Maize and sunflower production in Posavina, Croatia influenced by different soil tillage systems

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The paper presents results of the two years experiment in maize and sunflower production with four different soil tillage systems carried out in Western Slavonia, at agricultural company "PK Nova Gradiska" in village Staro Petrovo Selo, located 150 km south-east from Zagreb (45° 10' N, 17° 30' E). Energy requirement comparison showed that CT system had the highest fuel consumption of 62.93 L ha-1 (maize) and 57.96 L ha-1 (sunflower). In maize production the best energy saving system was RT2 with 36.30 L ha-1, while in sunflower production was RT1 with 36.41 L ha-1. Comparison regarding labour requirement unveiled that conventional tillage (CT) required 2.62 h ha-1 and 0.35 h Mg-1 in maize, while in sunflower it required 2.63 h ha-1 and 0.35 h Mg-1. The lowest labour requirement in maize production of 1.48 h ha-1 and 0.19 h Mg-1 achieved RT2 followed by RT1 with 1.49 h ha-1 and 0.15 h Mg-1, while in sunflower the lowest requirement achieved RT1 with 1.35 h ha-1 and 0.14 h Mg-1. The highest average yield obtained system RT1 in both crops, while the lowest yield was with RT3 in maize and CT in sunflower production