

Agricultural Research Station, Achhalia
Recommendations / Achievements

COTTON RESEARCH STATION

G Cot-11 should be grown keeping 90 cm distance within rows with application of 80 kg N/ha in three split doses, first 50 % as basal, second (25 % N) and third (25 % N) should be applied at an interval of one month from basal as top dressing under irrigated condition.

G Cot Hy-6 should be grown at 90 x 30 cm spacing with application of 160 kg N/ha in four equal splits of 40 kg N/ha at an interval of one month from basal as a top dressing under irrigated condition. Addition of phosphorous and potash are not beneficial.

NARP PHASE II

Mulch and irrigation on pigeonpea

The farmers of Agro-ecological Situation I (AES-I) of South Gujarat Zone growing kharif pigeonpea are advised to give two to three irrigations at monthly interval after cessation of monsoon. They are also advised to follow mulching practices with grass @ 5 t/ha to get 21 % more yield and 30-40 % more income.

Irrigation and mulch on cotton

The farmers of AES-I of South Gujarat Zone cultivating cotton G.Cot 11 are advised to give 3-4 irrigations to their crop after cessation of monsoon at monthly interval for getting about 46 % more yield. They are advised to mulch their crop with grass @ 5.0 t/ha immediately after cessation of monsoon. Alternatively, they are advised to interculture at monthly intervals, after cessation of monsoon though plastic mulch can increase the yield by about 58 % economically viable at present.

Mulch & methods of planting in Brinjal

The farmers of AES-I of South Gujarat Zone II cultivating brinjal as kharif crop are advised to follow mulching practices with either grass @ 5 t/ha or black plastic mulch [50 μ , 80 % coverage) to get about 50 and 36 % more returns, respectively. The mulching should be done within a week after cessation of monsoon.

Irrigation and mulch in chilli

The chilli growing farmers of South Gujarat Zone are advised to give 4 irrigations to their kharif crop after cessation of monsoon. They are also advised to mulch their crop with dried grass @ 6 t/ha to get about 18 % more yield and 21 % more income.

Fertilizer in drilled paddy

The farmers of AES-I of South Gujarat Zone II growing drilled paddy [GR-5] are advised to fertilize the crop with 80 kg N/ha in two equal splits i.e. 50 % as basal and remaining 50 % at tillering stage. In soils with medium phosphorous availability, the crop did not respond to application of phosphorous.

Drip and fertigation in Brinjal (Surati ravaiya)

The farmers of AES-I of South Gujarat Zone II growing brinjal [Surati ravaiya] during rabi and summer are advised to adopt drip irrigation [0.6 PEF] and fertigate the crop with 80 kg N/ha. By doing so, farmers can get 80 % higher yield and 5 % higher net profit along with 36 % saving of water and 20 % saving of N fertilizer. The crop should be planted in paired row [60x60x120 cm]. The lateral should be placed at 0.6 m using dripper of 4 LPH capacity. The system should be operated at 1.2 kg/cm² on alternate day for 1.5 hrs. during December & February, 2.5 hrs. during March, April and thereafter upto harvesting 3.0 hrs.

Drip irrigation in banana

The farmers of AES-I of South Gujarat Zone II are advised to adopt drip system of irrigation with spacing of 1.5 x 1.5 m. for banana crop [Barsai]. Drip method of irrigation [0.75 FCPE] gives 14 % more fruit yield than the surface method with 48 % saving of water. The system should be laid out with 150 cm lateral [16mm] spacing dripper/plant [45 cm both sides] with discharge 4 LPH at a pressure of 1.2 kg/cm² at alternate day for 1.25 hrs. during October, November, December & January,

2 hrs. during February, 2.5 hrs during March, 3.25 hrs. during April, May & June.

Land configuration study in cotton and paddy :

The farmers of AES-I of South Gujarat Zone-II are recommended to adopt following land configuration for getting higher net profit and better land utilization under rainfed situation. Cotton should be grown on raised bed of 7.5 m width followed by drilled paddy in 2 m wide and 20 cm deep furrow.

Irrigation and planting management of Rabi Castor

The farmers of South Gujarat Zone – II (AES-I) are advised to grow rabi castor in paired row planting (60 x 60 – 120 cm). They should adopt drip method of irrigation (0.4 PEF) along with mulching with black plastic (56 % coverage) for getting 71 % higher seed yield and 15 % net profit in addition to 39 % saving in water and 40 % saving in nitrogen fertilizer.

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