for information exchange and were as a result one of the most important factors in the popularization of scientific achievements, ideas and surveys between the various institutions and organizations and became a leading source in the development of university researches. For this reason, we believe that the historical agricultural periodicals studying as well as the systematization and generalization of their experience are important for use in modern agricultural students training.

Analysis of recent research and publications. The incipience and development of agricultural education in Ukraine was supported by the emergence of a number of periodicals that became the main source of information exchange and propagation of knowledge between various scientific

societies, centers, organizations, and educational institutions. The problem of emergence and development of agricultural periodicals in Ukraine and their impact on the agricultural education and science have been studied by many scientists, including K. Veselovsky A. Borynevych, S. Bogdanov, M. Neruchayev, A. Malihonov, S. Dmitriev, M. Saharda, A. Pylypchuk, I. Grebtsova, A. Zavalniuk, O. Shkolna and others.

Thorough research of the development of agricultural education in Ukraine was conducted by such scientists as L. Bilan and S. Bilan. They studied materials of the Zhurnal Ministerstva narodnoyi osvity (Journal of the Ministry of Education), Zbirky rozporyadzhen' Ministerstva narodnoyi osvity (The collection of instructions of the Ministry of Education), Zhurnal Ministerstva derzhavnoho mayna (Journal of the Ministry of State Property) and periodicals of higher educational institutions, such as Zapysky imperators'koho Kharkivs'koho universytetu (Notes of the Imperial Kharkov University) and Zapysky Novooleksandriys'koho instytutu sil's'koho hospodarstva ta lisivnytstva (Notes Novooleksandriyskoho Institute of Agriculture and Forestry) about the progress of the educational process in the ninetieth – early twentieth century as well as the materials of curricula changing, introduction of new courses and lectures, organizing and conducting of workshops, training laboratories, the principles of assessment of student learning. In his study, L. Bilan and S. Bilan proved that the origins of agricultural education and science go back to ancient times, and stated the emergence of the first special education agricultural schools [1].

Studying the organization of agricultural research institutions network in Kyiv region in late ninetieth – early twentieth century O. Zavalniuk referred to individual publications of Kyiv regional agricultural experimental station issued as specialized editions and in some agricultural journals [3]. We believe that due to these scientific publications O. Zavalniuk was able to follow the dynamics of the agrarian science in the region and to highlight some aspects of the scholars' researchers of that time, to get a more complete picture of the scientific achievements of our predecessors.

The development of agricultural knowledge and the support of agricultural publications in different regions of the country were studied by such scholars as V. Malyuga (Chernihiv region) O. Mikhailyuk, E. Podobna (Poltava region) and others. Agricultural journals of Zaporozhye were studied by T. Hitrova.

The aim of the study is to conduct a theoretical analysis of Ukrainian agrarian periodicals of late ninetieth – early twentieth century as a means of modern agricultural specialists training.

Theoretical framework and research methods. However, it should be noted that the study of the impact of agricultural editions of late ninetieth – early twentieth century on the development of agricultural science and education and their role in training of agricultural students were generally unexplored. We

believe that the special scientific interest is constituted by the agricultural periodicals of the specified period because they were among the most numerous at that time, and they played a leading role for information exchange between scientists and educators from different regions and institutions. They described the results of many observations of the climate change, documented the experiments of sort production and the cultivation of new breeds. Yet many of these sources were ignored by the researchers.

The methodological basis of the study is the conceptual ideas of the scientific and educational process development, modern theories of mass communication and periodical press evolution observation. During the materials selection and the paper writing we used such research methods as genre classification, bibliographic, statistics, and functional analyses as well as structural and typological research. At the studying of archived materials the methods of content analysis and abstraction were used.

Consequently, we had conducted a content analysis of a certain number of journals of the mentioned period and examined their role in the training of modern agricultural students and future farmers. A number of archival materials was investigated as well, most of which was first introduced into scientific circulation.

Research results. One of the most important factors of scientific information dissemination in the past was the development of special professional literature, and a special place among them was rightfully won by the branch periodicals. It contributed to the rapid informative exchange of the latest scientific and technical results, assisting the scientists in consulting about the work of their colleagues both within their own state, and abroad, served as intermediaries between theoretical research and their practical implementation.

Periodicals through a number of properties were the most suitable for providing of information support of science. Thanks to the regularity of their publications, the possibility of rapid proliferation to the most remote regions of the country, relatively inexpensive price it was the most expeditious means of communication. In particular, it concerned the studied period when all the other means of communication available to modern scholars, were not yet or just started emerging.

Among the factors that were important for the development of natural sciences in our country, was the promotion of scientific ideas, which have found considerable support in the labors of many scholars and publicists of late ninetieth – early twentieth century. At that time, numerous conferences and congresses of universities, scientific societies were an important factor that served as a link between scientists of any related branch, as well as between scientific institutions and society in the southwest of the former Russian Empire. First, the main centers of research work were the laboratories of few universities and higher technical educational institutions. Some ministries and departments have scientific and practical institutions that perform certain types

of studies (such as The Main Control Surveying Military Department, Agricultural Scientific Committee, Geological Committee of the Ministry of State Properties and others.). Of all the types of research institutions the university science was in a better position, as the process of democratization was conducted there more successfully, the number of departments was increasing, new publication appeared regularly, although it should be noted that the funding of science at that time was irregular and unsystematically. The national system of scientific process organization was irrational and to some extent ill-adjusted, nevertheless, due to the large number of scientific and technical societies the scientists could avoid the rigid statutory regulation characteristic of the university and academic science of that time. Scientific societies suffered less from state control as existed mainly on membership fees and donations. In that period the Academy of Sciences was rather a closed scientific institution, so it was not surprising that the universities became the main driving force of science in the country since the increased autonomy granted to universities under the new ordinance 1863. This greatly contributed to the improving conditions for the development of science and press.

As an example of general agricultural journal of national importance we can name the agency of the Ministry of State Property, the journal Sel'skoe khozyaystvo i lesovodstvo (Agriculture and Forestry). This journal originated in the early 40s of the nineteenth century in St. Petersburg and was one of the oldest agricultural periodicals. From the late nineteenth century every four months it started publishing lists of articles together with a short summary, i.e. on a quarterly basis. The journal continued to accommodate serious scientific works of contemporary scholars of natural and agricultural sciences. A significant part of all scientific articles concerned Ukrainian agriculture and printed the works of Ukrainian scientists based on researches conducted by local agricultural institutions, institutes, scientific agricultural societies. If in the beginning of the second half of the nineteenth century the journal referred mainly to the experience of the foreign scientists, at the end of the century the tendency changed and the basic theoretical authorship of scientific publications belonged to the national scientists among them Ukrainian. In addition, the bulk of the publication of original articles on science and agriculture were placed in every issue, on average, up to a dozen original articles belonging to recognized researchers and practitioners of the above mentioned fields, including the number of articles devoted to the issues of Ukrainian agriculture, which occupied by 30 to 50% of the volume of each issue. Likewise, the journal continued to print rubrics like From the foreign literature, Bibliography, which allocated the posts of the latest national and foreign branch literature. A significant part of pages of various periodicals was assigned to the announcements of a commercial nature.

If we consider the content of various rubrics of the journal in 1893, we can see that their location was quite homogeneous from issue to issue.

Table 1

Thematic distribution in the journal Agriculture and Forestry

Rubrics' titles	Journal's issues		
	Numbers 1-4	Numbers 5-8	Numbers 9-12
General rubrics	17	16	12
Foreign References	10	8	11
Bibliography	7	20	17
Forest Reviews	0	0	1
Announcements	0	1	3

Evidently, the quarterly amount of material in each section was approximately the same. The ratio of the articles' proportion, which informed about the innovations in the foreign and national literature, changed towards the latter. It indicated about the increasing importance of the national scientific literature, enhancement of the number of titles and circulations, as well as the authority of local scientists.

The confirmation of this idea we can find looking at separate articles of each issue. There are a large number of famous authors' names among the national scientists, who drew attention by serious scientific approach to the presentation of each item, supported by the practical experiments. As an example, we can mention the work of Ukrainian scientists A. Tyhomyrov Threats to modern sericulture, A. Horbatovs'kyy About oats crops in the southwestern region. Experiments of different varieties of oats cultivation, D. Ivanovs'kyy Mosaic disease of tobacco plants, D. Karpenkov The new system for dairy exhibitions in Sweden, A. Sempolovs'kyy Report on the station for assessment of seeds at the Warsaw Museum of Industry and Agriculture from June 1, 1891 to June 1, 1892, A. Horbatovs'kyy Guidance on growing maize, V. Shcherbachov Tobacco growing in Russia, H. Tanfil'yev Fertilization with nitrogen and many others [6].

Universities and numerous their societies became centers of science and culture development. The first such university founded in Ukraine was Kharkov University. It establishment was initiated on public donations of noble educator and a famous public figure V. Karazin. According to his ideas, a university should be a public institution like free universities of Western Europe maintained on funds of the public associations and managed by its professors and the nobility representatives.

Kharkiv University issued a number of scientific periodicals devoted to agriculture. A number of prominent scientists, naturalists and agrarians worked in this institution throughout its history among which we should mention A. Krasnov famous traveler and earth connoisseur, who led expeditions to various parts of Katerinoslav, Kryvorizhzhya and Donetsk regions and published several works on agriculture of Ukraine [5]. There he worked A. Zaykevych who was one of the first organizers of agricultural researches in our country, including a wide scientific heritage of vegetable physiology, agrochemistry,

agrotechnology, selection, live stock breeding, apiculture and others [5]. In the journal Zapysky Imperatorskoho Khar'kovskoho unyversyteta (Notes of Kharkov Imperial University) the results of researches and expeditions conducted by its scientists were reflected. Among them the studying of the correct natural zoning of Ukraine was particularly important. The results of this study was summarized in the works of P. Tutkovs'kyy with the accurate descriptions and characteristics of the four main and four additional physical and geographic zones, their boundaries, agricultural and cultural significance, the impact of human activities on its environment and even some local folklore samples. But the final zoning has not yet been produced. According to A. Yanata 'in terms of the demands that could be raised to the botanical experiments throughout Russia, the Ukrainian part of the state was explored quite well, but from the point of view of modern regional botanical experiments in Ukraine, in the broad sense they were and still are in an extremely sad conditions [8].

Shortly after the Kharkiv University Kyiv University of St. Vladimir was founded, and this was the sixth such establishment in Russia. Novorossiysk University in Odessa arose due to the rapid capitalist development of the Ukrainian southern regions, which therefore needed a large number of professionals for industry and agriculture officials.

An Agricultural Faculty was one of the most developed in the Kyiv University at that time. It was headed by a famous scientist, Professor S. Khodets'kyy. The scientists of the Faculty actively conducted a number of different branch studies, participated in the distribution and popularization of scientific knowledge, corresponded actively with other educational institutions and scientific departments.

A significant contribution to the development of agricultural science was made by the former student of Kyiv University (from 1890 the University professor) S. Bohdanov, who studied the need for water of sprouted seeds and the relation with the soil moisture, developed its own classification of groundwater, proposed a new method of water reserves in soil determining. His works on agriculture, published in Unyversytetskye yzvestyya and other publications were important for the development of agricultural science in the country. (University reports, 1893-1895)

One of the greatest achievements of climatology in Ukraine was the establishment of the Meteorological Service, which received all the information from different meteorological stations in Ukraine by the telegraph and radio, making it possible to foresee the weather major changes. These data were placed on the pages of a number of the University scientific publications. Later special meteorological issues were published.

Besides, the works of S. Bogdanov were indicative in the popularization of scientific thought at that time, as he from 1888 to 1896 edited the journal Zemledelye (Agriculture), which main objective was serving to the interests of the south-western region of the former Russian Empire. His readers

were able to keep abreast with the most developed agricultural countries of the world and the could read the news that were interesting for local farmers. The journal published original articles and translations in all fields of agriculture, placed reports of the practice of the Kiev Agricultural Society, all its branches and committees as well as the university scientific news. In such sections of the journal as News of Agricultural Literature, Review of Russians and Polish Agricultural journals the readers could find the information about new books and summaries of the best publications. Later, during 1893-1895, S. Bogdanov in the pages of Unyversytetskye yzvestyya published the summaries of the world's agronomic literature. These materials were also published as annual reports in 1891 and 1892, entitled as Obzor uspekhov sel'skoho khozyaystva v 1891 (1892) hodu (Review of agricultural successes in 1891 (1892)) [4]. The arrangement of materials in each issue was identical and divided into three sections: crops, livestock, agricultural economy, which responded to the university course program of that time and the aim of S. Bogdanov to meet the needs of scientists, teachers and students in the most recent achievements of the agricultural science. Within the first two rubrics the following headings were allocated: prepared materials under agricultural experiments (crops or livestock and their characteristics), environmental conditions favorable for agriculture (soil, air, water, etc.), what the owner gives to his live beings (agricultural machinery, fertilizers, and feed etc.). The agricultural economy rubric did not have such differentiation. This branch of science was only formed and there was not enough relevant literature.

In 1898 Kyiv Polytechnic Institute with a special Agricultural Department was established, where the specialists in agrarian field were trained. It was the first specialized higher agricultural institution that trained specialists for the agricultural branch. Such scholars as V. Dokuchayev, P. Budryn, V. Kyrpichov, D. Mendelyeyev and others participated significantly in the process of training.

The largest part of the first students came from the nobility, clerks, townsmen, and peasants. Among them were the descendants of Cossack and military families. The total number of students in Agricultural Department in 1898 (the year of the founding) was 87 people. The level of their training was noted by D. Mendeleev in a memorandum to the Minister of Finance Vitte that 'such a general selection of special work by the graduates that I saw at the first graduation from the Kyiv Polytechnic can not be found in the known universities and technological institutes, because most of the theses presented in them is theoretical in nature and is not accompanied, as here, by their own laboratory research' [5].

In the Kiev Polytechnic Institute named after Emperor Alexander II on the basis of the Agricultural Department an Agronomic Society was established. A number of prominent scientists and agrarians studied in it. Later a lot of them made personal contribution to the development of agricultural researches in Ukraine. among them were S. Veselovs'kyy, S. Vorobyov,

M. Kulyeshov, O. Yanata and others. According to A. Bilotserkivs'ka such group as the Agronomic Society was then a unique organization, which functioned as an agricultural society [2].

Among the journals that supported agricultural science Izvestyya Kyevskoho polytekhnycheskoho instytuta. Otdel khymyko-ahronomycheskyy, (News of the Kiev Polytechnic Institute. Department of Chemical Agronomy), Nablyudenyya meteorolohycheskoy observatoryy unyversyteta sv. Vladymyra v Kyeve, (Observations of Meteorological Observatory of the University of St. Vladimir in Kiev), Zapysky Imperatorskoho Novorossyyskoho unyversyteta (Notes of the Imperial University of Novorossiysk) and others. The main purpose of these publications was informational and communication support of scientific centers, propagation of the most recent discoveries among national and foreign scholars and the general public.

Conclusions And prospects of further research. Thus, according to the facts that since the second half of the nineteenth century the agricultural periodicals, that were at that time the only means of communication and the expression of ideas leading agricultural science, have became the important means of training of agricultural students.

Although some aspects of the establishment and development of agricultural periodicals and their role in supporting the national agricultural education and training as well as the impact on future farmers was partially covered in a number of studies, it should be noted that the systematic study of the issue in our country is still has to be conducted. Therefore, we believe that further studies should continue the study of agricultural periodicals, as well as the generalization and systematization of knowledge about the development of the agricultural press of the late nineteenth – early twentieth century, which is important and relevant to the modern system of agricultural education and training of future qualified specialists.

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ІННОВАЦІЙНІ ТЕХНОЛОГІЇ У ПРОФЕСІЙНІЙ ПІДГОТОВЦІ МАЙБУТНІХ УЧИТЕЛІВ ПОЧАТКОВИХ КЛАСІВ: АВСТРАЛІЙСЬКИЙ ДОСВІД

Анотація. *У статті досліджується австралійський досвід використання інноваційних технологій в професійній підготовці майбутніх учителів початкових класів. Розкрито поняття технології та інноваційні технологій, а також розглянуті їх особливості та критерії. Визначений головний принцип, який лежить в основі програм педагогічної підготовки майбутніх фахівців в Австралії та фактори, які зумовили використання інноваційних технологій в освіті, зокрема педагогічної. Наведені приклади технологій які застосовуються Австралійськими вищими навчальними закладами в процесі підготовки фахівців початкової ланки освіти. Описаний*