Moreover, fructose is a natural substitute for sugar, which is found in all fruits, berries, flower nectar, honey, 1.7 times sweeter than sucrose and at the same time, contains a third less calories. But, among other things, fructose has another advantage - it accelerates the breakdown of alcohol in the blood and its excretion. Fructose by 20-30% reduces the risk of caries and inflammation in the mouth, does not cause allergies. In fact it is sweeter than sugar, so it needs less to sweeten foods. In addition fructose will not raise blood sugar (will not cause a jump in insulin). Such products can be consumed by people who limit their dietary sugar intake: those who are overweight, obese [2].

The technological process of production of ice cream-sherbet "Barberry" is carried out according to the technological scheme (Fig.1). The technology of the developed ice cream provides:

- *Cooling of fruit puree.* After pasteurization, the mixture is cooled to temperature 0-6ºC.
- *Mixing milk and fruit base.* The milk and fruit base are mixed for temperatures 4±2°C.
- *Freezing of the mixture.* Freezers are used for freezing mixtures continuous operation of domestic and imported production. In the freezer the mixture should to act with a temperature of 2-6ºC. The temperature of the ice cream at the outlet of the freezer should be not higher than -3.5ºC.
- *Packing and hardening of ice cream.* Packed ice cream is hardened in the air flow at a temperature of -25 ...- 35ºC in special freezers that are part of the production lines. The temperature of packaged ice cream after hardening should not exceed -10ºC. Before placing the ice cream in the storage chamber, the ice cream is re-hardened in the hardening chambers for 24-36 hours. After re-hardening, the ice cream is placed in a storage chamber.

It can be concluded that the use of fructose and biologically complete ingredients provides a new type of ice cream with a pleasant taste, delicate texture, diabetic properties and quality indicators. Thus, the complete replacement of sugar with fructose in the composition of ice cream-sherbet will reduce the caloric content of the product, and the introduction of biologically complete ingredients will provide products with attractive consumer characteristics, with improved vitamin composition. New data can be useful to scientists and food industry workers; they have scientific and practical significance.

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Language adviser: *Kryvonos I.A., Senior Teacher of the Department of Foreign Languages, DmytroMotornyi Tavria State Agrotechnological University*

SOIL AMENNDMENTS

Sholukha T.A., *tarassholuha@gmail.com*
Dmytro Motornyi Tavria State Agrotechnological University

A soil amendment is any material added to a soil to improve its physical properties, such as water retention, permeability, water infiltration, drainage, aeration and structure. The goal is to provide a better environment for roots. There are two broad categories of soil amendments: organic and inorganic. *Organic amendments:* It is the composition of organic moieties derived from biomass and/or living beings. It generally includes compost, wood chips, biochar, animal manure, straw, husk, geotextile, and sewage manure. These substances are extremely rich in organic matter and macro- and microelements that increase the fertility of soils by ameliorating microclimatic conditions and may also provide substrates for microbial growth. Inorganic amendments are either mined or

man-made. These amendments are generally contained minerals associated with soil fertility. They include vermiculite, perlite, tire chunks, pea gravel, sand, gypsum, fly ash and SAPs.

Fresh manure can harm plants due to elevated ammonia levels. To avoid this problem, use only aged or composted manure. It can improve the soil structure (aggregation) so that the soil holds more nutrients and water, and therefore becomes more fertile. Animal manure also encourages soil microbial activity which promotes the soil's trace mineral supply, improving plant nutrition. It also contains some nitrogen and other nutrients that assist the growth of plants.

Compost refers to decomposed organic matter. It is not regulated, so there is no standard about the state of decomposition. Compost made solely from plant-based products (such as wood chips and yard wastes) are low in salts. These are preferred over manure based composts which are often higher in salts. However, they are generally more expensive. Compost enriches soil, helping retain moisture and suppress plant diseases and pests, reduces the need for chemical fertilizers and reduces methane emissions from landfills.

Gypsum is commonly used to decrease soil pH by bonding high sodium salts and lime or limestone to decrease the soil pH.

Superabsorbent polymers (SAPs) have the capability of absorbing water and retaining it for a long time. They are made up of lightly cross-linked hydrophilic polymers that can absorb a large amount of water and stored it in a readily available form to plants. They also act as food for microbes and soil conditioner, as well as reducing soil erosion and agricultural runoff and they increase fertilizer use efficiency.

Organic amendments are more sustainable and environmentally friendly, but have low nutrient levels. Inorganic amendments are easy to use, work immediately, but are expensive and the amount of use is limited.

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Language adviser: *Shevchenko S.P., Senior Teacher of the Department of Foreign languages, Dmytro Motornyi Tavria State Agrotechnological University*

WHAT IS AGROENGINEERING?

Uskova S.O., *svetlanauskova43@gmail.com*
Dmytro Motornyi Tavria State Agrotechnological University

The invention of tools by people dates back to the distant past. The first tools that man created were a plow and a hoe, with the help of which the land was cultivated before planting seeds and plants. The modern economy and consumer demands require the improvement of technologies and equipment, in connection with which the profession of an agroengineering appeared.

Agroengineering is a branch of agriculture that deals with the design and improvement of production processes in the agro-industrial sector. The objects of agricultural engineering are:

- machinery used to create and transport agricultural products;
- new technologies and means of the agro-industrial complex, for example: remote control combines, which were developed by agricultural engineers to simplify agricultural work;
- methods of maintenance and diagnostics of agricultural machinery and equipment;