

Safe Food Additives- The Prospect of Processing Local Plants

Khalilova Saida

*Doctoral student of Tashkent State Agrarian University
Department of storage and processing of agricultural products*

Abstract: It is no coincidence that the globe is changing rapidly, the population is increasing, the industrialization of each country day by day, the development of Science and technology requires only an innovative approach, safe and constant, both from the point of view of Medicine and from the point of view of cultivation and production. In addition to the negative impact of man-made and anthropogenic factors, the fact that in our time people do not consume enough natural food components, agricultural products grown under existing conditions are not fully processed is an urgent problem. As the demand for useful and safe products increases in the food industry, it becomes necessary to pay attention to the naturalness and ingenuity of the raw material base. It is known that in nature there is a flora and fauna world that is not fully studied, but has its own rich components.

Keywords: Amaranth, local raw materials, protein, organoleptic indicators, stability.

Introduction. With its 8,000-year history, the Amaranth (Amaranthaceae) plant has attracted attention from scientists and researchers around the world, pharmacists and food production enterprises as a 21st century plant [1,3,7,9]. In particular, in our country, this plant was grown in agriculture, from which scientists worked on obtaining a number of products. Flour from amaranth grain, omuxta-em from groundnut, oil from grain, phytochoys are taken and are considered as a healing resource that has a wide impact on human health.[4,17,21] of course, this plant, which has a number of advantages over other types of plants in terms of its medicinal properties, has ushered in a new era in the field of Agriculture.

While the amaranth plant is not considered a new plant in Central Asia, complete information about this plant has not been formed among the population. Some of the farms are coming in handy to get silage and siderate from Amaranth. However, today the spread of science is being sought to the maximum in terms of identifying the rich components of the plant, its use and promising in various areas of its processing [2,5,11]. The results are pleasing. Table 2

Table 1. Amaranth plant parts composition

Amaranth	
Seeds	Foliage
Protein-containing products (flour, meal, concentrates, isolates)	Pectin products (extracts, concentrates, dry pectin)
Starch products (starch, hydrolysates, starch milk)	Protein-containing products (herbal flour, cake, concentrates)
Lipid-containing products (oil, CO ₂ extract, squalene, lipid protein complexes)	Vitamins, carotenoids, C, B, B, E, flavonoids with P-activity
Products with a high content of dietary fiber: bran, cake, concentrates from seed shells	dyes with red (amaranth) and yellow (betaxanthine) pigments

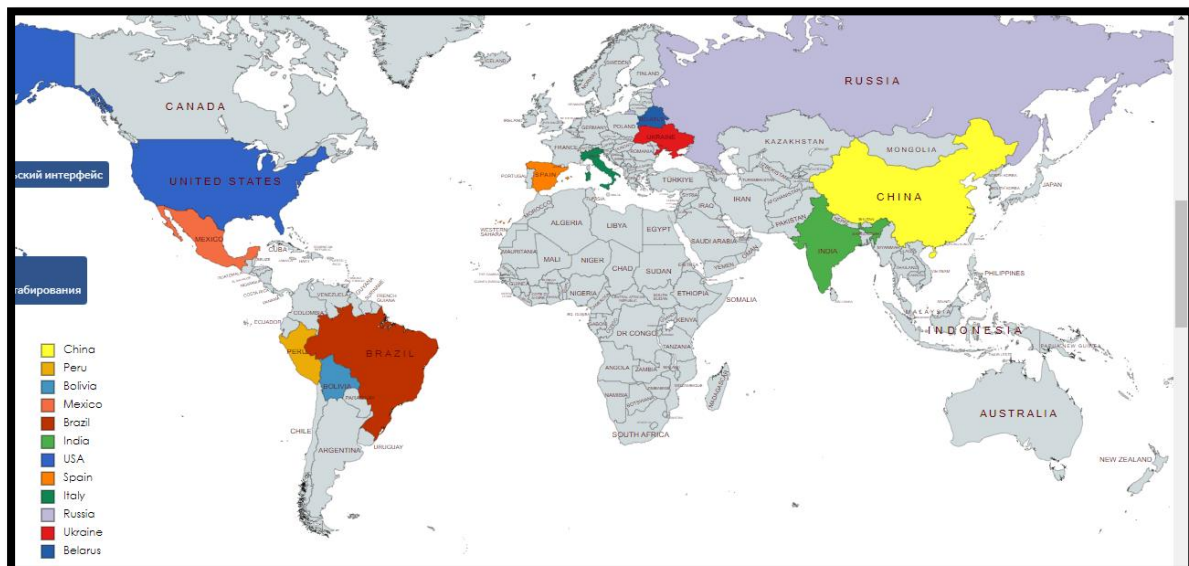


Figure 3. Top countries for amaranth cultivation and processing

But today researchers show that the color obtained from beans and red beets is widely used in the processing of meat products. It is also safe in addition to enriching the product with natural protein. At this point, dyes from Amaranth flower can also take their place in this area.

Results. Researchers are actively developing technologies for complex processing of amaranth seeds, from which a number of food and medicinal products are obtained: cosmetic, medicinal and and and parxezbop products with mechanical and heat treatment, amaranth oil, phytochoy, protein additives, omixta-em products for livestock. The flowers of amaranth are a source of natural nutrient dyes, which are enriched with pigments, protein and vitamins. The colorants of amaranth are represented by red (amaranth) and yellow (betaxanthin) pigments. Since amaranth flowers are bright red to dark red, the color obtained from it does not lag behind the color obtained from red beets in the food industry. The advantage is that, according to the results of organoleptic analysis, the nutritional dye obtained from Amaranth flowers is odorless and does not have a pronounced taste. (Table 2) usually in the conditer direction of food production, the excess to food dyes is large. Amaranth contains a large amount of flavonoids with protein (up to 38.3%), carotinoids, vitamins C, B1, B2, B12, e, P-activity (rutin, quercetin, trifolien) and pectin, which its ability to complicate is not inferior to apple pectin [17].

Qualitative characteristics	Color from beets	Color from Amaranth flower
Color	Mulberry	Mulberry
Smell	It has its own, vegetable scent	Specific
Taste	A little bitterish, the vegetable has a taste	Tasteless
Consistency	Has the same liquid	Has the same liquid
State of steadiness	Steady	Unsteadiness

Table 2. Color organoleptic analysis from Amaranth flower and beets

Discussion. The amaranth plant is not a traditional plant for our homeland. Not yet fully recognized for our country. Scientists and cultivating farmers have been supporting this plant for its medicinal properties. But amaranth has several hundred years of history in our country. As proof of this, in Abu Ali ibn Sina's "The Canon of Medicine" considered the father of medical science, it is possible to know that the maxillary varieties of amaranth are

recommended to be used when finishing wounds, barra leaves in constipation. [2] today, amaranth seed processed products are widely used all over the world. The need to process amaranth seeds in Uzbekistan, to extract oil from it, to obtain flour can solve the problem of reducing the lack of protein, vitamins and minerals in the diet of the population, creating the production of high-quality food and the purchase of such food additives from abroad. After all, amaranth has the property of being able to provide us with several soxas, while giving us a rich harvest in climatic conditions.

Conclusions. During the last years of our century, agriculture boomed. This is due to the fact that not only the world, but also in the Republic of Uzbekistan, significantly new varieties and species, the elimination and Prevention of land degradation, advances in livestock, fisheries and plant studies have changed surprisingly compared to the previous period. This will definitely require a lot of responsibility in the field of storage and processing of agricultural products. Since 2017, the Kharkovskiy, Valera and giant varieties of the amaranth plant have been bred by introduction, adapting to the climatic conditions of our country, new varieties of “Marhamat”, “Ulugnor”, “Andijan –M” and “Uzbekistan”. Received a place in the Unified Register of the Republic. With this, the re-creation and implementation of the plant gave evidence of development and economic efficiency to a number of areas in agriculture. Scientists M.Muydinov, A.Fatkhullaev, K.Dodaev, H.Usmanovas proved that several areas of cultivation and processing of the plant can be enriched with various recipes and products.

In conclusion, this plant is recognized today as the plant of the century. And the studies carried out on the plant are not until the end of Hali. From its Botany, the chemical and physical composition of the flower, grain, Leaf has been providing new and new information. This in turn is the reason for the recognition of agriculture as a source of local and affordable, but high-quality and content rich and valuable in its application, cultivation for various purposes, processing. Accordingly, in the future, we aimed to reproduce its bright flowers, obtain food coloring and introduce it into consumption.

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