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Paper:

Determination Of A Wheat Ideotype For Light Competition With Wild Oat (Avena Ludovicina) And Turnip Weed (Rapistrum Rugosum): A Simulation Approach

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Abstract:

In order to determine a wheat ideotype for competition with weeds, two field experiments were conducted in Agricultural Research Station of Mashad University in 2001. The experiments were carried out as factorial in a Randomized Complete Block Design with four replications. In the first experiment, the factors included wheat densities at 3 levels (300, 450 & 600 plants/m2) and wild oat densities at 5 levels (0, 20, 40, 80 & 160 plants/m2). The factors of the second experiment consisted of the same wheat densities but turnip weed densities at 5 levels (0, 4, 8, 16 & 32 plants/m2). ldeotypes were selected based on the absorbed PAR by INTERCOM model. The results indicated that wheat ideotypes in comparison to normal plants have taller plant height and larger leaf area index and less extinction coefficient (K). Wheat ideoype in competition with turnip weed are different from wild oat. A high correlation was observed between the amount of radiation absorbed by weeds and wheat yield loss.

Keyword(s): COMPETITION, MODELLING, LDEOTYPE, WILD OAT, TURNIP WEED, WHEAT