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# Effects of conservation tillage on maize yield

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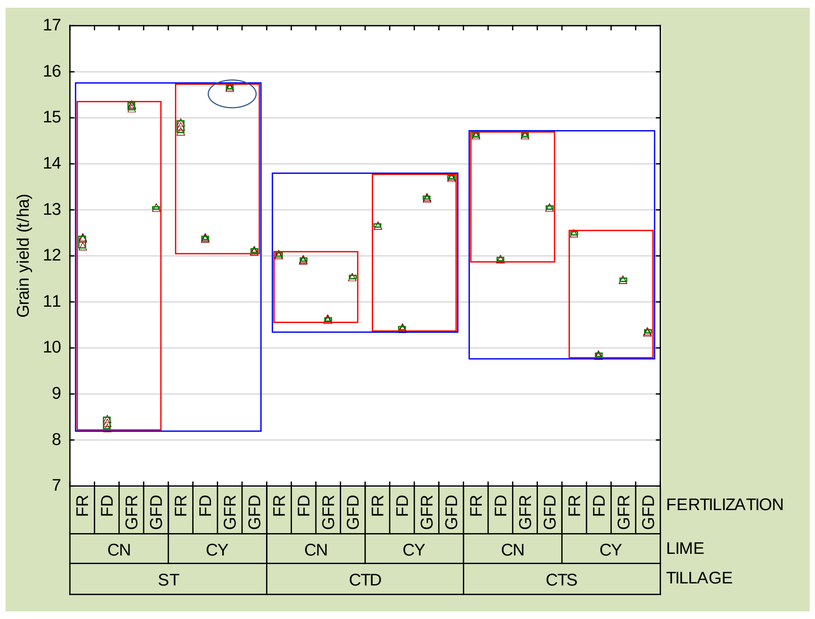
Conservation tillage is prescribed to prevent and protect soil from degradation processes. Conservation tillage ensures more moisture storage, reduces erosion, benefits the crop in arid and semiarid areas by reducing drought risk and increasing grain yield.

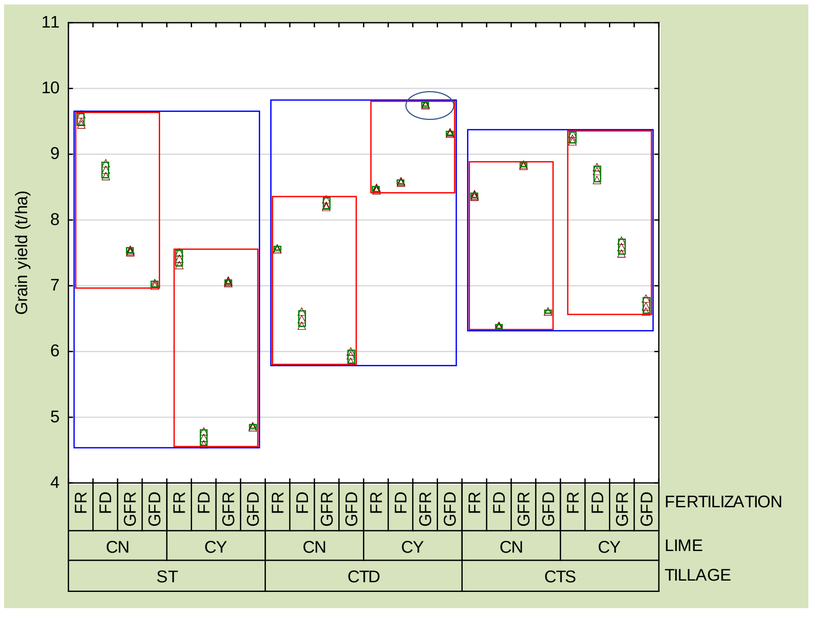
The aim of the research was to determine the changes in the grain and straw yield as a harvest index with regard to the tillage systems (ST, CTD, CTS), liming (CY, CN) and fertilization treatment (FR, FD, GFR, GFD).

| | |
|---|---|
| ST | Standard tillage deep mouldboard ploughing |
| CTD | Conservation tillage deep (chiseling with minimum 30% of surface covered with plant residues) |
| CTS | Conservation tillage shallow tillage up to 10 cm and minimum 50% of surface covered with plant or plant residues |

| | |
|---|---|
| FR | according recommendation (NPK) |
| FD | fertilization decreased by 50% compared to recommendation |
| GFR | fertilization according recommendation + 300 kg/ha Geo2 |
| GFD | fertilization decreased by 50% + 300 kg/ha Geo2 |




| | |
|---|---|
| CY | treatment with liming |
| CN | treatment without liming |

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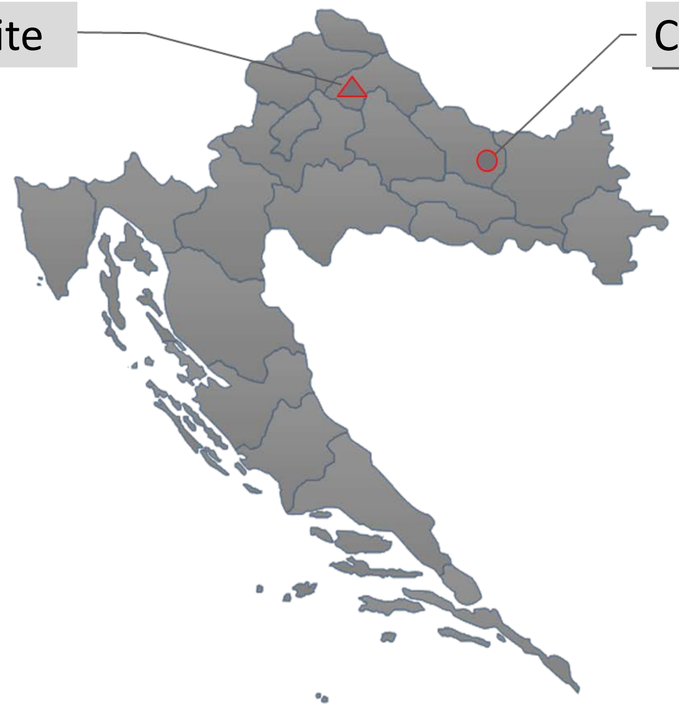

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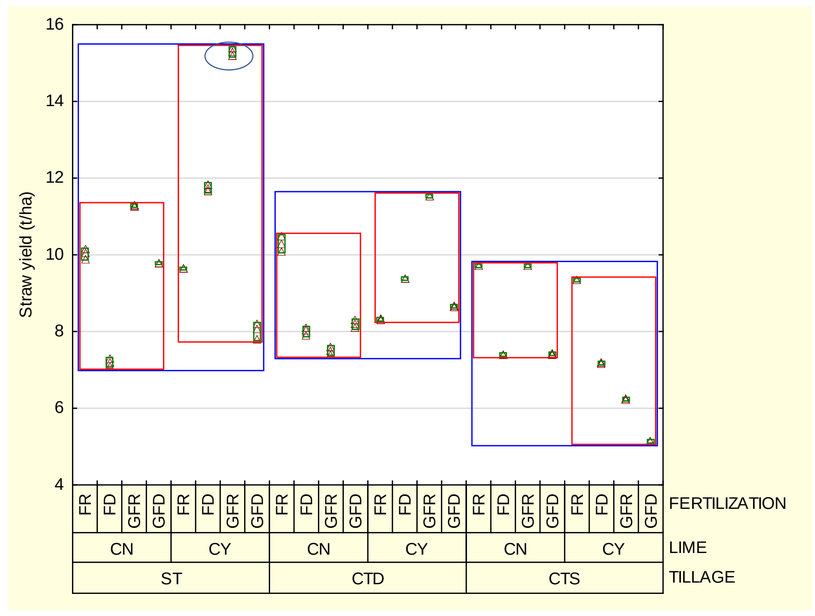


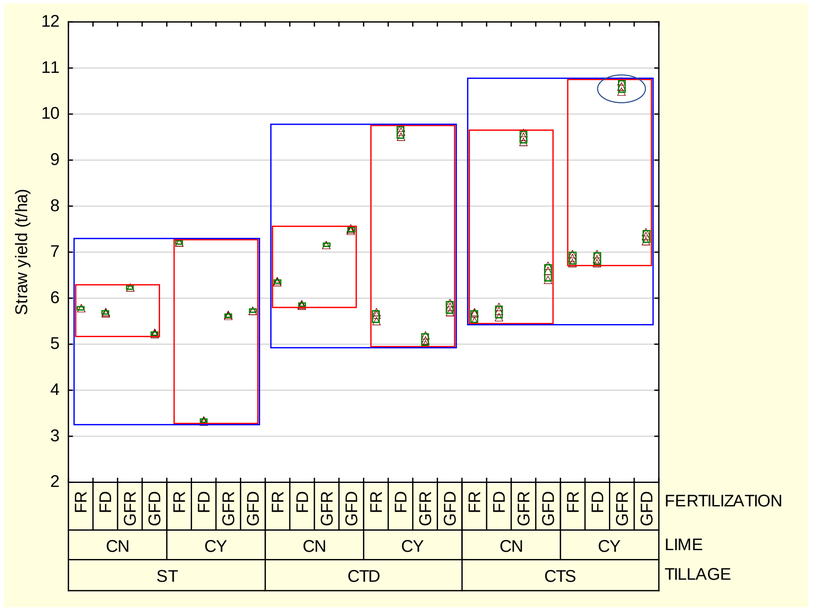


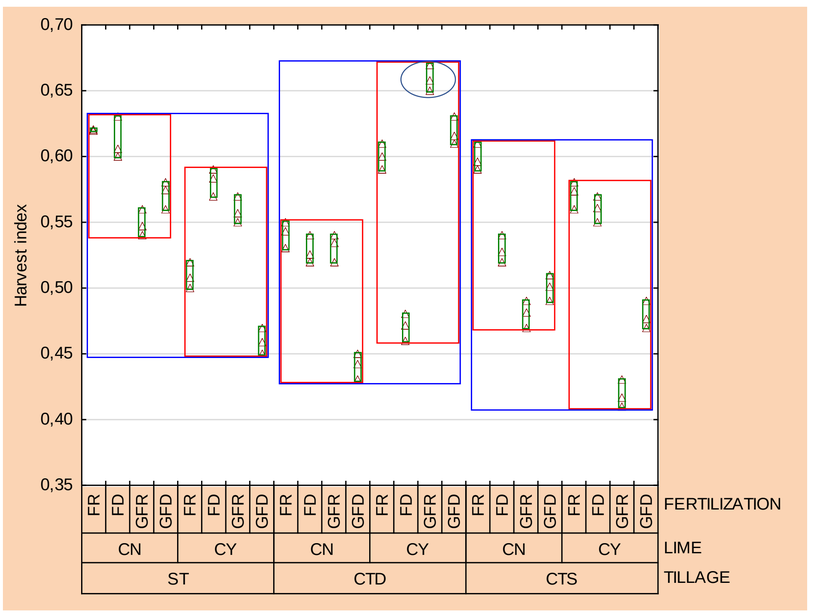


The obtained results indicate the importance liming (on acid soils), applying optimal doses of fertilizer with the use of biophysiological soil activators and the possibility of implementation conservation tillage for maize production in different agroecological conditions.

HRZZ Croatian Science Foundation

2nd Central European ISTRO Conference
Brno, Czech Republic, 6 – 8 September 2022

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