

SYSTEMS RESEARCH INSTITUTE,
POLISH ACADEMY OF SCIENCES, SZCZECIN DEPARTMENT
AGRICULTURAL UNIVERSITY OF SZCZECIN
FACULTY OF ECONOMICS AND ORGANIZATION OF FOOD ECONOMY

MODELLING OF ECONOMY IN SPECIALLY PROTECTED REGIONS

*Proceedings of the international conference
held on 9-11 june 1994 in Drawno, Poland*

SZCZECIN 1994

SYSTEMS RESEARCH INSTITUTE,
POLISH ACADEMY OF SCIENCES, SZCZECIN DEPARTMENT
AGRICULTURAL UNIVERSITY OF SZCZECIN
FACULTY OF ECONOMICS AND ORGANIZATION OF FOOD ECONOMY

MODELLING OF ECONOMY IN SPECIALLY PROTECTED REGIONS

*Proceedings of the international conference
held on 9-11 june 1994 in Drawno, Poland*

Editor: Bogdan Krawiec

SZCZECIN 1994

Reviewed by:
prof. dr hab. Stanisław STACHAK

Edition of this publication was financially supported by:

1. Komitet Badań Naukowych, Warsaw,
2. Samodzielny Zespół Edukacji Ekologicznej
Ministerstwa Ochrony Środowiska, Zasobów
Naturalnych i Leśnictwa, Warsaw.

ISBN 83-85847-40-5



45353

COMMITTEE OF HONOUR

1. **Prof. Zygmunt Dowgiałło**
Chairman of the Commission of Organization and Food
Economy Management of the Polish Academy of Sciences
2. **Mr Tadeusz Kohut**
Director of Drawa National Park, Drawno
3. **Prof. Roman Kulikowski**
Director of Systems Research Institute of the Polish Academy
of Sciences, Warsaw,
4. **Prof. Marian Piech**
Rector of Agricultural University of Szczecin,
5. **Mr Zbigniew Pusz**
Gorzów Voivode,
6. **Mr Marek Taborowski**
President of "POLCOOP" Ltd., Warsaw,
7. **Mr Waldemar Ślaski**
Mayor of Drawno town and commune,
8. **Prof. Andrzej Szujecki**
Secretary of State in the Ministry of Environment
Protection, Natural Resources and Forestry, Warsaw,
9. **Dr Stefan Wroński**
Director of Provincial Food Economy Bank, Szczecin.

ORGANIZING COMMITTEE

1. **Prof. Bogdan Krawiec** - chairman,
2. **Mr Bogusław Bil,**
3. **Prof. Ryszard Budziński,**
4. **Prof. Hans-Joachim Budde** (Germany),
5. **Prof. Paolo Gajo** (Italy),
6. **Mr Marian Kuc,**
7. **Prof. Michał Świtłyk,**
8. **Mrs Alfreda Winnicka** - organizational secretary.

ECOLOGICAL AGRICULTURE IN POLAND - THE PRESENT AND FUTURE

Marian Malicki

Agricultural University of Szczecin

The ecological agriculture in Poland is a new issue, introduced by the philosophy of the countries of a high agricultural level, foreign and Polish research centers, and institutions dealing with environment protection. In the 80's, the local resort agricultural institutes didn't do any research in the ecological direction in the development of agriculture. All research done in this area was carried out by non-agriculture-connected scientific institutions. The conclusion of this research, presenting a very hard situation of the natural environment, caused that at the middle and also highest stage of agricultural schools courses of eco-agriculture and sustainable agriculture were incorporated.

The present condition of the Polish agriculture during last 4 years is a result of applied philosophy of development; those main points were:

- single-direction orientation on maximization of agricultural

production without respecting the elementary rules of ecological balance. This caused the destruction of some ecosystems and in some regions even caused ecological disasters.

- The increase of agricultural production was reached in an extensive way, by using more and more land. In effect agriculture used worse kinds of land which caused the increase of production costs because of lower efficiency. From the currently used 1.8 mln/ha of the VI and VII class land the specialists suggest 0.5 mln/ha for forest use.
- exploitation of agriculturally used land was in many regions faster than its self-restoration.

The lack of systematic, ecological attitude towards agriculture, the lack of eco-regional attitude, use of bad farming systems that are oriented only on maximisation of the agrar production caused a situation in which we all have to pay the costs of increase in the production and also regeneration of the degraded environment.

The economical system used in Poland, created natural potential like water and land to be very inexpensive. The low costs of using this potential didn't force the producers to use the environmentally friendly technologies.

The ecological awareness of Polish society

Because of complexity and variation of the phenomenon the definition of the notion of ecological difficulty is an awareness process. For this paper we are using the definition of ecological consciousness based on (5) that says that ecological consciousness is a system of knowledge of a unit about its behavior

towards nature; the accepted system of values and system of norms that guarantees, on the basis of possessed knowledge, the realization of things preferred by the unit.

The society's ecological consciousness should be interpreted on two levels:

- consciousness of the producers,
- consciousness of the consumers.

In Polish literature there is a lack of complex research that illustrate this problem, even if it can be a main problem of the future of the Polish natural environment.

We will present here a partial research done on the area of 7 provinces (województwo) of North-East of Poland (4,6). In this area most of the farmers consider healthy food as such that is produced only with the use of organic fertilizers, without the addition of synthetic mineral ones and without the use of other chemical agents. This definition of healthy food isn't a complete one because this kind of food should also consist of enough sugars, vitamins and has very low contents of nitrates and other simple nitro- substances.

The declaration of farmers about healthy food production may be represented as follows:

- 88% of all farmers show interest in running an ecological farm,
- 93% is interested in the problem of selling ecological products,
- 83% of researched farmers said that they assumed the knowledge of the dangers for natural environment as necessary,

- 91% of farmers declare that the idea of environmental protection should be spread and the protection should be done by government agencies (49%), local governments (12%), and each person (49%),
- 70% was for increasing the use of mineral fertilization and chemical protection of plants,

the farmers are aware that used pesticides are bad for their health but still 49% of them declared their usage.

The results of this research show the declarative consciousness, that can be a base for further inferment on the character of the ecological values of the farmers.

The consciousness of the local consumers in the area of healthy food is very low. One of the reasons for it is the lack of attested healthy food on the market, which causes that there is no evidence if the purchased food is really of good quality.

The ecological food is more expensive than this produced in a traditional way, which due to the general impoverishment of society causes a low demand for these products.

The low ecological consciousness of the society is taken as the main reason of the devastation of the natural environment. This problem has been noticed by researchers for a long time, but in the past years it is more typical mostly for groups of young people.

The main factors that caused the change of ecological policy were (2):

- political and economical pressure from the highly developed countries, higher and higher losses caused by pollution,
- calling 27 regions of ecological danger and 5 of life threate-

ning, the Tscharnobyl disaster, that caused a higher sensitivity of the society to problems of environmental protection.

Ecological farms and their main problems

The ecological farms are till now a margin encompassing all farms in Poland. It is considered optimistic, that each year more farms become ecological ones, but the speed of increase isn't fast enough. The EKOLAND organization registered in 1989 took the role of integration of all farmers using unconventional methods of production.

The number of ecological farms in last years is shown below:

Year	Number
1990	27
1991	49
1992	94
1993	174

EKOLAND is an organization operating in all of Poland that attests the ecological farms and is also processing plants and traders that have a trade mark that applies to international standards set by IFOAM. EKOLAND became a member of IFOAM in 1990.

The main problem of ecological farms is the lack of special species of plants that are resistant to diseases and pests, and lack of machinery for destroying weeds. The experiences of such farms show that the hardest year is the first one, when the farm is transformed from a classical into an ecological way of farming. Besides lower harvest and lack of experience also the lack of financial means is a very negative agent. It would also be reasonable to give such farmers special ways of financial support.

The next problem is associated with the distribution of ecological products. The specific thing is that the distributors but not producers take the biggest part of the profit from selling a product. Low production scale and big territorial dispersion do not allow creating specialty shops with ecological food.

At the present time such ecological farms get additional profit by being guesthouses and offering ecological food during the stay of a group of tourists.

The system of ecological agriculture is much harder in realization than the conventional one. It demands from the farmer a knowledge not only of farming but also such topics such as marketing. Very important are the skills connected with changing of crops and organic fertilization. The success of ecological farming depends on support programs and attitude of extension services and agricultural schools.

Perspectives of development of ecological agriculture in Poland

The development of ecological agriculture will be influenced mostly by the demand for ecological food coming both from the country's and foreign consumers (export).

The increase of interest in healthy food comes from education in all levels of schools, direct contacts of our consumers with more consent people from more developed countries. Food of this kind will be mostly purchased for young people and children.

The slowly increasing money that people can spend on food will allow more people to buy ecological food products. The Polish agriculture can produce enough for Poland and also for export. In Poland there is big enough area of ground that isn't

polluted and is very good for such production. A high percentage of people working in agriculture would allow the usage of all the production potential in this production.

Export of healthy food is possible in all regions, but especially easy in transborder regions where the exchange of people is so high.

The only stipulation for this is the creating a good attestation system for giving attests to the ecological products. The creation of a network of institutes searching for food pollution would enable the elimination of polluted products and would give the Polish agriculture the meaning ecological. Till now this possibility has not been used.

Final conclusions

The ecological agriculture is still a margin in the general production of food.

Poland, even with big degradation of areas, has the opportunity for production of healthy food for internal use and also for export. Ecological farms could develop in regions near cities and borders of the country.

The perspective of joining the European Communities near the year 2000 forces Poland to new approaches in environmental protection and production of ecological food.

The ecological education will cause that people will buy more ecological products which will allow the farmers to get bigger profits and use more workers for the production.

The increasing of production of healthy food needs an institution for attestation of such products, a foundation for envi-

ronmental protection for such farms, a good distribution system for ecological products and an extension system that specializes in problems of ecological food production.

References

1. Babalski M.: Rys historyczny powstania i funkcjonowania Stowarzyszenia Producentów Żywności Metodami Ekologicznymi EKOLAND. W: *Rola doradztwa w kształtowaniu i ochronie środowiska rolniczego w gminie, Świnoujście - Kopenhaga* 7-11.XI.1993.
2. Kowalik A., 1994: Edukacja ekologiczna na terenach przyrodniczo cennych zagospodarowanych rolniczo. W: *Rola doradztwa w kształtowaniu i ochronie środowiska rolniczego w gminie, Świnoujście - Kopenhaga* 7-11.XI.1993.
3. Michna W., 1992: *Produkcja zdrowej żywności i ochrona ekosystemów żywicielskich*, Zag. Ek. Roln., 4/5:61-70.
4. Mydlak M., Trebnió D., 1993: Świadomość ekologiczna rolników. W: *Rola doradztwa w kształtowaniu i ochronie środowiska rolniczego w gminie, Świnoujście - Kopenhaga* 7-11.XI.1993.
5. Praca zbiorowa, 1992: *Idee ekologii w świadomości społecznej*, Poznań.
6. Szafranek R.Cz., Mydlak M., Trebnió D., 1994: Niektóre problemy wprowadzenia rolnictwa ekologicznego. W: *Doradztwo w ekorozwoju terenów wiejskich*, Szczecin - Kristianstad, 7-11.VI.1994.
7. Schupham W., 1984: *Nutritional values of crops as influenced by organic and inorganic fertilisers*. Qual. Plant, 23: 338-358.

IBS PAN

45353

ISBN 83-85847-40-5