

Central Institute for Cotton Research, Nagpur

First Weekly Advisory for Cotton Cultivation 3rd -10th June 2013

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

Cotton plants need about 2-4 mm water per day during vegetative phase and about 6-8 mm water per day during flowering and boll formation for good production. Water can be provided accordingly for irrigated cotton. Inadequate soil moisture during boll formation leads to poor yields.

Wherever water is available, early sowing can be taken up preferably under drip, 10-15 days before the onset of monsoon. Proper irrigation during flowering and boll formation will result in good yields.

Late maturing varieties and late sowing should be strictly avoided for rainfed cotton cultivation. For rain-fed cotton, it is important to select early maturing varieties and take up early sowing so that adequate soil moisture is available during critical stages of flowering and boll formation. Earlier the sowing, better are the yields with early maturing varieties, especially in shallow-medium soils, where moisture retention is low. Early sowing also leads to good initial plant growth thus enabling the crop to overcome water logging, drought and escape insect pests and diseases. It is important to choose varieties that are tolerant or resistant to jassids and other sap-sucking insects.

Land Preparation

In the central zone (Maharashtra, Madhya Pradesh and Gujarat) on black cotton soil where cotton cultivation is predominantly rainfed, the tillage operations can begin with the odd pre-monsoon shower or immediately with the onset of rains. The soils should deep ploughed (30 cm) once in three years. Farm yard manure @ 5-10 cartloads/acre depending on the availability must be added. Before planting the soils should be harrowed and planked,

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.

Cotton being very sensitive to excess water condition. 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. Keep the soil free of perennial weeds particularly sedges like *Cyperus sp (motha)* and grasses (*Saccharum spontaneum, kans*). Glyphosate @2.0 kg/ha (repeated directed sprays using protective hood) or manual removal by pick-axe can be resorted if these weeds appear in patches.

NORTH INDIA

General recommendations for North Zone:

Sowing of cotton may done in the evening hours. Complete sowing upto 10th June and field should be leveled. Soil and tubewell water should be tested before the sowing of cotton crop. Avoid sowing of non-descript cultivars. Destroy crop residues stubbles and ratoon cotton plants. Avoid mono-cropping. Adopt crop rotation for soil borne diseases. Sow the seed at proper depth and spacing with adequate soil moisture. Synchronized and timely sowing of short duration varieties/Bt hybrids will result in getting good yields. Removal of weeds in and around fields and balanced use of fertilizers are important management aspects.

There is no incidence of pest and disease in Punjab, Haryana and Rajasthan thus far. In Punjab and Haryana, majority of the area has been covered under Bt hybrids where as in Rajasthan, American cotton (*Gossypium hirsutum*) varieties RS-810, 2013 and RST-9 have been grown in addition to Bt hybrids. Desi cotton area coverage is less than 10 per cent.

Punjab

Cotton sowings are completed in about 90 per cent of cotton growing areas of Punjab. Farmers are advised to complete the sowing of cotton as early as possible. In early sown crop the gap filling should be done. There is burning of cotton crop in some areas due to severe heat wave.

Haryana

Sowing of Desi cotton started from 3rd week of April and that of American cotton from 1st week of May. Maximum temp. crossed 48° C in the zone which caused burning of seedlings in desi as well as American cotton. Seedling burning was more in desi cotton in comparison to American cotton. Farmers have been suggested to raise seedlings for transplanting to fill the gaps due to burning of seedlings to keep higher seed rates at the time of sowing for maintaining optimum plant population. They have been also suggested to grow heat tolerant hybrids/ varieties in future. Sowing operations have been almost completed.

Rajasthan

Desi Cotton varieties RG-8, RG-18 and American cotton varieties RS-810, 2013 and RST-9 were sown in the state at seed rates of 12 to 16 kg/ha. Bt Cotton with seed rate of 1.8 kg/ha has been taken up. No pest incidence has been recorded till date.

Uttar Pradesh

Crop stage is in vegetative stage. Farmers are advised to remove the weeds in the cotton fields and apply the life saving irrigation after 25-30 days of sowing.

CENTRAL INDIA**Madhya Pradesh**

At Khandwa, one deep ploughing followed by 2-3 cultivator was given. Seed treatment with Thiram 2 gm + Carbendazim 1 gm, Imidacloprid 10 gm or Carbendazim 5 gm was given wherever required. Apart from the extensive area under Bt cotton hybrids, several American cotton varieties and Desi varieties were also sown. Varieties such as H- 5, H-6, JK-4, JK-5, Jawahar Tapti, Vikram, Khandwa-2, DCH-32 were used for sowing. Moisture requirement for sowing was about 6 inches. At Indore, Weather in Malwa and Nimar where the cotton is predominantly sown was mainly dry. Temperature, varied between 39° to 43° C in Malwa whereas in Nimar, the temp. ranged between 41 to 44 °C. Sowing of cotton (mainly Bt) started from May 13, 2013 (Akshay Tritiya) in the pockets of Nimar and adjoining Malwa region i.e. Kannod and Khategaon area of Dewas Distt. Farmers with facilities of assured irrigation have taken up the crop. Farmers are transferring the polythene bags into the field and a few has started sowing of seeds into polythene bags. They are advised to sow the plants with proper insecticidal use against the grub. Farmers depending totally on rains have started preparing their fields. Farmers are expected to take up sowing operations as soon as they receive at least 2- 4" of rain.

Gujarat

At Surat and Junagadh, Preparatory Tillage: like Deep plowing and 1-2 times harrowing in the month of April- May in summer season in all the four zones viz., South Gujarat Cotton Zone, Middle Gujarat Cotton Zone, Wagad Cotton Zone and Mathio Cotton Zone has been advised and followed in many fields. Drilling just before monsoon is recommended thereby sowing can be done in short time after arrival of rain. Dibbling of costly seed after sufficient rainfall in vapsa condition. Advance sowing in the mid of May where irrigation facility is available is taken up.

Maharashtra

In the Vidharba region, it is advised that farmer should purchase the cotton seed for pre monsoon sowing in last week of May 2013, prepare land with harrowing for leveling. Ridges and furrow should be made. Irrigation should be given before dibbling of seed on side ridges. PKV Hy-2 or NHH-44 should be used. For monsoon sowing PKV081, PKV Rajat, AKH 8828

and AKA5,AKA7,AKA8 should be purchased. Farmers who prefer Bt cotton hybrids may choose early maturing hybrids which are resistant to sucking pests and take up sowing at the earliest on arrival of monsoon and when the top soil layer gets adequately wet for germination. Farmers may choose hybrids which are known to perform better in their area.

Odisha

Farmers are advised to go in for field sanitation i.e the cotton plants may be cut from ground level and may be used for making vermicompost or compost.

SOUTH INDIA

Andhra Pradesh

Deep summer ploughings are under progress. Summer showers helped in preparatory cultivation in some parts of Andhra Pradesh. In general sowings will be taken up during second fortnight of June in Telangana & Rayalaseema districts while from second fortnight of July to first fortnight of August in coastal Andhra Pradesh

Tamil Nadu

In the summer irrigated zones of Tamil Nadu (Parts of Tirunelveli, Virudhunagar, Ramanathapuram, and Madurai District) the cotton crop is in flowering and boll development stage. The day and night temperature prevailing in this month is higher than previous month leading to vegetative growth and flower dropping in some areas due to hormonal imbalance. Spraying of 40 ppm NAA after nipping at 75 DAS is recommended to stop the flower dropping. The incidence of *American bollworm* (*Helicoverpa*) was noticed in some areas for which plant protection measures may be taken on need basis.

=== End of the Report ===