

Effect of weather conditions on *Kharif* groundnut (*Arachis hypogaea* L.) at Anand in middle Gujarat agro-climatic zone

■ P.M. GULED, A.M. SHEKH, VYAS PANDEY AND H.R. PATEL

Article Chronicle :

Received :

16.09.2013;

Revised :

17.10.2013;

Accepted :

04.11.2013

Key Words :

Date of sowing, Pod yield, Rainfall, Groundnut, Weather conditions

SUMMARY : A field experiment for the two years was conducted during the *kharif* seasons of 2009 and 2010 with the first sowing at the onset of monsoon followed by successive sowings at an interval of 15 days with the varieties namely V₁-M 335 (Virginia spreading type), V₂-GG 20 (Virginia semi-spreading type) and V₃-GG 5 (Spanish bunch type) to study the effect of weather conditions on pod yield of groundnut. The overall performance of groundnut crop in terms of pod yield from the present study suggest that, sowing of groundnut should be taken up for variety V₁ between 26th to 27th week, as a good rainfall amount and distribution of 823 to 852 mm under early/normal onset of monsoon as observed during 2010 resulted in commercial production of groundnut. Whereas, sowing of groundnut should be taken up for variety V₂ between 26th to 27th, because reasonably a good crop can be produced on as little as 269 to 298 mm of rainfall under late onset of monsoon as observed during 2009 crop growing season. However, during pod development phase (P_o) 79% of mean relative humidity, 23.5 mm of Hg mean vapour pressure and 135 mm of rainfall amount were found optimum with an R² of 0.61, 0.54 and 0.63, respectively to have significantly influenced the pod yield. Similarly, the values beyond for mean maximum air temperature of 32.5 °C, evaporation rate of 3.2 mm and bright sunshine hours of 4.8 were found detrimental with an R² of 0.53, 0.77 and 0.59, respectively. The decrease in each unit of maximum air temperature, evaporation rate and BSS hours had resulted in decrease of 567, 332 and 474 kg ha⁻¹ in pod yield levels.

HOW TO CITE THIS ARTICLE : Guled, P.M., Shekh, A.M., Pandey, Vyas and Patel, H.R. (2013). Effect of weather conditions on *Kharif* groundnut (*Arachis hypogaea* L.) at Anand in middle Gujarat agro-climatic zone. *Asian J. Environ. Sci.*, **8**(2): 72-76.

Author for correspondence :

P.M.GULED

Department of
Agricultural
Meteorology, B.A.
College of Agriculture
University, ANAND
(GUJARAT) INDIA
Email:praveenkumargulad@
gmail.com

See end of the article for

Coopted authors'