

RECOMMENDATIONS:

(1) Study on evapotranspiration and crop coefficient during different phenophases of sorghum and green gram (Alternate year) (For Scientific Community) (2006-07)

The crop coefficient for kharif sorghum (cv. Gundari) under North Saurashtra Agroclimatic Zone varies from 0.44 during maturity to 0.86 during booting stage. The average values of crop coefficient and crop water use efficiency were 0.67 and 2.96 kg/ha/mm respectively during kharif sorghum. The crop coefficient for kharif green gram (cv. K-851) varies from 0.55 during germination to 1.30 during flowering stage. The average values of Kc and crop water use efficiency 0.96 and 3.68 kg/ha/mm respectively.

(2) Crop-weather relationship of kharif groundnut. (For Scientific Community) (2007-08)

The farmers of South Saurashtra agro-climatic zone are advised to sow the spreading and semi spreading varieties of groundnut from 21st May to 10th June with one or two pre monsoon irrigations to obtain higher yields with the benefit of favorable weather conditions during the monsoon period.

(3) Effect of date of sowing and weather parameters on growth and yield of wheat under South Saurashtra Agro-climatic Zone. (For Farming Community) (2010-11)

On the basis of the results obtained using heat unit concept, it is recommended to the farmers of AES-VI of South Saurashtra Agro-climatic Zone interested for early sowing of wheat i.e., during first fortnight of November (Minimum temperature 12 to 13° C and Maximum temperature 30 to 31° C) should prefer variety GW-366 for getting higher yield and net profit.

ખેડુત ઉપયોગી ભલામણ

હિટ યુનીટ કોન્સેપ્ટ આધારીત પરિણામો અનુસાર દક્ષિણ સૌરાષ્ટ્ર ખેત આબોહવાકીય વિસ્તારના ખેડૂતો કે જેઓ ઘઉંની વહેલી વાવણી કરવા રસ ધરાવતા હોય તેઓને આથી ભલામણ કરવામાં આવે છે કે ઘઉંની જાત જી.ડબલ્યુ.-૩૬૬ નુ વાવેતર નવેમ્બરના પ્રથમ પખવાડિયા દરમ્યાન (લઘુતમ તાપમાન ૧૩ થી ૧૪ °સે. અને મહતમ તાપમાન ૩૦ થી ૩૧ °સે.) કરવાથી વધુ ઉત્પાદન મેળવી શકાય છે.

(4) Determination of thermal requirement for different kharif crops under rainfed condition. (For Scientific Community) (2009-10)

Based on the field experiment, it was concluded that with delay in onset of monsoon, the Growing Degree Days (GDD) and Heat Use Efficiency (HUE) of different crops were tended to decline.

(5) Assessment of sowing time for irrigated chick pea using heat unit concept under South Saurashtra Agro-climatic Zone. (For Farming Community) (2013-14)

On the basis of results obtained using heat unit concept, it is recommended to the farmers of South Saurashtra Agro climatic Zone to sow irrigated chickpea during 30th October to 15th November for securing higher yield and net monetary return.

ખેડુત ઉપયોગી ભલામણ

પ્રવર્તમાન સરેરાશ તાપમાનના અવલોકનો અનુસાર દક્ષિણ સૌરાષ્ટ્ર ખેત આબોહવાકીય વિસ્તારના ખેડૂતોને ભલામણ કરવામાં આવે છે કે વધુ ઉત્પાદન તથા ચોખ્ખી આવક મેળવવા માટે પિયત ચણાનું વાવેતર ૩૦ ઓક્ટોબર થી ૧૫ નવેમ્બર સુધીમાં (સરેરાશ લઘુતમ તાપમાન ૧૮.૮ ° સે. અને સરેરાશ મહતમ તાપમાન ૩૪.૭ ° સે.) કરવું.

(6) Effect of sowing time and spacing on summer guar. (For Farming Community) (2015-16)

Based on heat unit concept, the farmers of South Saurashtra Agro-climate Zone growing summer guar are advised to sow the crop in second week of February (>22°C soil temperature) at 45 cm x 15 cm spacing for obtaining higher yield and net realization.

ઉષ્ણતા એકમ વિભાવના અનુસાર દક્ષિણ સૌરાષ્ટ્ર ખેત આબોહવાકીય વિસ્તારના ઉનાળુ ગુવારનું વાવેતર કરતા ખેડૂતોને સલાહ આપવામાં આવે છે કે ગુવારના દાણાનું મહતમ ઉત્પાદન અને ચોખ્ખું

વળતર મેળવવા માટે ફેબ્રુઆરી ના બીજા અઠવાડિયામા (જમીનનુ ઉષ્ણતામાન ૨૨° સે. થી વધુ હોય ત્યારે) ૪૫ X ૧૫ સે.મી.ના અંતરે પાકની વાવણી કરવી.

(7) Calibration and validation of CERES model (DSSAT 4.6) for different cultivars of wheat under different sowing time (For Scientific Community) (2023-24)

CERES-Wheat model of DSSAT family was calibrated and validated for GW 499, GW 451 and GJW 463 cultivars of wheat. The model simulations of grain yield of wheat were validated with less than 10 percent error. The genetic coefficients are recommended for use in optimization for crop management and yield prediction of wheat crop as under.

Symbol	Description	GW 499	GW 451	GJW 463
PHINT	Phyllochron interval (⁰ days)	73.4	71.2	72.8
PIV	Vernalization coefficient	0.5	0.4	0.5
P1D	Photoperiodism coefficient	1.80	1.90	2.00
P5	Grain filling duration coefficient	3.25	3.15	3.10
G1	Kernel number coefficient	5.55	5.60	5.50
G2	Kernel weight coefficient	4.20	4.35	4.25
G3	Spike number coefficient	5.25	5.35	5.30

DSSAT model can be used for predicting wheat grain yield and phenological events under various agro-climatic conditions. The model may also be used to improve and evaluate the current practices of wheat growth management to increase the crop production.

(8) Calibration and validation of CERES model (DSSAT 4.6) for different cultivars of wheat under different sowing time (For Scientific Community) (2023-24)

It is informed to the scientific community that wheat crop under South Saurashtra Agro-climatic condition can be sown around 15th November (Minimum temperature 15 to 17 0C and Maximum temperature 32 to 34 0C) and prefer varieties GW 499, GW 451 and GJW 463 for getting higher yield and net return.

