

Central Institute for Cotton Research, Nagpur

Fifth Weekly Advisory for Cotton Cultivation 28th June – 6th July 2013

"The advisory is based on inputs received from the State Agricultural Universities of the respective states"

Weed management: Wherever grassy weeds have emerged prior to sowing, glyphosate may be used as directed spray to kill the weeds and sowing may be taken up a few hours later. Pendimethalin may be used as a pre-emergence weedicide prior to sowing or within a week after sowing to reduce the problem of weeds during the season.

Clean cultivation is crucial for a healthy crop. Generally all weedicides are effective on younger (less than 10-15 days old) weeds, especially grasses. For grassy weeds, Quisqualop ethyl, fenaxoprop ethyl, fluzafop butyl, can be used. For sedges and grasses, Propquizafop ethyl is effective and Pyriithobac sodium is effective on broad leaf weeds. Farmers may consult the technical experts of the Agricultural Universities for further details.

Water logging: Cotton is very sensitive to excess water. In many parts of Central and South India, water logging can be problematic due to excess rains. Cotton grown on deep black soils and ill drained conditions is worst affected due to water logging. Provide adequate drainage channels or water ways (particularly in heavy soils) along the slope of the land for draining excess water under heavy rainfall situations. For better soil moisture conservation, preferably in areas where rainfall is 700-900mm, the land can be reshaped into ridges and furrows with the help of a ridge plough or a bund former. This technique and sowing cotton on ridges would conserve rainwater and the furrows acts drainage channels whenever heavy rains are received particularly in heavy clays.

Drainage channels must be opened up along the field borders so that excess water is removed from the fields. If sowing hasn't yet been completed, it is strongly recommended that to take up sowing immediately on ridges and furrows by planting on top of ridges. Heavy rains will not affect the crop because the furrows will drain away excess water. Apply fertilizers if the crop becomes pale due to water logging. If heavy rains are forecast, fertilizer application may be postponed so as to prevent losses due to surface run-off.

NORTH INDIA

Overall germination is good in the zone. The rainfall received is very less and farmers were advised to irrigate the field as per requirement. In Punjab, wherever heavy rains were received, farmers are advised to drain out the standing water from their fields. Prevailing hot and humid conditions may cause the population buildup of whitefly, so farmers are advised to monitor their fields and check for appearance of CLCuD symptoms. In case, the population crosses ETL or appearance of CLCuD symptoms occur, the recommended insecticides may be sprayed. Farmers have been suggested to apply first dose of nitrogen. Thrips attack has been observed in some pockets but they do not cause economic damage. Farmers were advised to monitor their fields regularly.

Punjab

The cotton crop is at vegetative stage. Farmers are advised to do thinning if required, remove weeds in and around cotton fields. At some places the mild attack of thrips has been noticed on seedlings but no need to spray.

Haryana

In Haryana, during preceding week (20th June to 25th June), dry weather was observed. Maximum temperature varied from 36.9°C to 41.6°C and minimum temperature from 25.0°C to 30.8°C with 49 to 69 per cent relative humidity. The average wind speed recorded from 2.6 to 10.0 km/ha. From 29nd June to 1st July, 2013, there is possibility of variable and partly clouds with light rains to occur at isolated places during the period. The maximum temperature may vary between 38 to 42 °C and minimum temperature 27 to 29 °C during this period. The average wind speed would range from 7-10 km/ha. Farmers are advised to do gap filling preferably with same variety/hybrid, thinning may be done if required, weeding and hoeing if required to control weeds and to conserve moisture. Mild incidence of Cotton Leaf Curl virus disease was also noticed. Attack of leaf hopper and white fly was expected to remain below ETL, however population of leaf hopper may increase if frequent rains occur and high humidity persist.

Rajasthan

In Banswara, the weather during next 4 days would be stable with clouds. Drizzling to normal rains up to 2-4 mm rains is expected during all the four days. Farmers are advised to keep the seed materials ready and go for sowing if rains during 24 hrs exceed 40 mm. Farmers are also advised to essentially go for seed treatment before sowing. At Sriganganagar, the crop is at early growth stage with moderate wind speed and cloudy weather. Incidence of painted bug was noticed in the fields.

Uttar Pradesh

Crop is in vegetative stage to square formation. Farmers are advised to remove the weeds in the cotton fields.

CENTRAL INDIA**Gujarat**

Sowing of cotton is in final stage. The maximum temperature of 34°C and minimum of 25 °C coupled with clear sky is reasonably congenial for sowing. A total of 38.8mm rainfall was received during this period.

Madhya Pradesh

About 400 mm rainfall has been received so far. The sowing in most of the areas has been completed. Where cotton crop has not been sown, cultivators are advised to sow their crop as and when conditions permit. The summer sown cotton is good. Inter-culture and weeding operations are required. It can be performed as per the field conditions. At Indore, total rainfall during last week was 140.4 mm. Seasonal rainfall of about 386 mm has been received since June 1st 2013 in the region. Max. Temperature of 25.5 to 33 °C and Minimum of 22 to 24.5 °C with Relative humidity around 84 to 92 per cent prevailed during this week. Crop condition of irrigated cotton is very good. Sowing of rainfed cotton is almost completed in cotton growing areas with favorable conditions for germination. There is possibility of sucking pests in late sown irrigated cotton.

Maharashtra

Total rainfall received in 23rd and 24th MW at MPKV, Rahuri centre was 29 mm which is not sufficient for sowing of cotton. But, wherever irrigation is available, the cotton sowing is initiated.

Odisha

According to IMD, New Delhi, 143 mm rainfall is expected during the next five days period. Sky will remain cloudy on all five days. Wind will blow from S-W direction with speed of 08-10 km/hr. Maximum temperature will remain at 26-34°C and minimum temperature will remain at 22-24°C. Maximum RH will be between 75 to 91 per cent and minimum between 40 to 70 per cent. Total rainfall of 143 mm is expected during these five days period.

As monsoon has already set in, sowing of cotton may be started. Uplands having more than 60 cm depth of moderately heavy to heavy soil may be selected. The land should be prepared thoroughly with MB plough. Seeds of hybrids and varieties should be bought from authorized dealers. Spacing of 90X60 cm should be adopted. Seeds are to be treated with Imidachloprid (Gaucho) before sowing. FYM @ 5t/ha should be applied at final land preparation. To overcome Zinc and Sulphur deficiency, 12.5 kg Zn SO₄ per ha should be applied. Fertilizers @ 90:45:45 kg/ha for varieties and 120:60:60 kg/ha for hybrids should be applied with 100% P₂O₅, 25% N and 50% K₂O as basal dose. The dose should be adjusted as per the soil test values. For green manuring, sunhemp seeds @ 25 kg/ha should be sown at the time of sowing of cotton. For weed management, Pendimethalin @ 1.0 kg/ha should be applied as pre-emergence spray one day after sowing. Arhar can be grown as an intercrop in cotton at 8:2 row ratio (cotton : arhar) for more profit and soil health management. Trap crops like castor (for Spodoptera), marigold(for boll worms) and cowpea (for aphids) may be planted at regular intervals around the cotton field. Seedlings may be raised in leaf pots or polythene bags in the field itself for gap filling.

SOUTH INDIA

Andhra Pradesh

Low to moderate rains occurred during the period under report in Telangana region which facilitated farmers to take up early sowings to an extent of 5-10 per cent of the area in the region. In general, preparatory cultivation is completed and ready for sowing. Farmers are repeatedly advised and emphasis is given to select Bt cotton hybrids which are being cultivated and found suitable for their locations for the last 3-4 years. Pre-emergence application of Pendimethalin @ 1.3-2 l/acre within 24-36 hours of sowing is recommended. Inter cropping in cotton with greengram/ blackgram/ cowpea/ cluster bean/ foxtail millet in 1:2 or 1:3 and pigeonpea 4:1 or 6:1 or 8:1 is recommended

Karnataka

Sowing of Bt cotton can be continued till July first week in all districts of cotton growing region of Karnataka. It is advised to purchase the Bt hybrid suitable for the particular locality from the authorised dealer with authentic cash bill. Interspecific Bt hybrid cotton (H x H) to be sown at a spacing of 90 cm x 60 cm and H x B Bt hybrids at 120 cm x 60 cm. Refugia crop seeds of Red gram or Non Bt cotton are provided with Bt cotton seeds. These should be sown around the Bt cotton crop. One or two rows of Bhendi crop has to be sown around the Bt cotton plot and also with Bt cotton in 10:1 row proportion as "Trap Crop" to minimise the shoot weevil attack. One or two rows of Maize crop may also be grown around the Bt cotton plot as "Feast Crop" to increase the population of predators that control sucking pest on Bt cotton. Fertiliser dose of 100:50:50 NPK kg/ha of which 25% N & K and entire P fertilizers has to be applied basally at the time of sowing. Apply the remaining N & K as top dressing in 3 equal splits i.e. 25% N & K each at 30, 45 and 60 DAS. Spray Pendimethalin 30 EC weedicide @ 3-4 ml/lit of water in the soil to control the weeds up to 30 days. It is advised to maintain required plant population by filling the gaps with Bt cotton seeds only. Short duration crops like green gram (1:1), peas (1:1), beans (1:1) and coriander (1:2) may be taken up as an intercrop with Bt cotton. Crop should be weed free up to 45-60 days of sowing for better growth.

Tamil Nadu

In the summer irrigated zones of Tamil Nadu (Parts of Tirunelveli, Virudhunagar, Ramnathapuram and Madurai District), the cotton crop is in boll development and maturity stage. Harvesting of kapas was initiated in earlier sown crop in some areas. The weather prevailed during the reporting period was moderately cool and mild wind with small quantity of rainfall observed in western parts of Tirunelveli and Virudhunagar Districts. The other parts experienced dry climate with mild wind. Nipping may be recommended for late sown cotton during 75- 80 DAS on 15th node for varieties and 85- 90 DAS on 20th node for hybrids to arrest the terminal growth. Need based plant protection measures may be carried out wherever boll worm and sucking insects incidence appeared in some areas.

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