EFFECT OF MOISTURE ADEQUACY INDEX IN Kharif SUNFLOWER

ABSTRACT
A study was conducted for five years on sunflower for four different sowing dates windows to analyse the relationship between grain yield and weekly moisture adequacy index (MAI) in kharif season. In correlation studies the grain yield of the crop sown in MW 28 (9-15 July) showed positive and significant correlation with MAI at button stage and 50 % flowering to soft dough stage. This indicated that button and 50 % flowering stage was more sensitive in relation to MAI with grain yield. In correlation studies 50 % flowering to soft dough stage was found more sensitive in relation to weather parameters with grain yield. In regression studies, it was observed that wind speed, afternoon relative humidity and pan evaporation regressed positively with grain yield and minimum temperature regressed negatively with grain yield. The crop sown at MW 28 (9-15 July) and hybrid MSFH-17 produced maximum grain yield and total monetary returns. The stepwise multiple regression model of different phenophasewise weather parameters with yield of Kharif sunflower sown in MW 28 is Yield = 9592.1149 + 69.30X_1 - 214.98X_2 - 1.34X_3 - 339.62X_4, r^2 = 0.99 and the stepwise multiple regression model of different phenophasewise weather parameters with yield of Kharif sunflower for hybrid MSFH-17 is Yield = 1076.2805 + 1.95X_1 - 100.20X_2 + 1.68X_3 + 14.34X_4 + 7.71X_5, r^2 = 0.87. However, The weather parameter influence their contribution and performance of Kharif sunflower crop sown at different dates of sowing were assessed and the model on combined effect was developed using stepwise multiple regression for predicting grain yield as Yield = 2743.9965 + 49.3091X_1 - 120.3659X_2 + 11.0559X_3 - 103.7084X_4, r^2 = 0.70