

**PROTOFORM OF THE MODERN EXTENSION SERVICE IN THE FIELD OF ANIMAL HUSBANDRY AND VETERINARY MEDICINE. III. THE PERIOD AFTER THE LIBERATION OF BULGARIA (PERIOD OF NATIONAL PROGRESS IN AGRICULTURE)**

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**ABSTRACT**

The present research analyses the activities of state, public and private structures assisting the work of agriculture producers after the Liberation of Bulgaria (aka period of national progress in agriculture), and throws light on their role as a protoform of the modern extension service in the field of animal husbandry and veterinary medicine from historical point of view. For this purpose, a number of governmental documents (orders, laws, ordinances etc.), rules for organisation of agricultural schools, programmes of public organisations and unions, museum and library funds expositions relevant to the study's goal were investigated. The period of national progress in agriculture in Bulgaria is associated with the foundation of different types of agricultural schools and training courses. The organisation of agricultural experimental stations and the implementation of professional training have improved the practical skills of people engaged in farm animal rearing. The foundation of livestock husbandry unions and social movements, the educational activities related to improving the knowledge and skills of livestock producers became more pragmatic and species-specific. During that period, due to the direct transition of Bulgaria to bourgeois capitalist development, agricultural educational and administrative structures organised and institutionalised in the country were similar to those of West Europe. This way, agricultural teachers, practicing agronomists, veterinarians and zootechnicians, specialists and administrative staff hired by livestock husbandry unions became the founders and distributors of scientific and applied knowledge in the field of animal and veterinary medical sciences. The training of livestock producers in the country performed by them at that time is a kind of a protoform of the modern extension service.

*Key words: extension service, proto-form, animal science, veterinary medicine*

**Introduction**

After five centuries of Ottoman rule, the freedom that the all of Bulgaria had hoped for was achieved after the Russian-Turkish Liberating War. Plundered, underdeveloped and torn, Bulgaria was finally free. The Liberation played the role of a bourgeois-democratic revolution.

The land passed from the large-scale Turkish farmsteads into the hands of Bulgarian peasants. The small and, to a lesser extent, medium landed ownership system was established.

There was, however, significant damage in the field of animal husbandry. The retreating Turkish armies and the fleeing populace slaughtered for food or took with them many of the domestic animals. Thus, soon after the Liberation arose an acute need to restore animal husbandry in Bulgaria for the purposes of agriculture, the cavalry and officer corps, intercity transport and commerce (with the railway system being in very early stages of development), as the country embarked upon the road to capitalism, albeit with a delay (Iliev et al., 2008).

The aim of the present study is to analyse the activity of the state, social and private organisations in Bulgaria after the Liberation, which assisted in the work of livestock breeders and crop farmers, as well as to clarify from an informative-historical perspective their role as the protoform of contemporary extension service in the field of animal husbandry and veterinary medicine for the period following the Liberation, known as the period of national progress in agriculture.

### **Material and methods**

For the purposes of this study, government documents (directives, laws, ordinances, etc.), regulations for organising the activities of agricultural schools, programmes for social organisations and unions, as well as exhibits from museum and library funds, which are relevant to the study's goal were used.

The information from these sources and the results were interpreted by using the following methods: historical, legal-case, content analysis, analysis of expert evaluations, auxiliary method in systematising the derived information through direct research and analysis of facts from museum and library exhibits.

### **Results and discussion**

The analysed period matches the time of nation-wide efforts towards proliferating and implementing the “agronomic and veterinary medical science” within the country. The populace engaged in agriculture exhibited eagerness to acquire modern European knowledge in agriculture and its branches. It was a slow and decade-long process related to building up national agricultural educational infrastructures (state and public), which would create the necessary new social class of farmers – livestock breeders.

#### ***1. Foundation of agricultural schools***

The question of opening agricultural schools in Bulgaria had been put forth many times before direct authorities before the Liberation – even before the Clerical Council, assembled in 1875 in Plovdiv. Despite the numerous favours, requests and insistence about the greater need for such schools, the Ottoman government did not give its approval for opening them (**Kostadinova, 2009**).

One of the first actions of the Bulgarian state after the Liberation was related to opening agricultural schools. The first one was opened by the government of the Principality of Bulgaria under the name of Obratsov Chiflik (“Exemplary Farmstead”) near the town of Rousse. In 1882, an ordinance was issued for the opening of a practical agricultural school in the town of Dobrich under the name of Lower Agricultural School.

Another school was opened in East Roumelia in 1883 under the name of Sadovo in the village of Cheshnegira-mahle near the town of Plovdiv.

After the Unification of Bulgaria, the two schools were both put under the management of section IV of the Ministry of Finance. This action equalised their curricula (with the Sadovo curriculum being predominant) (**Editorial, 1900**). Despite the equalised levels in theoretical and practical tuition of the students, the two schools retained their specific scientific-educational profiles, which they developed independently.

At the Obratsov Chiflik school, dairy production was one of the strongest orientations, making it very popular and desirable among the students, as well as by the workers at dairies. For the purposes of education, the school created its own dairy, in which the students acquired the practical skills for producing cheeses. Apart from training at the experimental dairy, studies and tests in new directions were performed – technologies for separating the cream from cow and sheep milk and producing butter. In order to increase the amount of milk produced in the region, the teachers from the school started educating the local sheep breeders. The visits and the on-site training of the breeders were free of charge. Along with this activity, the teachers actively contributed to the *Sadovo* magazine and the issued by Obratsov Chiflik *New Agriculture* magazine with articles on dairy production and animal husbandry, translating foreign literature and publishing their own works.

At the Obratsov Chiflik school were offered regular practical course in dairy production. They were taught primarily to farmers and livestock breeders, as well as dairy owners. The first course was organised in 1903. At the same time, one-month winter courses were held in villages of

the Rousse district. In the next few years these courses, known as “winter school,” became increasingly popular throughout the region. In 1928 the school offered a three-month course for master dairymen, which ended with a practical exam. Twelve attendees passed the exam successfully and received the respective diplomas. In 1931, they also held the first dairy production course for dairy owners, specialists and workers.

A study farm was created from the very beginning at the Sadovo agricultural school, competing with the best similar farms at leading European schools of agriculture. It set the foundation of animal husbandry practice, beekeeping, sericulture and fish breeding. Most developed were the horse and cattle farms. With the public administrative regulations of the East Roumelia government from 17 February 1884, a horse breeding station was created at the school in order to improve the breed composition at private farms. This station served the horse breeders from the Plovdiv, Haskovo, Stara Zagora and Pazardzhik districts. Studs from the Purebred English, Orlov, Nonius, Pleven and Danube breeds were provided.

The school had a great contribution to the development of cattle breeding. In the report compiled for the First Bulgarian Industrial Agricultural Expo at Plovdiv, which took place in 1892 it was revealed that cows from various breeds were used to create the school barn, imported and bought from Russia or Prince Battenberg’s farm in Gorna Banya.

In the vast mix of animal breeds with different colours, exterior and productivity were distinguished cows of the Angler breed, some of which yielding 4,070 litres of milk for 281 lactation days in 1891. They were the foundation for the forming high-productive herd of the teaching barn, which could “renew itself with its own offspring” since 1886. A major contribution to the improvement of the dairy herd had the bulls Doctor (a black-spotted Dutch cross) and Pigeon (a Simmental cross). This previously unseen livestock breeding attracted visitors from the entire country. Hristo Fetvadhiev, principal of the school during that period, who had hoped for the development of such farms throughout the entire country, criticised the negligence in animal breeding and urged for competition among all breeders for the sake of improved livestock. Breeders from the region listened to the “words of the learned livestock breeders” and started to bring their mares, cows and sows to the school for mating. The schools provided mates for the animals and they were recorded in a special book. The fee for a mated mare was one white Medjidie, which changed to 5 levs after the Unification. A certificate of lineage was issued as well. The bulls and hogs were let in for free (**Hazmanov, 1923**).

In 1905 the breeding was oriented towards the creation of animals close to the Angler type. Four cows and one bull of this breed were imported, which had a profound effect on the herd’s exterior and milk yields. The positive influence for the high fat content of the milk (around 5%) of this herd also came from the gray local cattle.

In 1912, Zhelyo Ganchev – a graduate of the Higher Agricultural Veterinary School in Copenhagen who specialised livestock and dairy production in Denmark and Switzerland was appointed as school principal. He had the needed experience to make true the dreams of the local population for creation of an original local breed (Red Sadovo cattle). The newly created population was the most productive national breed by that time. It spread rapidly in the regions of Plovdiv, Pazardzhik, Haskovo and Varna. Along with selling breeders, producers received recommendations for the feeding and breeding of the animals. This took place in the school, at the farm, the exhibitions for elite breeders and through the *Sadovo* journal.

The agricultural school in Sadovo had also a large contribution to the development of pig and poultry husbandry in the country. Since the creation of the school farm, Yorkshire and Berkshire sows and boars were procured from the royal farm in Gorna Banya. Both pure-breeding and cross-breeding were practiced. Since 1887, a total of 733 breeder pigs have been sold. To improve the quality of pigs reared at the farm, a repeated import of male and female pigs from Germany was made. The non-exigent and the resistant nature of the German noble swine, the possibility to raise it

on pastures and its valuable production traits have established the breed as the most appropriate for improvement of local pigs.

In 1899, the school farm has imported chickens from the breeds Cohin China, Padua, Transylvanian, Brahma, Plymouthrock, Houdan, White Langshan, Minorca, and Pekin and Rouen ducks. A fish pond for rearing freshwater fish and a sericulture station were also created.

To improve the practical skills of livestock producers, mainly within the region, specialists and teachers gave regular lectures on the improvement of reared animal breeds, the pastures and the quality of feeds. Multiple courses on dairy production, sericulture and apicultures were held for those willing to develop such activities.

*Thus, over a number of decades, with absence of Bulgarian higher educational establishments, the agricultural schools Obratzov Chiflik in Rousse and Sadovo, near Plovdiv fulfilled their educational mission and set up the progressive national animal husbandry class.*

Apart the aforementioned schools, other practical and agricultural schools were gradually opened in many places in the country.

*Practical schools* aimed at providing the young people a sufficient knowledge for independent practicing of a given profession in the field of agriculture. The full-time students in the initial class were required to have finished a secondary school. The tuition course was either 2 or three years. The graduates performed a professional practice in animal husbandry sections, experimental fields or other structures at the schools, or in private farms, but under supervision by the school.

*The high agricultural schools* aimed at providing students with a good theoretical and practical basis needed for their future independent, administrative or management work in the field of agriculture. The tuition course was 4-year, and admitted students had to be graduates from a secondary school. The high agricultural schools taught special subjects according to the school profile, Bulgarian language and other general education subjects needed for comprehension of specialised courses. A “modern foreign language” was also taught. High school students performed a one-month summer practical training in animal husbandry sections, experimental fields or other structures at the schools, or in private farms, but under supervision by the school. The graduates possessed a good contemporary agricultural education comparable to that obtained in similar European schools.

During the 1820s, the government has decided that the major opportunity to provide a prospective extensive agricultural and ménage education for youngsters of both genders could be the broadening of the network of the so-called “agricultural auxiliary schools”. By that time, a municipality could be declared as exemplary mainly on the basis of such a school in the neighbourhood because of the municipality students trained in it and the commitment from the part of the teaching staff (especially the agronomists and livestock husbandry teachers, as well as ménage teachers). In the early 1840s, there were 240 agricultural auxiliary schools in Bulgaria, with 59,164 graduates until 1941, while the number of graduates from all other agricultural schools was 8,473. The agricultural auxiliary schools were thought to be rather useful in their role as an “educational establishment” for agricultural industrial and ménage education of young rural population. The attendance of such schools was mandatory for all boys and girls, secondary school graduates, whose main occupation was agriculture and ménage (**Angelova, 2003**).

In 1925, the government budget provided funding of 20 million leva for professional education, and a major part of this sum was spent on creation of professional schools and courses. In order to realise this project, it was decided to create *specialised agricultural courses to village secondary schools*. Their attendance was mandatory for all secondary schools graduates at the respective settlement. Each course lasted at least 4 months (from November to March or April, depending on specific conditions). The courses were held in schools and gathered students from several villages, and all experiments were performed by students in their parents’ farms under the

supervision of the teaching staff (**Editorial, 1925**). Agronomists organised also winter courses of agriculture in villages (**Ministry of Agriculture and State Property, 1926**).

## **2. Foundation of agricultural experimental stations and introduction of professional training**

The idea about the creation of agricultural experimental stations in Bulgaria, similar to European ones, emerged in 1897. Konstantin Milkov was the first to address this issue. The idea was realised through the creation of *three agricultural experimental stations* in the country (Sadovo, Obratsov Chiflik and Pleven).

The agricultural experimental station (AES) in Obratsov Chiflik was opened on 9 March 1905 on the basis of the built experimental field, modern by that time, and the experience of teachers agronomists. During its development, the station gained considerable reputation in the field of selection and agricultural techniques and became renowned both at a national and international scale. Publishing activities were also performed along with research and teaching. The AES Obratsov Chiflik published an own journal (New Agriculture), later renamed into Agricultural Review, and possessed an own publishing house where the first flyers, textbooks, leaflets and other printed materials were published.

In 1901, the State experimental cattle farm was created in Samokov. For its needs, 40 cows and 3 bulls from the Montafon breed were imported from Austrian Tyrol. The purpose of the cattle farm was to investigate the adaptation potential of brown Alpine cattle to local conditions and through pure-breeding, to supply breeders for improvement of local cattle. The farm existed as an experimental cattle farm until 1932. Afterwards, it was reorganised into a livestock depot, and since 1943 – into a factory. For that period, the modest farmhouse, initially called experimental cattle farm, turned into *a livestock factory* with direct impact on the development of livestock husbandry in mountainous and semi-mountainous regions of West Bulgaria.

The state authorities paid a special attention to the idea for improvement of the qualification, skills and scientific knowledge of livestock breeders, workers and the training of the personnel to assist veterinarians for control of especially dangerous epizootics.

Until the Sanitary Veterinary Service Law (SVSL) was promulgated in 1924, none was interested in improving the skills of farriers. According to Art. 66 of this law, a farrier is a person having taken a farriery course at the Sofia Military Veterinary Hospital or the district veterinary hospitals in the country. Farriers working until the law came into force, were obliged to pass one-month farriery course or to take the exam within 3 years (until 1928) (**Kovachev, 1930**). Those who succeeded at the exam, were given a permit (certificate) for work, while the rights of others who failed on the examination, were suspended (**Zhelev, 1932; Gospodinov, 1933**).

To prevent the emergence of infectious diseases among livestock, Art. 62 of the law stated that municipalities with population over 2,000 were obliged to appoint *veterinary keepers* after passing a special two-day course. Such courses were held in many municipalities in the country. The same year, a foot and mouth disease epidemics has emerged in the region of Stara Zagora. To announce the emergence of the disease in the different villages, airplanes were used for the first time for distribution of flyers. The outbreak did not cause significant losses due to the efforts of veterinary keepers too.

For the needs of export trade, it was decided to perform *short-time discussions* and *practical trainings*. For example, at slaughtering, lambs were marked by their owners with different dyes and as a result, the stained fleeces were not appropriate for export. For this purpose, the Regional Directive No. 1432/22.02.1928 issued by the Veterinary Unit, has ordered to protect lamb skins by obliging veterinarians and technicians in charge to explain the harm of dying during the training sessions. The dying of lamb bodies was forbidden, and in exceptional instances only – the marking of lamb nose with dye was allowed (**Pavlov, 1928**). At its meeting in May 1932, The Regional Shepherds Society in Shoumen offered to think over a regulation of schools and courses for

shepherds, cheese-makers etc. and providing graduates from these training courses with elite and controlled breeding material (**Banchev, 1932**).

### ***3. Foundation of livestock husbandry establishments***

In 1892, a Law on stallion stations and horse stud farms in the Principality of Bulgaria has passed. This Law, including 33 articles, is of historical significance and shows the special attention paid by the state to create necessary preconditions for progress in development of national horse breeds for the needs of cavalry and improvement of traits of horses reared for work in fields.

The law was amended in 1897, compelling the permanent district committees to maintain stations for stallions and horse stud farms, and requiring from every municipality to possess at least one excellent stallion breeder.

*The Kabiuk horse stud farm.* The Kabiuk horse stud farm was opened after the first law on horse husbandry entered into force in 1893. It was created on the basis of the stud farm created by the Rousse Governor Midhat Pasha and used during the Ottoman rule to provide riding horses for the army and draft horses for the population (**Rachev, 1980**). The stallion stations in the stud farms increased every year (in 1892 they were 4 and in 1899 – already 7). The number of mares mated by the Kabiuk stallions also increased. With time, sections of the other major livestock husbandry branches were also created (**Bichev, 1930**).

*Klementina horse stud farm in Pleven.* It was officially opened on 20 July 1895 as a stallion warehouse in the District Exemplary Farm in Demirköy. In 1899 it was declared a horse stud farm with a stallion station. In 1900, a cattle husbandry section was created, in 1902 – a pig breeding, 1903 – poultry breeding and in 1910 – sheep breeding stations. After the opening of these stations, it acquired the status of a State Livestock Factory (**Bichev, 1934**).

Apart the main activity of maintaining stallions stations over the country, preparation of elite male breeders, other activities of educational or scientific applied character were also carried out.

Private horse stud farms were also created to improve the traits of horses reared in Bulgaria. Such were the farms of Mr. Hairlov from Gabrovo, Todor Danov from Radinenets, Pleven district, Ivan Kovachev from Gagalya, Rousse district, S. Stambolov and K. Popov near Bourgas etc. All private horse farms existed for a couple of years and were then closed due to obstacles or refusal of the state support provided by the then acting law (**Hazmanov, 1923**).

### ***4. Livestock producers unions and social movements and their contribution for development of animal husbandry***

As early as 1912, committees of livestock producers were instated as independent institutions in some municipalities in the country. The funds gathered from estates, taxes, fees etc. were under their control and were exclusively used for activities related to livestock production development (purchase of breeders etc.). The renaissance of Bulgarian livestock husbandry after the Liberation and its progress were resulting from the foundation of the first livestock producers' societies in 1914.

In 1927, the state, per the example of more developed countries, introduced some measures for improvement mainly of cattle and sheep husbandry, namely control on productivity, organisation of breeder farms, rearing of male breeders.

This process however began to be purposefully realised after the foundation of livestock producer unions. In 1931, the Cattle Producers Union was founded in Pleven, followed by the Horse Producers Union (1936), the Sheep Producers Union (1937) and the Pig Producers Union (1941). The aim of livestock producer unions was to guarantee a direct participation of its members in decision making and planning of their own development. To this end, the unions employed an arsenal of means, from legislative initiatives for the development of various livestock productions, improvement of breeders, information and education of members about the benefits of rearing highly productive animals, improvement of their housing and use etc.

As early as the unions were founded, the Ministry of Agriculture has appointed secretaries (agronomists and zootechnicians), which along their routine duties, were obliged to direct the activities of unions to issues, important for European livestock production, to provide the necessary information and to assist the activities for spring reviews, regional and national animal exhibitions. They published professional materials in newspapers of the unions – *Cattle Breeders Bulletin*, *Horse Breeding*, *Sheep Breeding*.

The evaluation of the practical benefits from the activity of unions came in time. One of experts in the jubilee exhibition in Dermantsi (1940) has written: "All groups of animals are fairly compliant to, and some of them – better than the established norms for livestock factories". Harmonic and well developed body parts, delineating the noble type of a cultured race...." (**Krastev, 1980**).

The activities of unions in favour of their members were related to improving the feeding of animals and improving the qualities of high-mountainous pastures.

The enlightening activities of livestock producers unions and their specialists were directly related to improve the knowledge of producers about reared animals and the potential for better productivity by introduction of progressive methods, used in other European countries and the USA.

By the end of the 1920s, a social movement called *Union for Rural Spirit Raising* was created, aimed at „...union and coordination of efforts of all intelligent healthy creative forces, working in the village and for the benefit of the village, for its material and spiritual recreation" (**Grancharov, 1930**). The programme of the movement was directed to the education, farming, rural public works and hygiene (**Union for Rural Spirit Raising , 1930**).

Similar movements have emerged by that time in other countries – Germany, Italy, Romania and the USA. Their Bulgarian equivalent was however somewhat specific, with regard to both agricultural economical and general cultural, public health and social policies (**Angelova, 2003**). Joining this movement in order to improve and protect the national livestock production, the unions of agricultural specialists (veterinarians, agronomists, zootechnicians) proposed and accepted to implement programmes, made popular through specialized print editions. The programmes contained progressive measures and recommendations modern by that time, aiming at development of livestock production. For realisation of all planned activities, all agricultural specialists were expected to perform a motivated and nationally responsible educational, professional work with local livestock producers, as most of them were illiterate.

The organised professional education among livestock producers was however insufficient. There was a considerable difference between communicating with a graduate from an agricultural school or qualification course, and a livestock producer, misled by prejudice, false beliefs and wrong experience.

What was the livestock production or veterinary tutoring in Bulgaria, existing even before the Liberation? This could be seen from the following lines:

„ ...Publishing of several veterinary and livestock production journals, domestic calendars etc., articles written by veterinarians, agronomists or zootechnicians, publication of flyers by the Ministry, permanent committees etc. They undoubtedly contribute for the spread of professional knowledge, but for whom? If owners are asked whether they know one author or another, what would they answer? No! They do not know him. They recognise the people near to them. They are the trusted ones, from them they seek assistance – the agronomist, the veterinarian, the farrier. They are in fact the real consultants of livestock producers, they should be the most familiar with modern methods and means, in order to make popular modern livestock and veterinary knowledge among animal producers. For familiarisation with professional animal husbandry and veterinary knowledge, the specialised educational courses and all events from the social life – gatherings, celebrations, exhibitions, fairs, should be used, when such persons speak through Bulgarian animal producers. Usually, all livestock producers are gathered on exhibitions to present their animals, and

the selling price reflects their ability to care for the animals. If they could be convinced that they would get a better price for the animals and birds they bred, they would follow the advice they were given. In order for this to happen, examples would be necessary – positive and negative, yet always practical. Therefore, it is necessary for the lecturers to rely on the best and most experienced veterinarians, agronomists and other specialists that are close to and trusted by the livestock breeders” (Tyulev, 1930).

### Conclusion

The period of national progress on agriculture in Bulgaria is related to the founding of various agricultural schools and training courses, through which the contemporary scientific achievements and practices of agricultural production gradually became popular among Bulgarian farmers and agricultural producers. Through the creation of agricultural test facilities and the introduction of professional education, the practical skills of a number of occupations related to servicing agricultural animals were improved, while conditions were created for others to become acquainted with the basic requirements of protection from infectious disease or buying and selling livestock.

With the emergence of livestock breeder unions and social movements, the educational activities throughout the country related to improving livestock breeders’ knowledge and skills became increasingly more pragmatic and specific for the respective animal or bird species they bred.

During this period, due to Bulgaria’s direct transition into the conditions of bourgeois-capitalist development, agricultural educational and administrative structures were organised and industrialised throughout the country, similar to those in West Europe. Thus, teachers in agriculture practicing in the different regions, agronomists, veterinarians and zootechnicians, the specialists hired by the livestock breeder unions, as well as the administrative staff became the founders and proliferators of scientific and applied science knowledge in the fields of animal husbandry and veterinary medicine. The trainings they offered for livestock breeders throughout the country were the period’s proto-form of contemporary consultancy.

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