

BIOENGINEERING IN AGRICULTURE

1. READING

a. Look at the picture. What do you think bioengineering is and what are its advantages?



agriculture – сельское хозяйство

breeding –
выращивание

create – создавать

crop – урожай

fertilizer – удобрение

animal husbandry –

животноводство

beneficial – полезный

quality – качество

b. Read the article and check your ideas. Bioengineering in agriculture is a field of science that combines biological knowledge and engineering methods to increase the efficiency and stability of agricultural production. It has played a significant role in the development of agriculture and is becoming increasingly relevant in the changing climatic situation and the growing needs of the population.

The purpose of bioengineering in agriculture

One of the main tasks of bioengineering in agriculture is to improve the genetic material of agricultural crops. With the help of genetic engineering and breeding methods, it is possible to create plants with increased ability to struggle against diseases, pests, and negative environmental conditions. Such plants can survive in drought (засуха), soil salinity

or extreme temperatures, which reduces crop losses and ensures food

Biological products

Another direction of bioengineering in agriculture is the creation of biological preparations and fertilizers that promote plant growth and improve their quality without negative impact on the environment. Such preparations may contain beneficial microorganisms that improve the soil, increase the planting capacity, or increase the nutritional (питательный) value of products.

Animal farming

In addition, bioengineering in agriculture is actively used in the field of animal husbandry (животноводство). With the help of genetic engineering new varieties of forage crops are



developed; animals with the increased ability to struggle against diseases or capable of producing more milk are being created. Thus, bioengineering in agriculture is becoming an increasingly important science that can bring enormous benefits to the development of the agricultural area. It allows you to create the newest solutions, improve the performance and sustainability (устойчивость) of crops and animals, as well as improve the quality and safety of products. The development of bioengineering in agriculture already has a positive impact on global food security and is an important element of the stable development of our agricultural systems.

2. PROJECT

Research and prepare a presentation on the topic 'Agriculture bioengineering in my region'. Give a 1.5 - 2 min. talk.

Remember to say about:

- areas of bioengineering;
- examples;
- impact of bioengineering on people/environment.

Present your findings to the class.

DISCUSSION

c) Discuss in pairs:

- Why do you think bioengineering is so beneficial in agriculture?
- Has bioengineering got only a positive impact on agriculture, or are there any disadvantages? Why? What are the drawbacks, if any?
- What other areas can bioengineering affect?