

TRADITIONAL AGRICULTURE IN THE LOWER PRUT MEADOW

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The data shown in the present paper belong to a more extensive study which was the starting point of a Project "Traditional Agriculture for Nature – European Recognition of South-Eastern Europe Landscape" which WWF Carpathians-Danube Programme has developed together with the European Forum for Nature Conservation and Pastoralism (EFNCP). The Project aimed at the identification of alternative measures that could help in the preservation of traditional agriculture methodologies – as a support for landscape preservation and rural community well-being in naturally preserved areas.

The High Nature Value Farmland (HNVF) is at present one of the European priorities for rural development. The traditional agricultural system that contributes to the preservation of biodiversity (plant and animal species and associations dependent on this environment), habitat and rural landscape conservation , natural resources protection and preservation, tradition and custom association with the natural cycle.

Decision No. 2151 from November 30th 2004 concerning the setting up of protected natural areas status for other new areas has also included the Lower Prut Low Meadow Natural Park (8,247 ha) in the group of protected natural areas with corresponding management abilities.

Key words: agriculture, ecosyste, biodiversity, lands use

Agriculture is an economic branch that makes use of all natural resources in order to achieve products required by the required nutrition of the ever-growing world population through technological processes. The natural resources that are being used are: soil, meadows, forests , surface and phreatic waters, production and game animals, cultivated or perrenial plant species, herbicides and fossil and solar energy.

Agriculture represents an intervention in the ecosystem, which might be quite aggressive at times, leading to the deterioration of the physical, chemical and biological characteristics of the soil, to air, crop and water polution and to biodiversity diminution.

The biodiversity in agriculture refers to two important elements: one, referring to wild species and the other , to the cultivated plant species and the domestic animals.

The biodiversity of vegetal species and wild animals represents a „gene bank” that seems to be better adapted to conditions of stress, disease and pest

attacks and which can be used by genetic sciences to get plant and animal breeds of higher qualitative characteristics.

MATERIAL AND METHOD

To get the paper right, various documents and info materials from the town halls of the villages which have been studied as well as infos from the inhabitants of these places have been used. Other info and statistical data have been taken from the Agricultural and Rural Development Office as well as from the Agricultural Consultancy Agency of the Galati County. Still older information concerning agricultural practices in the past has been found and synthesized from the documents found in the Galati State Archives.

The villages near the Natural Park are the following: *Cavadinesti, Suceveni, Oancea, Vladesti, Mastacani, Foltesti, Frumusita, Tulucesti, Vanatori* and they present a historical past, interesting both from its complexity and heterogeneity point of view of the various elements which seem to define it. Despite the existence of these fragile ecosystems in the area, historically, the diversification of permanent settlements and the extension of the within-the-walls area were based on their apparently hostile nature.

RESULTS AND DISCUSSIONS

Agricultural Practices before Collectivization

Before collectivization in the Galati county, as it happened all over our country, a traditional agriculture was in action at the time which contributed to the creation of remarkable and varied natural landscapes with a stress on biodiversity preservation.

The most important plants cultivated were: wheat, rye, barley, oats and corn. On smaller areas hemp, beans, lentil, vegetables and fruit trees were cultivated. Vines occupied important surfaces.

The people in this area were ploughing, breeding animals (cows and sheep), fishing and wickerwork and knitting, reed mowing and carting (during winter time). The land was toiled with simple tools: plough, cultivator, harrows with animal traction. The household activities practiced by women were: dairy activities, fowls and pig breeding, wool spinning and weaving. Generally, the peasants were very poor and they had reed-roofed houses.

Agriculture during the Communist Period

Agriculture, with its technologies of production augmenting, some of them rather aggressive for the environment, has led to the simplification of the ecosystems, so that unfavourable living conditions for some animal and vegetal species have been created.

As a result of the systematic use of herbicides, lots of wild plants have disappeared as, for instance: *Centaurea cianus* (cornflower), *Agrostema githago* (corncockle), *Achillea millefolium* (milfoil), *Artemisia campestris* (wormwood) and other species.

The herbicides used for the protection of the crops destroyed not only the dangerous pests for the crops, but also an important part of the microfauna, and along with this, the food for the favorable fauna.

The wild birds that feed on insects are exposed to intoxication as a result of treatments of agricultural crops with insecticides.

The modern technologies of cereal crops require that, after gathering (wheat, rye, barley), the summer ploughing incorporates all the seeds in the soil, the seeds that had fallen during gathering the crops and which were some wild birds' food (quails), a fact that leads to a decrease or even disappearance of these birds.

All the nitrates from the chemical substances used unrationally as well as the organic ones have led to the pollution of phreatic waters and lake waters, both used for household purposes and for animal watering.

Agriculture Nowadays

After 1990, agriculture has seen a period of regression due to the agricultural policies offered by the governs which have succeeded at the leadership of the country. Statistical data show that the cultivated areas with the main crops were reduced by about 8%, while those with cereal crops with more than 12 %.

The reduction of the cultivated plots is the effect of peasant pauperization who do not possess the money required by the production process in agriculture. The decline in agriculture has manifested itself in both the vegetal and the animal production. Privatization, unsuitably coordinated, led to the massive destruction of the animal stock through exaggerated sacrifices, high mortality rates, abusive exports.

The decrease of agricultural production is also given by investment resources.

Anyway, lately, the agriculture in the Galati county has come to life, both through state's interventions in this sector and the private investments.

Lands Use Methodology

Economically, agriculture is the activity that sustains the greatest part of the food sources of the population in the area and which diminishes poverty a little. Through its both branches, plant cultivation and animal breeding, agriculture ensures the food and minimal financial means, too, for the population in this area. Its characteristic trace is that of subsistence for most of the region though lately there have been developed agricultural societies, small or medium-size, which promote an intensive agriculture.

Plant Cultivation. From an environmental point of view, the premises of agricultural development in the area under study are quite difficult if we take into account the bio-pedo-climatic conditions of the region..

The altitudes are under 200 metres high for the most part, while the relief is not very fragmented and the soils of a levigate chernozem type cover only small zones in the slightly higher regions.

Inferior alluvial soils cover large areas, while the rainfalls calculated multi-annually average 450mm/year.

The greatest part of the lands is being toiled privately on small surfaces with modest machinery for a type of agriculture which is meant for subsistence.

All the villages: Cavadinești, Suceveni, Oancea, Vladesti, Mastacani, Foltesti, Frumusita, Tulucesti, Vanatori – situated on the limits of the Low Meadow of the Low Prut Natural Park shows a positive evolution in as far the extension of agricultural surfaces is concerned.

Agricultural plots represent 75% of the total surface of the villages, while arable lands represent the greatest part of the agricultural lands from 70% in Cavadinești up to 90%, in Frumusita. Cereals are among the favorites representing the major part of the local agriculture, through their double role as raw material in the production process of some food for people and as animal nourishment, too. Other high-rated plants required by the market have also been introduced : sunflower, soy bean, rape seed, but on smaller areas.

The Pasture Lands. The pasture lands are very important as their presence increased after 1990. An explanation could be that arable lands have been deserted due to the impossibility to toil them because of the lack of financial and technical resources.

The hay fields are fewer in number due to the fact that livestock breeding is underdeveloped. Such lands are to be found in each of the villages of underdeveloped zones, placed at great distance from the big cities.

The sylvesteppe xeromesophile and the steppe xerophile grasslands and the fallow grounds are placed in between agricultural lands as there are also reminiscences of primary steppe grasslands.

The vegetation of steppe grasslands is dominated by xerophile graminaceae with small, thick bushes and narrow leaves (indented couch grass, cockle, steppe hay, etc), having in its structure some xerophile dycotyledonates.

Extensive or traditional agricultural practices

Most rural households from this area practice an agriculture of subsistence, the typical form of natural economy of the previous century. It is a “clean » agriculture that is being practiced in many households which use traditional methods of toiling the land and of fertilizing the soil.

The houses that own 1-2 cows use organic fertilizers for the land which are first fermented and then implemented into the soil. The manure fertilization is practiced especially for potato and vegetable cultivation. Some arable lands have been abandoned and changed into grasslands.

After 1990, a shift from the big agricultural exploitations, run by the state, to the smaller, individual exploitations has occurred. There is also an excessive fragmentation of property, the individualist character of the owners being rather obvious. There are still landowners who toil their lands primitively, using animals and who sow their lands manually. Some of them have accessed SAPARD funding and bought small-sized equipment. By 2007, most landowners have applied for agricultural associations with surfaces that exceed 25 ha.

The organization of micro-farms and agricultural associations may represent a chance for the agriculture practiced in this area which can be revitalized and extended (extended cultivation of sunflower, soybean, vegetables and rapeseed,

beekeeping development based on acacia and sunflower, animal farm development).

Animal Breeding. The fodder quantities required by the breeding of cattle and sheep in the villages close to the Park are given by both the existent grasslands (but insufficient) and the agricultural production itself.

Animal grazing is performed in sheep flocks and cattle herds on the grassland, on the common or on private property.

Cattle Breeding. After 1990, once with the abolishing of the Production Agricultural Cooperatives (PAC) a drastic reduction of cattle occurred in all the villages with strong negative effects. The existent grasslands are inferior and they need improvement activities. The cows are taken to pasture in herds on the common and they are kept in the stable during winter.

Sheep Breeding. The number of sheep in the villages close to the Natural Park has had a fluctuating evolution.

Sheep breeding is easier than cattle breeding as the products we get (cheese, meat and hides) can be obtained more easily, with less money. Though the plots which produce the fodder have remained constant in time, the number of animals has increased.

The sheep breeding system is collective (sheepfold or pen), each village having 2-3 pens that turn to good account all the plots of land in the proximity, particularly the grasslands and the stubblefields.

Pig Breeding. In this sector the number of animals is relatively limited if we compare it to the fodder quantity (the arable area, in particular), and we don't take into account the low quality of the agricultural plots of land. Much more pigs were grown before 1990 in the farms of Tulucești, Cavadinesti, Frumusita, Foltesti, Mastacani and Vanatori, while in 2007 there still were pig growing centres in Cavadinesti, Tulucești, Frumusita, Vanatori.

Poultry Breeding Each household has between 10 and 100 poultry.

Horse and Donkey Breeding. In this area, the horses and the donkeys are a major force in agriculture as they are used in all agricultural works and for transportation of products and persons.

Beekeeping. Though it has a rather high development potential (due to the large areas planted with acacia and sunflower), beekeeping is not what it should be, having a lower development in this area. The biggest number of families are to be found in Suceveni (474) and Vanatori (450). As for the rest, the number of families is under 150, a fact which shows the modest interest in this activity.

CONCLUSIONS

1. Various types of agriculture have been practised in the Low Prut Lower Meadow Natural Park lately , from animal traction devices to modern machines and equipment.

2. In the poorer villages a traditional agriculture is being practiced based on the organic fertilization of the land and on the toiling of the soil by hand or by means of horse power. In these villages conditions for the conservation of biodiversity are created.

3. At present, more and more landowners tend to toil their lands in associations or on lease.

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