

The not advanced,
and farmers use
outdated
technologies



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The population of the Earth has been growing during the whole time of existence of the mankind. Last decades, not only does the number of people living on our planet grow, but the rate of this increase is becoming bigger and bigger.

According to the United Nations Population Fund, there is a probability that the World population will reach the level of 12 billion or even exceed the level of 25 billion by 2150 (cited in Zuckerman, p. 82). It is possible to imagine how big the food needs will be in this case: it will be necessary to cultivate more fruits, vegetables and crops to feed the population. On the other hand, natural resources are limited, and the period of their recovery is quite long; in this sense, soil is not an exception. Producing more food means using soil more intensively, which may lead to its exhaustion. Besides, a range of other negative environmental processes such as changes in ecosystems, pollutions, acid rains etc also affect the soil (Huttl & Frielinghaus, p. 63). Finally, growing energy consumption has led to the new trends in energy generation.

For example, production of biodiesel will also require much space for cultivation of plants. The controversy that takes shape from these facts is connected with soil fertility: the population growth causes growth of food needs and thus exhausts soil, which exposes soil fertility to danger. This controversy is a potential trigger of a range of serious problems that the mankind may face in the nearest and the distant future. Lack of food will cause numerous situations of food crisis and famine. It is possible to predict that the developing countries with the population who have low income will suffer the most - people will not be able to buy food for prices that will grow

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because of the growing demand and the decreasing supply. The situation will result in “ food wars” – worsening of international relations, competition for food and regions with fertile soil. Yet in 1996 the World Bank argued that the situation had already become dramatic for Africa, “ Without restoration of soil fertility, Africa faces the prospect of serious food imbalances and widespread malnutrition and likelihood of eventual famine” (cited in Keeley & Scoones, p. 43).

Thus, it becomes clear that today the World community should cooperate and direct its efforts solving the soil fertility problem. One of the main directions of overcoming the controversy with the soil use is science. Soil fertility and soil use should be studied from different perspectives. First of all, it is necessary to study the environmental and industrial factors that the most strongly affect soil fertility. Secondly, it is important to put effort into development of new technologies in agriculture.

Farming should become less exhausting for the soil, which will give the opportunity to use it more intensively and effectively. Finally, it is necessary to invent fertilizers that will help recover the soil quickly. The new fertilizers should have low cost, as in many countries high price that the farmers have to pay for them becomes a cause of soil exhaustion. The second important direction is the international policies that should be developed and implemented. Today there are several organizations that pay attention to the soil fertility problem (Keeley & Scoones, p.

48). However, the situation requires more diverse and intensive actions. In many developing countries, agriculture is not advanced, and farmers use

outdated technologies to grow plants, which means that soil is used ineffectively.

On the one hand, the technology influences the crop capacity: the more progressive technology is used, the bigger harvest a farmer can grow. On the other hand, advanced agriculture technologies help protect soil from quick worsening. In case the technology is outdated, regions where the soil has low fertility will suffer from famine, and the regions that have fertile soil will miss the possibility to provide food to other regions and meet the needs of the local population. Thus, developing countries should receive assistance and help in applying new agriculture technologies. The support can be done in the form of investment, scientific cooperation, transferring technology and information. Dramatic population growth is connected with a range of environmental problems, and the soil fertility issue is one of the most important environmental controversies. Today the soil fertility problem is not a hypothesis anymore: it has turned into a real threat that the World population can face in the quite near future.

The rate of population growth is difficult to predict, but scientists call to think about the soil fertility problem right today. The World community should understand that our wellbeing to the great extent depends on our own efforts. Besides, we are responsible not only for our own prosperity, but for that of our future generations. To save our descendants from the food crisis, famine and “ food wars”, we need to cooperate and take resolute actions on the international level.

Developed countries have particular responsibility for developing new knowledge in agriculture and helping agrarian regions find optimal approaches to effective soil use.

References

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