

The quality and aerobic stability of silages made from maize intercropped with field beans

S u m m a r y

In the presented study the quality and aerobic stability of silages produced from three maize varieties intercropped with field beans was evaluated. In split-plot experiment three varieties of maize - Wilga FAO 190 (W), Blask FAO 240-250 (B) and Iman FAO 290 (I) were cultivated in monoculture (sowing density 9 seeds per m²) and in intercropping with field bean (Nadwiślański variety). The field bean in three levels of density - 18 (B1), 27 (B2) and 36 (B3) seeds per m² - was sowed. The content of dry matter in silages varied between 27 and 42%. With the increase of field bean participation in material, the concentration of dry matter demonstrated upward tendency, in general. Depending on field bean ratio in silages, the changes in the content of all carbohydrate fractions were observed, as well. The poorest quality was characteristic of the silage produced from WB2 combination (variety Wilga plus field bean 27 seeds per m²). In the mentioned feed, there was found the butyric acid presence (4.19 g/kg DM), as well as the highest pH level (4.63). The content of butyric acid was observed also in two other silages - WB3 and BB2. The aerobic stability of silages from different variants was differentiated. The fastest heating process in silages made from pure maize was observed. The silages from Iman variety maize intercropped with field bean were characterized by the best aerobic stability (for all sowing standards of legume).