

The influence of nitrogen fertilization and harvest date on the micronutrients content in biomass of *miscanthus x giganteus* (*Miscanthus x giganteus* Greef et deu)

Wpływ nawożenia azotem i terminu zbioru na zawartość mikroskładników w biomacie miskanta olbrzymiego (*Miscanthus x giganteus* Greef et deu)

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In the years 2014 - 2015 in two-founded experience in a "split-plot", the dynamics of changes in the content of microelements collected in rhizome and aboveground parts *miscanthus giganteus*. We studied in order: I dose of nitrogen fertilizers in kg·ha⁻¹ N 0 and 60; II. *Miscanthus* harvest dates (7) starting 30 days from the start of the growing season at intervals of 30 days. The experiment was conducted on a plantation established in 2004 on light soil, defined as mud river very light on loose sand and gravel sand, referred to as a complex of agricultural suitability rye weak quality class V. In all deadlines set, with four replications, with the surface of 0, 25 m², dug to a depth of 20 cm rhizome and aboveground shoots *miscanthus giganteus*. Determined number of shoots on the surface of 0.25 m², and the fresh weight rhizomów and aboveground parts. 10 randomly selected shoots, the weight of the leaves and stems. In rhizomach, leaves and shoots to determine the content of water, which was used to calculate the dry weight during the first harvest date indicated above-ground mass (fresh and dry) *miscanthus*, as the chapter on plant leaves and stems was not possible. In rhizome, leaves and shoots, and the aboveground part of the first date set, the contents of Mn, Fe, Cu, Zn, Ni, Pb and Cd. On the basis of chemical analysis, dry matter rhizome and aboveground plant parts calculated accumulation of micronutrients with an area of 1 m² and the percentage of individual components of yield (leaves, stems rhizome) in the accumulation of micronutrients. The content of microelements in the most differentiated date of harvest, changeable weather pattern in the years of research, part of the plant and nitrogen fertilization. On average, two years of research rhizome *miscanthus*, compared with leaves and stems, contain more Fe, C, u, Zn, Ni and Pb, the list of Mn and Cd stem. Participation in the accumulation of leaves Fe, Cu and Zn decreased in subsequent dates set, while for Ni, Pb and Cd showed no clear trend. Participation in the structure rhizome collection of micro throughout the plant *miscanthus* depend on the test element. Nitrogen fertilization at 60 kg·ha⁻¹ resulted in an increase in the content of macro and micronutrients in plants *miscanthus giganteus*. The structure of the collection of minerals in individual terms set largest part of the stem.