

Note on animal production and animal science in Romania

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Romania, its three former countries, Moldavia, Transylvania and Valachia used to be up to 1864, a country of landlords. By GDP it was an agricultural country exporting more cereals. In animal production it was known especially by its sheep transhumance centers, about 40 villages in Meridional Carpathians, who used to winter their 2.4 million shed) iii all neighboring countries.

The repeated agrarian reforms, 1864, 1889, 1918, 1945, made more by social than by economic reasons, did not help the development of agriculture nor the improvement of peasant's life. The modernization of agricultural farms was always a problem of the Romanian agricultural economy.

After the Second World War, especially after 1948, when the communists with the help of SSSR took the power in Romania, they imposed a solution for modernization by dramatic forced cooperativization of peasant lands and by the nationalization of the last landlord farms. The cooperativization was ended in 1962 when some 2/3 of the agricultural land the plane and some hilly land was in cooperatives or in state farms. The cooperator peasants had the right to use a few hundred meters of land and to keep animals. In 1989 near 50% of sheep were owned by private peasants. By itself the cooperativization without financial and technical support was not an easy solution for modernization. The difficulty of development has been supported mainly by peasant and in many fields such as cattle production and feed production the progress was very modest. Never the less, in some fields some interesting achievements existed.

Romania pioneered especially after 1965, the large scale industrial production systems, sometimes vertically integrated systems in poultry and pigs at the time when such units were unknown in the western world. (Bichard, 2001). There were some 140 big pig state and cooperative enterprises, each producing 15000 to 1 million pigs per year and some 116 big poultry state and cooperative enterprises each having about 100000-1 million laying hens, or producing each 100000-20 million broilers per year. Special breeding units produced own poultry and pig hybrids and feed mills industry was organized with 67 units and a total production of about 10 million

tons end products per year.. Even though the genetic and feeding technology was not perfect Romania used to be in poultry and pig production in the top ten countries of the world.

In 1950-1989, the number of poultry increased 6.89, times, the number of pigs 6,4 times, but the number of cattle, just 1.19 times. The egg production raised 7.74 times, meat 3.46 times, wool 2.44 times, cow milk 2.2 times.

The sudden political change of 1989-1990 was also a sudden change of agricultural structure in many aspects back to the old peasant agriculture. Production of larger units was drastically reduced; 95% of the cows are in "farms" of 1-2 cows. There is no clear agricultural policy of development. In 1990-2000 the number of cattle decreased with 45.6%, of pigs with 58.3%, of sheep with 40.4%, of poultry with 40.3%. The meat production decreased by 33.3%, the egg production by 36.7%, wool production by 52.2%. Only milk production seems to have increased. It is hope that the shift from mainly central planned economy to market oriented animal production systems will find in the future the best solutions for a sustainable development.

Animal production higher education

The first veterinary high school was organized in Romania in 1859 and the first agricultural high school in 1862. Both professions had vocation in animal science and' always the animal science was an area of dispute between them. In 1948 an independent animal science faculty was organized in Bucharest and later in Timișoara (1949), Iași (1950) and Cluj (1952). These four faculties are active even if the number of animal production engineers needed decreased. The curriculum on 4.5-5 years, based on credit system, is slightly different from faculty to faculty. The Cluj and Timișoara faculties have a specialization in biotechnology and the Bucharest faculty in animal food technology, the biotechnological specialization being a part of an independent faculty.

Animal science research

The research in animal science and animal technology was done at the beginning of the 19th century just in high schools. In 1890 there was for a short time an animal science research institute and in 1906 the research station in silk worn has been set up. The first national animal research institute was founded in 1927 and it was a veritable school for scientists.

In 1970 the national animal research institute was divided in 6 institutes and one central research station.

In 1981 new laboratories were established within the existing

institutions and new territorial stations were set up.

Currently, scientific research is conducted in faculties of animal science and in research institutes.

- Faculty of Animal Science Bucharest
- Faculty of Animal Science Iași
- Faculty of Animal Science Cluj
- Faculty of Animal Science Timișoara
- Institute of Biology and Animal Nutrition, Balotești (near Bucharest)
- Research and Production Institute for Cattle Breeding, Balotești with seven research and production stations spread all over the country.
- Research and Production Institute for Sheep and Goats Breeding, Palas Constanța with six research and production stations all over the country.
- Research and Production Institute for Poultry Breeding Balotești
- Research and Production Institute for Pig Breeding, Periș with five research and production stations.
- Research and Production Institute for Horse Breeding, Bucharest
- Bee Research Institute, Bucharest
- Research and Production Institute for Fish Farming, Galați
- Research and Production Central Station for Fur Animals Breeding, Târgu Mureș
- Central Station for Research in Silk Worms, Bucharest with three local research and production stations.

The work of the research institutes is coordinated by the Academy of Agricultural and Forestry Sciences (ASAS) where there is a department of animal science.

The national program of research-development-innovation in animal breeding during 2000-2002 includes a general objective "Competitive methods and technologies for obtaining higher productions and for their processing, in animal breeding and fish farming under the conditions of a sustainable agriculture and in accordance with the requirements for consumer protection and of European Union parameters including nine subsidiary objectives.

The material basis of the research units consist of research laboratories and experimental farms populated with a varied genetic patrimony of animals consisting of 2451 cattle (Brown, Schwytz, Romanian Spotted, Simmenthal, Romanian Black Spotted, Holstein, Friesian, Steppe Grey), 6888 sheep (Transylvania Merino, Karakul, Tsigai, Palas Merino), 7337 ~ (Large White, Landrace, Periș Synthetic Line 345, Hampshire, local breeds Bazna and Mangalitsa), 619350 poultry (Layers, broilers, turkey hens, quails,

Coturnix coturnix, pheasants), 1581 fur animals (Minks, otters, silver foxes, polar foxes), 1400 bee families (1 species), 3250 silkworm (2 species), 256000 fish (10 species).

The area of the public domain allotted to experimental animal breeding is 15061 ha, to which 8074 ha used by stations with agricultural and animal breeding profile, add.

There also are several feed mills with a processing capacity of 40,000 tons per year of protein-vitamin-mineral concentrates, premixes and vitamin-mineral mixtures.

The human resources consist of total staff 3667, of which 705 in research (307 higher education graduates).

After 1 980 the number of scientists decreased due to the diminishing funds allocated to scientific research.

There is a rather good scientific cooperation between the university professors and the research worker, many of them acting in both institutions.

Conclusions

Animal production was developed in Romania during the past 40 years, particularly in pig and poultry, where Romania ranked among the top ten countries worldwide.

Animal production in Romania decreased during the past ten years compared to the peak during the '80s, with major repercussions on all the other areas of activity.

For the next period, strategies on short, medium and long term were developed, which to lead to the establishment of efficient farms, to the development of services for animal production and of laws in support of the agricultural producers.

Education and research already engaged in educational and research programs will be involved in the transfer of, scientific information to the producers. The investigations will be directed towards the new structure of ownership and towards integration in the international scientific community.

References

Monitorul Oficial, 2000 - Anul XII, nr. 595.

Monitorul Oficial, 1999 - nr. 328/9, VII Partea I.

Oancea M., Nicolae I., Ionitescu E, 2001 - Foresights on restructuration and recovery of the Romanian agriculture, in, Nat.Sci.Symp., vol.1, 13-18.