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CUCURBITA PEPO AS A STOCK RAW MATERIAL FOR PRODUCING CHILDREN AND DIET FOOD

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Currently, in the Republic of Belarus, one of the vegetable crops grown in open ground is zucchini, which is used for baby and diet food and serves as a raw material for the production of canned products [1, 2].

Zucchini (Cucurbita pepo) is a culture of very great biological potential. In open ground, it can produce crops of up to 500-700 kg / ha and even higher. With a yield of 600 centners per hectare, zucchini tolerates N – 150, P_2O_5 – 120, K_2O – 240 kg/ha. According to their requirements for soil fertility, squash is very close to cucumber, and therefore it is advisable to grow them in one crop rotation field. They respond well to organic and mineral fertilizers, while at the same time they intensively use sparingly soluble nutrients from the soil [2].

When cultivating vegetable plants, the problem of excessive accumulation of nitrates is very relevant. It is associated with the ability of plants to accumulate a significant amount of nitrogen in the leaves and storing organs during ontogenesis. However, plants require a large amount of nitrogen for normal growth and development, the course of many important biochemical processes, for example, such as protein biosynthesis. The source of nitrogen is its inorganic and organic forms, localized mainly in the soil: molecular nitrogen and ammonia vapors, nitrates, nitrites, ammonium, ammonia, amino acids, amides, polypeptides, and other nitrogen compounds. The main easily assimilated forms of nitrogen for plants are ammonium ions (NH4 +) and nitrate [3].

A study on the development of technology for producing zucchini for baby food is officially conducted at «Institute of Soil Science and Agrochemistry» during 2018-2019. The issue of this issue remains relevant.

In the Russian Federation, vegetable marrow cultivation is carried out in the crop rotation system after cereal crops, and the mature ripening varieties Rolik, mid-ripening Anchor and early ripening Gribovsky are used for conveyor production. The vegetative period of early ripening varieties is 25 days from sowing, the mid-ripening variety is 35-37 days and the late-ripening is 44-50 days.

The purpose of the research is the study of varieties of zucchini hybrids by the ability to accumulate nitrates in fruits.

The studies were carried out in 2019 on the basis of the Minsk Vegetable Factory RUAP, the Horizon and the Honey Aroma. The nitrate content in the fruits of a vegetable crop (zucchini) in different varieties and hybrids was estimated. The nitrate content was determined in the laboratory of EI «GGAU» and the control and toxicological laboratory of the State Institution «Grodno Regional State Inspectorate for Seed Production, Quarantine and Plant Protection».

According to our data, the lowest nitrate content was in Andergo variety and amounted to 908 mg/kg. Approximate indicators were in the varieties of Corus – 1143 mg/kg and Albin – 1211 mg/kg. The highest content was in varieties Russian spaghetti – 3043 mg/kg, Pineapple – 2840 mg/kg, Anchor – 2040 mg/kg.

A second study revealed a decrease in the content of nitrate nitrogen to 603-1171 mg/kg. The lowest nitrate content was in the varieties Asso, Angelina and Foran, respectively 542 mg/kg, 607 mg/kg and 622 mg/kg.

In order to obtain high-quality products in a stable manner, it is necessary to conduct research on the development of optimal technology for cultivating zucchini on an industrial scale to obtain zucchini fruits for baby food with an acceptable level of nitrate content (200 mg/kg).

LITERATURE

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SALAD VEGETABLE CROPS FOR GROWING MICROGREENS

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To meet the physiologically minimum consumption of vegetables and melons of more than 140-150 kg per year, according to the