

APPLYING THE PRINCIPLES AND SPECIFIC OBJECTIVES OF METABOLIC ENERGY GREEN POWER FOOD BASED ECO-BIO-ECONOMY, ACCORDING ECOZONA CEZIENI, OLT COUNTY

Viorel DANACU¹, Alexandru T. BOGDAN², Valerica DANACU³, Florea George TOBĂ⁴

¹Ministry of Administration and Interior, Piata Revolutiei no. 1 A, District 1, Bucharest, Romania, Phone: +40745667740, E-mail: viorel.danacu@yahoo.com

²Romanian Academy, Calea Victoriei 125, Sector 1, 010071, Bucharest, Romania

³Faculty of Veterinary Medicine Bucharest, 105 Splaiul Independentei, 050097, Bucharest, Romania

⁴Post-doctoral school for Zootechnical Biodiversity and Feed Biotechnologies, Str.Calea 13 septembrie, Bucharest, Romania

Corresponding author email: viorel.danacu@yahoo.com

Abstract

Green Power Sustainable Food and Euro-Atlantic Romania, integrated and globalized, based on eco-bio-economy, represents a new direction of development that should mark the transition to a new sustainable social market economy, a smarter, greener economy, in which our prosperity is due to innovation, better use of resources and the knowledge to be a key factor. They are also the principles underlying the EU Strategy 2020 and the European bioeconomical Strategy 2030, developed in Germany through which the European Union aims to accelerate progress towards a knowledge economy, but an environmentally friendly economy. Metabolic energy as specific form of nutritional energy by externalizing the productive potential of feed is running photosynthesis so a specific form of solar energy obviously fall in global concept of "green power". We believe that Sustainable Food Green Power as a new original concept launched in the Postdoctoral School, is based entirely on complex use of various forms of green energy (solar, wind, hydropower, geothermal energy, etc.), And how to meet specific food production based on eco-bio-social and rural economy (according to the strategies of social inclusion objective of the Lisbon 2030) is actually a confirmation of theoretical and practical aspects and analytical synthesis that the authors have found the-over the years the scientific organization (management) and recovery (marketing) and sometimes record high yields recorded continuously for agro-pedoclimatic conditions of ecozona Cezieni Olt County.

Key words: bio-economic, ecosanogeneza, sustainable agriculture

INTRODUCTION

Given the increasing food needs of the population in the world, that there are National Strategies and Programs of Absorption of Financial European Grants and that agriculture today for the entire political class, conscious and unanimous agreement, is the priority for economic and social revival of the village, of the country, through sustainable rural development where livestock sciences, soil sciences, agro, horticulture, veterinary medicine, environmental health, conservation of bio-potential agro ecosystems and natural and anthropogenic agribusiness, food biotechnology, innovations and compared ecosanogeneza, applying of principles and specific targets for metabolic energy from green power food, based on eco-bio-economy,

and therefore according to ecozona Cezieni, Olt County, are a priority to develop new paradigm eco-bio-economic, an economy for future generations, providing a healthy living environment through the wise use of limited resources earth.

MATERIAL AND METHOD

The paper is relevant to economic and social recovery after decades of stagnation of village development Cezieni, Olt County, on the principles and specific objectives of metabolic energy green power Food, based on eco-bio-economy, according ecozona Cezieni, Olt County and sustainable rural development. For this we used research methodologies that are based on eco-bio-economic requirements for an intelligent world, a healthy environment, a life

of wealth. In the first phase we made an inventory of the main sources of the principles, objectives and directions for implementation of sustainable rural development, including relevant official documents: the United Nations, European Union and the strategies of this Common Agricultural Policy and for the period 2010-2030 the U.E. Romania's position. Establishment of a collective joint working with staff and some members of my family who are advised by activities carried out over decades in the context of evolution and unfortunately partial involution of ecozona Cezieni, Olt County, social and historiographical methodologies by individual families chips and components of the village administrative unit with economic reference for metabolic energy from green power agro-food based on eco-bio-economy, according to ecozona Cezieni, Olt County.

RESULTS AND DISCUSSIONS

Processing grapes at CAP Cezieni was a wise decision to avoid travel to other processing stations (the closest one was at 45 km), slow processing, unjustified extension of harvest with serious consequences for production environments, losses inevitable quantity and quality during transportation, the possibilities for recovery of marc and reducing fuel consumption and oil.



Photo 1. Processing department of grapes and marc at CAP Cezieni, Olt County

200-300 tons resulting marc was dried, ground and used as an excellent livestock feed, transformed into metabolic energy required in livestock, in 7 to 13% fat and 10 to 12% protein. Is important this transformation by drying, grinding marc, to obtain metabolic energy because the marc unground and processed, the seeds were eliminated entirely,

because its were not digested by animals. This resulted to be given greater importance to the expansion of processing activities for the fodder of all reserves and resources from vegetables or results of semi industrial. Also in this section of feed processing residues, using presses they had, they carried out the operation of squeezing the seeds and shells of tomato canning factory, eliminating most of the moisture they had.



Photo 2. Concentrated feed factory, feeding rabbits, ruminants, sheep, pigs at CAP Cezieni, Olt County

After squeezing were exposed to sunlight for several hours to dry and then were used in the winter as feed in poultry diets, providing the metabolic energy necessary to poultry, being an important source of vitamins, protein and fat. Development of small industries in Cooperative Production Cezieni, Olt County, imposed increasingly wide use of technologies that require heat.

To this is added the heat for halls in which the cooperators of the unit were working also during the winter.

A boiler so large was not justified at all times, because you cannot use all the heat in all periods, because you cannot use all the heat produced during the entire year. The boiler must operate continuously, even when the energy was not needed to avoid freezing pipes carrying heat from the boiler to the premises in different halls. It was hard to accept such use. So they decided to use the locomotive boiler only in periods when technological steam was needed for the canning and feed, in summer-autumn period.

Then with local experts was made, from internal resources, a boiler type stove with high efficiency and heating capacity of 320 square meters. The fuel for these stoves were provided only from processing residue from wicker and

from the logging made in vineyards and orchards. This type of stove was easily heated, consumed less and meet the needs of the halls, in the premises of sections in the livestock sector, especially in growing rabbits halls.

At Cezieni, nothing was wasted, significant amounts of plant mass resulting from technological operations of vineyards and orchards and the vegetable were used as source of energy in various forms and in various sectors, and peelings from willow twigs processed in the department of wicker, these remains were used instead of raffia, used for tying vines, etc.. Purchased would have cost them about. 70 000lei/year. Other remains were used as fuel in stoves of industries mentioned above. It was approached successfully and practiced the unconventional energy formula namely a section for biogas, another on solar batteries, wind stations that allow them quasi energy independent.

As the primary concern was the judicious use of land so that each parcel be used as economically. For this purpose we analyzed each parcel of land and agro-pedological attributes report was established what use it should have in the future. Cezieni the village was considered in all respects and were found at the same time these modes of use of land: Arable land suitable for: crops, vegetables sloping land suitable for: vine plantations, plantations trees, pastures: wetlands: woodland: afforestation, protection curtains.

CONCLUSIONS

Green Power Food development is a new direction which should mark the transition to a new sustainable social market economy, a smarter, greener economy where our prosperity is due to innovation, better use of resources and the knowledge to be a key factor. They are, in fact, the principles underlying the EU 2020, the European Union aims to accelerate progress towards a knowledge economy, but an environmentally friendly economy.

Metabolic energy as specific form of nutritional energy by externalizing the productive potential of feed is running photosynthesis so a specific form of solar energy falls clearly in the global concept of “green power”.

We believe that green power food as a new original concept launched in the Postdoctoral School, is based entirely on complex use of various forms of green energy (solar, wind, hydropower, geothermal energy, etc..), and how to know specific food production based on eco-bio-social and rural economy (according to the strategies of social inclusion objective of the Lisbon 2030) is actually a confirmation of theoretical and synthetic of practical aspects and analytical which the authors of the scientific papers have found over the years in scientific organization (management) and recovery (marketing) and sometimes record high yields recorded continuously for agro-pedo-climatic conditions of ecozona Cezieni, Olt County.

Therefore at Cezieni it was shown that green power food based on eco-bio-economy provide metabolic energy and not only to ensure an increase in integrated production, food and chemical industry needed as a source of food and energy for human life, animals and plants.

At Cezieni, as it once was, the ecozona can be revitalize economic and social by investing in wind farms, solar, hydraulic or biogas (manure from animals, from birds), biofuels from plant residues (straw, barley, corn stalks, vines cut branches from trees after cleaning, sawdust, wicker waste processing), as it was once.

ACKNOWLEDGEMENTS

Thank you very much for the cooperation in this research work, which was possible with my father's help, Eng. Tudor Danacu, personal family archives and help from Postdoctoral School for Livestock Biodiversity and Food Biotechnology based on Eco-economy and Bio-economy necessary for Ecosanogeneza, the Romanian Academy and Ministry of Agriculture and Food.

REFERENCES

- [1] Danacu Viorel, 1994, *General Considerations on Food Security in the Context of National Food Security and International, Romania's National Defense College of the third series, publicly supported*, Bucharest, Military Academy, Ministry of Defence of Romania;
- [2] Events, News on School Postdoctoral website, www.postdoctorat.ro;
- [3] Methodological guide, scientific, educational and financial, School Postdoctoral Biodiversity on Livestock

- and Food Biotechnology and Bio Eco-economy necessary Ecosanogeneza, Edition March 2010 Vision Design
- [4] Danacu Viorel, Alexandru T. Bogdan, Danacu Tudor, 2010, *Romanian Agriculture revitalization area through a program of livestock based on the establishment and development of multipurpose agricultural cooperative, multi-year case study experience of the Cezieni, Olt county the scientific seminar presentation place on: livestock biodiversity resources necessary human food in perspective* 2020-2050-2100 PERIOD, Study and Research Center of agro biodiversity, Bucharest, path No.13 September 13, 7th floor, west wing (photo poster).
- [5] Danacu Viorel, Alexandru T. Bogdan, Danacu Tudor, 2011, Traditions and Prospects for the practical application of the concept of Integrated Environmental Health, a world of intelligence, a healthy environment, a life of wealth, with features for ecozona ecobioeconomica Cezieni, Olt County, place where Scientific Seminar has been held on: SCIENTIFIC BASIS OF THE NEW CONCEPT OF INTEGRATED ENVIRONMENTAL HEALTH - A WORLD OF INTELLIGENCE, A HEALTHY ENVIRONMENT, A LIFE OF WEALTH, Education and Research Center of Bucharest agro biodiversity, path No.13 September 13, 7th floor, west wing (photo poster) .
- [6] Danacu Viorel, Alexandru T. Bogdan, Danacu Tudor, 2011, Possibilities of achieving an integrated recovery ecobioeconomic biodiversity in agro-livestock ecozona Cezieni, Olt County, place where Scientific Seminar has been held on: BASIC BIBLIOGRAPHIC CONTRIBUTIONS AND SCIENTIFIC RESEARCH PROJECTS IN ORIGINAL SERIES II POSTDOCTORAL, Center for Studies and Research of Biodiversity agro Way No.13 September 13, 7th floor East Wing, Conference Room cam.7301, Negre.Grup Sea University Foundation work-Biotechnology breeding Genetics and genomics in zootechnics. Moderators: Prof.univ.dr.Marcel Paraschivescu, Member of the Academy of Agricultural Sciences and Forestry, CSII Dr.George Toba (Photo Poster).
- [7] Danacu Tudor, 1986, From experience of agricultural units straight to “ AGRICULTURAL COOPERATIVE OF PRODUCTION CEZIENI ON THE ROAD TO NEW AGRARIAN REVOLUTION”, Center Agricultural Teaching and Propaganda, Ministry of Agriculture, Agricultural Engineering Editorial Propaganda, Bucharest.
- [8] Danacu Tudor, 1986, *On the way the new agrarian revolution accomplishment from experience in agricultural production cezieni, olt county, in small industry development*, Ministry of Agriculture, Agricultural Engineering Editorial Propaganda, Bucharest.
- [9] Nicholas Georgescu-Roegen, 2009, *Some elements of Orientation in Economic Science*, Publications and Postdoctoral Virtual Library School.
- [10] Lester Russell Brown, 2001, *Eco-Economy: Building an Economy for the Earth*, Publications and Virtual Library of Postdoctoral School.
- [11] Bogdan A.T. 1993. *Achievements and prospects of agricultural biotechnology research*, Cluj Academic Days, 25-30 October, Cluj-Napoca.
- [12] Bogdan Alexandru T., Vioara Mureșan, Alexandru Mironov, Viorica Boboc, Denis Diaconescu, 2010. *Prospects of agrifood green power and forecasting for 2100*. Bulletin USAMV Cluj-Napoca, Animal Science and Biotechnologies, 43 (1),188-191
- [13] Bogdan Alexandru T., Vioara Mureșan, Viorica Boboc, Denis Diaconescu, Marcel Theodor Paraschivescu,(2010) – Prospects of agrifood green power and forecasting for 2100. Bulletin USAMV Cluj-Napoca, Animal Science and Biotechnologies, 43 (1),188-191
- [14] Bogdan A.T., A. Ardelean, Opean C., (2010) - Methodological guide, scientific, educational and financial. School postdoctoral for Livestock Biodiversity and Food Biotechnology based on Economy and Bioeconomy necessary for Ecosanogeneza. Edition, Vision Design.
- [15] Dorina Bogdan, Bogdan A.T. (1993), Scientific Basis of embryo transfer and associated biotechnologies. Simp. Romanian Academy, the scientific basis of biotechnology applied to agriculture and food industry Bucharest.
- [16] Drăgan J.C., M.C. Demetrescu, 1986, *Entropy and Bioeconomics. The New Paradigm of Nicholas Georgescu-Roegen*, Nagard, Srl Editrice, Milano.
- [17] Dragan J.-C., M.C. Demetrescu, 1994, *Economist Millennium III: Nicholas Georgescu-Roegen - Prophet architect of the new thinking*, Publishing Europe Nova, Bucharest.
- [18] Nicholas Georgescu-Roegen, 1996, *The Entropy Law and Economic Process*, Volume V, Publishing Expert (care volume - Ihor Lemnij, Georgeta Bolomey translation).
- [19] Nicholas Georgescu-Roegen, 2006, *energy, natural resources and economics*, Volume VI, Book I, Expert Publishing (care volume - Hildegard Puwak).
- [20] Nicholas Georgescu-Roegen, 2009, *Epistemology Roegenian*, Volume VII, Book II, Expert Publishing (forthcoming), (care volume - Hildegard Puwak)
- [21] Nicholas Georgescu-Roegen, 2009, *Epistemology Roegenian*, Volume VII, Book I, Expert Publishing House (Romanian version of Part I - Some elements of guidance in economics –
- [22] European Commission (2005b). *Prospects for Agricultural Markets and Income 2005–2012: Update for the EU-25*, Brussels (December).
- [23] Evan Hillebrand. (2009). *Poverty, growth and inequality over the next 50 years*, Raport FAO.
- [24] FAO (2004a). *The State of Food Insecurity in the World 2004*, Rome.
- [25] FAO (2004b). *Human Energy Requirements*, Report of a Joint FAO/WHO/UNU Expert Consultation, FAO Food and Nutrition Technical Report Series No 1, Rome.
- [26] FAO 2004. *Critical Review of China's Cereal Supply and Demand and Implications for World Markets*, Document CCP:GR-RI/04/2, Rome.