

INVESTIGATION OF THE EFFECT OF DIFFERENT NUTRIENTS ON THE YIELD OF AMARANTH VARIETIES

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Those plants are called pseudocereals, that are used exactly in our diets like cereals, but because they do not contain gluten, the products made from them can be consumed by gluten-sensitive people too (Hermann, 2018, Csabai, 2018). Pseudocereals are the following plants: buckwheat, amaranth, quinoa.

Amarants are members of the *Amaranthaceae* family, formerly classified as *Chenopodiaceae* (Turcsány, 2005, APG, 2009). Several of the members of the family utilized for the seed, but there are also vegetables or herbs. A common characteristic of each species is that they are resistant. The quality of the soil is not demanding and their need for precipitation is low. In case of their cultivation we have to count with few pathogens and pests, so their organic production can also be realized (Antal, 2005).

Amaranth is considered to have five major varieties as a horticultural / agricultural crop such as : *Amaranthus caudatus*, *A. cruentus*, *A. hypochondriacus*, *A. tricolor* and *A. hybridus*-t (Aufhammer, 2000; Miah et al, 2013,; O'Brien, 1983; Pond, 1989, Marázné Szabó, 2008, Ravindran, 2016, Singh, 1993, Sooby, 1998 ; Stallknecht, 1993).

In the course of our research we investigated the yields of two amaranth species, “Edit” and “Zsuzsanna”. The site of the experiment was the half-acre area of the Botanical Garden of University Nyíregyháza. Here we measured 3 plots. The first plot was treated with rhyolite tuff (2 kg / m²), and the second plot was processed with poultry manure before sowing (0.15 kg / m²). The third bed was the control. The row spacing is 40 cm and the spacing is 5 cm between the plants. Seeds were rejected on May 7, 2018.

The measurement took place on November 19, 2018. After drying and threshing, the seeds were measured in grams per bed and variety. Based on the results obtained, the seed yield of 'Edit' is not balanced. The control soil gave the highest seed yield. Surprisingly, this one soil didn't get any extra nutrients. For

Zsuzsanna, the highest yield was achieved in the poultry-treated area, despite the fact that several plants were extinct.

Keywords: pseudocereal, amaranth, poultry manure, rhyolite.

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