Association Prosperity and Development in Bulgaria
Project:"SOS for endangered traditional vine varieties"
Acronym: "VineSOS"
Project No. 1829

2700 Blagoevgrad
"Stefan Stambolov" str. №1, fl. 2
tel. +359 878 711 903 /+ 359 876 323 280
e-mail: pdbulgaria2010@gmail.com

Interreg Greece-Bulgaria VINESOS European Regional Development Fund

EUROPEAN UNION

Endangered vine varieties and sustainable agriculture

The main objective of the project "SOS for endangered traditional vine varieties" is to promote and enable the long-term protection of vineyards, especially those in "Natura 2000", and also to improve the conservation status of local vine varieties; to analyze local species through joint scientific work and to create mechanisms for protection and conservation of species in general that can be used for other species and regions.
One of the main activities of the project "SOS for endangered traditional vine varieties" is to support the long-term conservation of local vine varieties, which will contribute to the spread of traditional vine populations in the cross-border region by giving them unique identification and image, not only nationally but also globally.

Due to global warming, the chances of different grape varieties disappearing are high. Climate change also affects the drought in the various wine-growing areas.

This is also one of the main challenges that the wine industry is facing. They range from short-term impacts on wine quality and style, to long-term issues such as varietal suitability and economic sustainability of traditional viticulture.

For the reasons mentioned above, we must continue to maintain traditional vine varieties that are climate-tolerant and at risk of drought.

There are alternative irrigation solutions such as adaptive systems, use of drought-resistant plants, soil selection.

According to the Japanese farmer and philosopher Masanobu Fukuoka, natural agriculture bases its nature on agriculture, completely free from any human intervention and mediation. He "seeks" to repair the damage caused by human knowledge and the actions of nature and to "restore humanity without divinity." Fukuoka is the author of "The One-Straw Revolution", which discusses the issues of subsistence farming. His theory is divided into four basic principles.

Association Prosperity and Development in Bulgaria
Project:"SOS for endangered traditional vine varieties"
Acronym: "VineSOS"
Project No. 1829

2700 Blagoevgrad
"Stefan Stambolov" str. №1, fl. 2
tel. +359 878 711 903 /+ 359 876 323 280
e-mail: pdbulgaria2010@gmail.com

The first principle is subject to the refusal of cultivation - plowing or turning the soil. For centuries, farmers have been convinced that tillage is necessary for growing different crops. The "do-nothing" technique is fundamental in natural agriculture. The soil "digs" itself naturally, thanks to the penetration of plant roots and the activity of microorganisms, small animals and soil worms.

The second principle is to eliminate the use of chemical fertilizers. Left alone, the soil maintains its fertility in a natural way without any help from man.

The third principle is to refrain from weeding. Weeds also play a role in creating soil fertility.
The fourth principle is no dependence on chemical pesticides for protection. Fukuoka grows cereals without the use of any chemicals. Some of the fruit trees are sometimes treated with an emulsion of machine oil to reduce insects. He also did not use long-acting pesticides of wide range.

For a scientist who is convinced that nature can be understood and used through human intellect and action, natural cultivation is a special method. The number of farmers who consciously follow this method in today's agriculture is very limited.

Sustainable agriculture is defined as the production of agricultural products through a system that increases the inherent capacity of natural and biological resources.

At the same time, it allows producers to enjoy good yields and provides consumers with safe and healthy products while minimizing adverse effects on the environment.

Sustainable agriculture aims to both maintain and improve food production, reduce the level of production risks, protect the potential of natural resources and prevent soil degradation and water quality, while being economically and socially acceptable.

These goals are a shared vision of both producers and consumers. Central to sustainable development is the principle of continuously meeting the human needs of present and future generations. Achieving this principle requires balance and harmony of human resources and continuous maintenance of agro-ecosystem elements.

The intensive form of agriculture with the application of high yield systems is called conventional agriculture. This term is widely used in the international literature to describe conventional agriculture.(Fig.1)

Association Prosperity and Development in Bulgaria
Project:"SOS for endangered traditional vine varieties"
Acronym: "VineSOS"
Project No. 1829

2700 Blagoevgrad
"Stefan Stambolov" str. №1, fl. 2
tel. +359 878 711 903 /+ 359 876 323 280
e-mail: pdbulgaria2010@gmail.com

Fig.1 – High yields in conventional agriculture

Generally, any type of agriculture that uses chemical additives, over-cultivates the soil and aims to maximize production by ignoring future impacts is considered as such. For conventional agriculture, the following terms are used: intensive agriculture, chemical farming, industrial farming.

The last fifty years, the spread of modern intensive agriculture worldwide is observed and as a result, when we refer to agricultural practice, we understand mainly intensive / conventional agriculture. The result of this form of economic growth is an increase in productivity and a corresponding sharp increase in agricultural income in the first few years.

Initially, this method of cultivation significantly contributes to rural development and supports the agricultural economy compared to large-scale agriculture used in the past.

However, the practice of agriculture with such a high intensity has led to the biological simplification of the farming environment and the creation of a craft ecosystem that requires constant human intervention to regulate its internal functions.

For all the above reasons, agriculture today is under serious pressure to review the effects of intensive farming systems and in particular their impact on the environment, rural areas, human health, healthy eating, agricultural profitability and more. Recent research has shown that crops have declined by one-fifth in recent decades due to erosion.

Integrated management in agricultural production is a balanced care for the environment and product quality. This is an environmental management system with

Co-funded by the European Regional Development Fund and by national funds of the countries in Interreg VA "Greece-Bulgaria 2014-2020" Cooperation Programme
http://www.greece-bulgaria.eu/

Association Prosperity and Development in Bulgaria
Project:"SOS for endangered traditional vine varieties"
Acronym: "VineSOS"
Project No. 1829

2700 Blagoevgrad
"Stefan Stambolov" str. №1, fl. 2
tel. +359 878 711 903 /+ 359 876 323 280
e-mail: pdbulgaria2010@gmail.com

elements of the quality system, based on compliance with legal requirements, the rational use of all substances (water, fertilizers, plant protection products, energy, etc.) It is mandatory to monitor and control all phases of production in order to protect the environment and the consumer, as well as to produce branded, high quality, safe and competitive products.

By implementing an integrated management system, we achieve a sustainable production process through the continuous use of all available information (on cultivation, means of production and the environment). Integrated management is an alternative management method that is more environmentally friendly than the conventional production method.

The implementation of the integrated management system achieves the following results - organization of farms with production planning, control of all stages of the production process, current information and training of participating producers, reduction of production costs due to rational use of raw materials, production of quality, safe and competitive products, protection of the health of producers and agricultural workers, improvement of soil fertility, rational management of water resources and effective plant protection in accordance with legal requirements.
Integrated management in agriculture, and therefore in viticulture, is not in fact an alternative method of cultivation, but rather a way of rationalizing chemical resources and agricultural interventions to reduce adverse effects on the environment without jeopardizing the economic survival of farms.

Integrated management is based on "the right dose at the right time". Close and continuous monitoring of the operation so that each problem is identified in a timely manner and resolved in the most appropriate way.

For fertilization, i.e. the amount and type of fertilizer, a soil and leaf analysis is performed. Traps and predatory mites are used to control insects, as well as the use of certain biological preparations, where applicable.

The integrated management system emerged on the European market in the 1990s, when there were uncertainties regarding chemical interventions in the fields and the growing pollution of the environment, groundwater and the growing consumer demand for healthier and greener products.

Organic farming appeared in the early 20th century, almost simultaneously with the intensification and industrialization of agriculture. After 1924, the sociologist Rudolf Steiner gave a series of lectures on an alternative form of agriculture, discussing

Association Prosperity and Development in Bulgaria
Project:"SOS for endangered traditional vine varieties"
Acronym: "VineSOS"
Project No. 1829

2700 Blagoevgrad
"Stefan Stambolov" str. №1, fl. 2
tel. +359 878 711 903 /+ 359 876 323 280
e-mail: pdbulgaria2010@gmail.com

human beings, healthy eating and living, positions that later became the basis of organic - dynamic agriculture, or the "biodynamic agriculture" was his predecessor.

Subsequently, other scientists studied alternative methods of organic farming, such as the British botanist Sir Albert Howard, who is considered the father of organic farming, Lady Eve Balfour, who compared organic and conventional farming in 1939, and others.

These different movements consider the connection between agriculture and nature to be essential, as well as respect for the natural balance, and refrain from a quite managed approach to agriculture.

Organic farming is obtained as a system for management and production of agricultural products based on natural processes. That is, the non-use of chemical synthetic fertilizers and pesticides, but the use of non-chemical methods to deal with pests, diseases and weeds and the use of appropriate production techniques.

Today we are seeing rapid growth in the organic farming sector, both at the level of consumption and at the level of research, information and production. It has political support at European Union level, as its citizens have become aware of the impact of conventional agriculture on the environment, on the quality and potential risks arising from agricultural products and are now demanding more from producers.

The increase in food risks due to globalization, the huge food scandals in recent years and the increased awareness of consumers about health and environmental protection have a positive impact on the demand for organic products.

The fact is that the cultivation of vineyards and mainly viticulture in Greece, going through several stages more or less favorable for its development, is now emerging with new data that seem to justify a biological version of cultivation. The desire to improve the quality of wine is a fact. Quality grapes are produced from live vines, many of which are in places where vegetation is difficult to control. This forces the manufacturer to frequent and different interventions, thus increasing production costs. The quality is ensured by balanced vines that have a good leaf surface.

The "VineSOS" project is co-financed by the European Regional Development Fund and national funds of the countries participating in the Cross-Border Cooperation Program Interreg VA „Greece-Bulgaria 2014-2020" http://www.greece-bulgaria.eu/.

Association Prosperity and Development in Bulgaria
Project:"SOS for endangered traditional vine varieties"
Acronym: "VineSOS"
Project No. 1829

2700 Blagoevgrad
"Stefan Stambolov" str. №1, fl. 2
tel. +359 878 711 903 /+ 359 876 323 280
e-mail: pdbulgaria2010@gmail.com

Leading beneficiary is the Executive Agency for Vine and Wine. Its partners are: Association "Prosperity and Development in Bulgaria", Business & Exhibition Researches and Development Institute (IEE)), Greece, and the International Hellenic University, Thessaloniki.

The content of this material is the sole responsibility of the Association "Prosperity and Development in Bulgaria" and, in no way, the views of the European Union, the participating countries, the Managing Authority and the Joint Secretariat can be taken into account.