

More detailed data about the experiment can be found in Debreczeni and Debreczeni (1994). The climate of Keszthely site is moderate warm, it belongs to the territories of Hungary relatively well supplied with precipitation. In the last five decades, however, the amount of annual precipitation decreased by 46 mm. Data were analyzed by correlation analysis using SPSS 9.0 software.

Results and discussions

Impact of precrop and fertilization

The impact of previous crop on grain yields was investigated with two levels of nutrient supply: without NPK and with the actual NPK doses that resulted in maximum yields. Comparing the different precrops, the favourable influence of pea on wheat is obvious. On the control plots pea effected 50 and 25 % yield increases as compared to maize or wheat precrops, respectively (*Figure 1*). As an effect of fertilization these differences amounted only to 32 and 11%. On the other hand, this phenomenon demonstrated the dose of N fertilizer which can be saved by the use of legumes in the crop rotation.

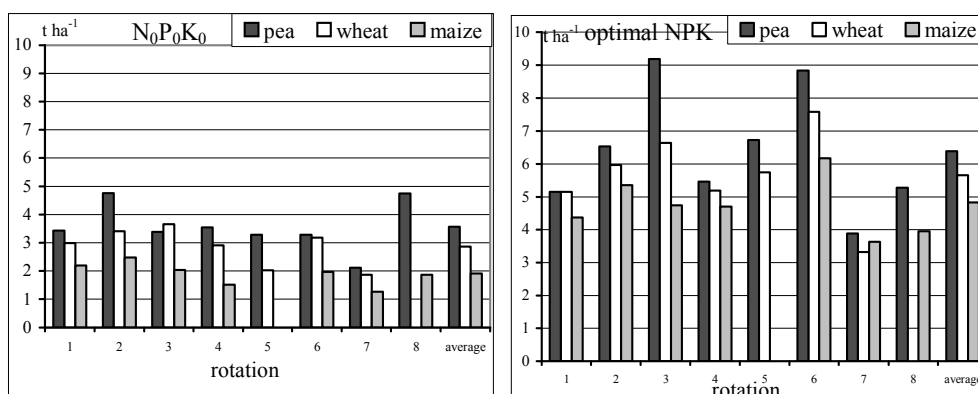


Figure 1. Wheat yield depending on precrops (t ha⁻¹)

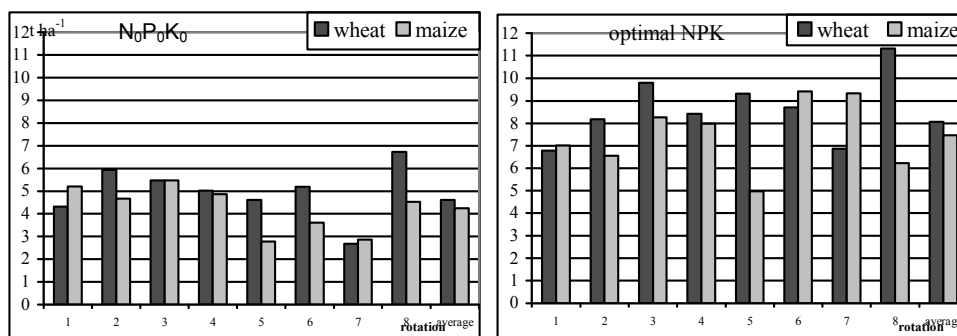


Figure 2. Maize grain yield depending on precrops (t ha⁻¹)

Maize was less sensitive to the precrop (*Figure 2*), but maize proved to be a better precrop for itself than wheat in some cases. However, after wheat maize yielded 8.7 and