

ECOLOGY AND AGRICULTURE

[Professor Thomas Alifakiotis](#)

Department of Agricultural Engineering
Aristotle University of Thessaloniki
Greece

Cultivated plants, besides being absolutely necessary for human existence, also clear the atmosphere through photosynthesis and the absorption of polluting elements. In addition, some plants produce bio-energy and other products which can be substituted for fossil fuel, polyethylene and other polluting industrial products. Traditional agriculture, because of its environmentally friendly approach to the environment, does not alter natural sources within an existing biological equilibrium.

However, the intensification of agriculture after the Second World War, aimed mainly at the maximisation of yield, is connected with some environmental problems. The main factors responsible for these problems are:

- excessive chemical fertilisation and improper irrigation of crops
- overuse of chemicals for pest and weed control and of heavy farm machines
- the elimination of crop rotation
- the extinction of precious plant species and varieties

The pollution of the environment, as well as the need to reduce agricultural surpluses and the cost of agricultural products in order to become competitive in the world market today, impose new reforms on crop farming. Agriculture is tending to change from intensive to ecological and biological alternatives aiming at the lowest use of input and energy and, for this reason, it was recently named LISA (Low Input Sustainable Agriculture). The Common Agricultural Policy of the European Union subsidises research projects for sustainable agriculture and applies mechanisms and directives in order to achieve the new goals, among which is the decrease in production of many basics of human nutrition agricultural products.

However, the whole subject needs very careful consideration, as it is possible that the new priorities of alternative agriculture, under the guise of environmental protection, would exacerbate the problem leading to the starvation of millions. Farming systems and crop productivity could deteriorate, leading to real disaster even for developed countries.

Professor **Thomas Alifakiotis** has been professor in the Faculty of Agriculture, Department of Animal Production, Aristotle University, Thessaloniki, Greece, since 1980. He is also on the Agricultural Planning Committee for Rural Development and the Scientific Committee of the National Agricultural Research Institution. He received his post-graduate education at Utah State University, where he also taught, specialising in the physiology of reproduction and lactation, the control of reproduction in farm animals and new technologies in breeding. As a recipient of a C.E.C. Scholarship, in 1983, he was visiting professor in Ireland, West Germany and France. His many publications include *Problems and Perspectives of Greek Dairy Cattle Breeding* (1994).

