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Effect of organic fertilizers on maize production in Eastern Georgia

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Maize remains to be the most important cereal crop in Georgia. Total area of arable land under cereal crops production equals to 184 thousands hectares (FAO statistical yearbook, 2014), from which maize takes the biggest share. Leading position of maize among other cereal crops is caused by its dual purpose as food and feed product. In Spite of a relatively high production of maize to other cereals there is still a high demand on it, especially as feed for animal husbandry.

The same tendency is seen in organic production, where producers of livestock and poultry products require organically grown maize, the average yield of which is much less than those produced conventionally. Therefore, it is important to increase productivity of maize in organic farms.

Current study aimed to improve maize yield using locally produced organic fertilizers and to compare them to the effect of mineral fertilizers. The study was carried out in Eastern Georgia under dry subtropical climate conditions on local hybrid of maize. This is the first attempt to use hybrid maize (developed with organic plant breeding method) in organic field trials in Georgia. The results shown, that grain yield from two different types of organic fertilizers reached 70% of the yields achieved with industrial mineral fertilizers. As on farm level differences between organic and conventional maize production are much severe, the results from the field trials seems to be promising for future improvement of organic cereal crop production.