

PACKAGE OF PRACTICES OF COTTON CULTIVATION



सत्यमेव जयते

Government of India

DIRECTORATE OF COTTON DEVELOPMENT

Ministry of Agriculture & Farmers Welfare,

(Department of Agriculture, Cooperation & Farmers Welfare)

Bhoomi Sarvekshan Bhavan, Katol Road, Nagpur 440013 (Maharashtra)

Tel: 0712:2585831, Fax: 0712:2595505, Email: director_dcd@rediffmail.com; director-dcd@gov.in,

Website: <http://dcd-dacnet.nic.in>

PACKAGE OF PRACTICES OF COTTON CULTIVATION

Cotton crop is cultivated in 3 zones i.e. North, Central and South. In north zone, cotton is cultivated as irrigated crop, whereas in central and south zones it is grown as rainfed crop. Though Cotton plant is semi xerophytic, it responds better in proper management. Generally, cotton is grown by about 20 states in our country. Major contributors to production are states of Punjab, Haryana, Rajasthan, Gujarat, Madhya Pradesh, Maharashtra, Andhra Pradesh, Karnataka, Telangana and Tamil Nadu. The package of practices of better cotton cultivation are as under:

Agronomic practices	1. Punjab	2. Gujarat	3. Maharashtra
1. Soil	Deep alluvial soil (100 % irrigated)	Medium to deep black and sandy to sandy loam (69.43% Un irrigated).	Medium to heavy black cotton soils (90 % rainfed)
2. Land preparation	After harvesting the previous crop, 3 ploughings by cultivator followed by 1 harrowing.	2-3 ploughings by cultivator followed by 1 harrowing.	One ploughing followed by one harrowing
3. Normal Rainfall	648.8 mm	845.2 mm	939 mm
4. Sowing time	April to 15th May	Irrigated cotton: March to May, Rainfed cotton: June - July with the commencement of South West Monsoon, Pre monsoon dry sowing: End of May or early June (rainfed).	Irrigated cotton: March to May, Rainfed cotton: June - July with the commencement of South West Monsoon (Rainfed).
5. Seed rate kg / ha	Desi variety: 7.5 -8.0 kg / ha, Desi cotton hybrid: 3.0-3.5 kg / ha, Bt. cotton hybrid : 2 Packets / ha [(each 500 grams- 450 (Bt. seed) +50 (refugia seed)], American hybrid: 3.75-4.0 kg /ha, American variety: 8.75-9.0 kg / ha.	Desi variety: 10-15 kg / ha, Desi hybrid: 3kg / ha, Bt. cotton hybrid: 2.0-2.5kg / ha & American hybrid: 2.5-4.0 kg / ha	Desi variety: 10-12 kg / ha, Bt. cotton hybrid: 4-5 Packets / ha [(each 500 grams- 450 (Bt. seed) +50 (refugia seed)], American variety: 10-20 kg / ha & Hybrid variety: 3.5-5.0 kg / Ha
6. Species	<i>Gossypium hirsutum</i> , <i>G. arboreum</i> , Intraspecific hybrid of <i>hirsutum</i> and <i>arboreum</i> species and Bt. cotton hybrid	<i>G. hirsutum</i> , <i>G. arboreum</i> & <i>G. herbaceum</i> , Intra / Inter specific hybrid and Bt. cotton hybrid.	<i>G. hirsutum</i> , <i>G. arboreum</i> & Intra / Interspecific hybrid and Bt. cotton hybrid.
7. Variety / hybrid	Bt. hybrid: MRC7017 BG II, MRC 7031 BGII, MRC 6301 Bt., MRC 6304 Bt., RCH 314 Bt. & RCH 317 Bt., American Hybrid: LHH 144, American Variety: F 1861, FY 2228, LH 2076, F 846 & LH 1556, Deshi hybrid: Moti, Deshi Variety: LD 694 & LD 327	Desi variety: G. Cot. 13, 21, 23, G. Cot 15 & 19, Deshi hybrid: G.Cot. DH 7 and G. Cot. DH 9, Bt. Hybrid: G. Cot. Hy. 6 BG II, G. Cot. Hy. 8 BG II, G. Cot. Hy. 10 BG II, G. Cot. Hy. 12 BG II, GTHH-49 BG II, Vikram - 5, Vikram- 11, Ajit - 155, Jai-3028, Rasi- 659, RCH 2-669, RCH - 779, Ankur Western Nirigi- 108, Mallika, Jadu, Jakpot, Solar- 77 and Solar - 77.	Desi variety: AKA 5, AKA 7, AKA-8401, Deshi hybrid : PKV DH 1, AK DH 5, American variety: PKV Rajat, AKH 8828, AKH 081, DHY 286, Suraj, Bt. hybrid: Ankur 3028 BG II, Ankur 3034 BG II, Ajeet 199 BG II, Ajeet 155 BG II, Ajeet Balvan BG II & ATM
8. Sowing method	Tractor drawn Seed drill or by dibbling. Hand dibbling at recommended spacing is commonly practiced for hybrid.	Sown using bullock / Tractor drawn Seed drill or by dibbling.	Bullock / Tractor drawn Seed drill or by dibbling. Hand dibbling of seeds at recommended spacings is commonly practiced in rainfed areas particularly for hybrid.
9. Spacing in centimetres	American variety: 67.5 x 60 cm, American & Bt. Hybrid: 67.5 x 75 cm, Deshi variety: 67.5 x 45 cm & Deshi hybrid: 67.5 x 75 cm	Desi variety (Arboreum) : 60 x 15/20 cm, Desi hybrid (Arboreum): 90/120x60 cm, Deshi variety (Herbaceum): 45 x 22.5/30 cm, Hirsutum variety: 90-120 x 30/60/75 cm, Hirsutum hybrid: 90/120 x 30/45/60 cm	Rainfed: American variety: Heavy soils: 60 x 60 cm, Medium soils: 60 x 30 cm or 90 x 90 cm, American Hybrids: Heavy soils: 90 x 60 cm, Medium soils: 60 x 60 cm, Deshi Cotton: Heavy soils: 60 x 15 cm & Medium soils : 45 x 22.5 cm

Agronomic practices	1. Punjab	2. Gujarat	3. Maharashtra
10. Sowing depth	4-5 cm	4-6 cm	3-4 cm
11. Thinning DAS	25-30 days	20-25 days	25-30 days
12. Fertilizers (N: P: K-kg / ha) (Based on Soil testing report)	Variety: 75 kg N, 30 kg P ₂ O ₅ , Hybrids: 150 kg N, 30 kg P ₂ O ₅ .	Hybrid (irrigated): 240 kg N, 0 kg P ₂ O ₅ , 0 kg K ₂ O, Hybrid (rainfed): 160 kg N, 0 kg P ₂ O ₅ , 0 kg K ₂ O & herbacium (rainfed): 80 kg N, 0 kg P ₂ O ₅ & 0 kg K ₂ O	Hybrid (irrigated) : 100 kg N, 50 kg P ₂ O ₅ , 50 kg K ₂ O or 120 kg N, 60 kg P ₂ O ₅ , 30 kg K ₂ O Hybrid / Variety: 50 kg N, 25 kg P ₂ O ₅ , 25 kg K ₂ O.
13. Micronutrients (Based on Soil testing report)	Zinc Sulphate @ 25 kg/ha	As per recommendations of ICAR / SAUs	ZnSO ₄ , MgSO ₄ , FeSO ₄ , Boron
14. Bio fertilizers	As per recommendations of ICAR / SAUs	PSB, Azotobacter	PSB @20 gm / kg seed, Azotobacter @ 25 gm / kg seed
15. Weeding	Manual	Fluchloralin @ 2.8 L / ha	Pendimethilin
16. Irrigation	05-06	3-6 (Sandy soil: 10-12 days' interval and black soil 20-25 days' interval)	3-4 at critical stages in irrigated area.
17. Intercrops	Uradsbean / Moongbean	Soybean / Uradsbean / Moongbean	Soybean/ Uradsbean / Moongbean/ Pigeonpea/ Sorghum
18. Cropping system	Cotton-Wheat, Cotton-Mustard, Cotton- Berseem	Mono cropped cotton, Cotton-Jowar (two year rotation), intercropping with Uradsbean, Greengram, Soybean, Groundnut and Redgram.	Mono cropped cotton, Cotton-Jowar (two year rotation)
19. Insect pests	Sap feeders : Jassids, Whitefly, Aphids, Thrips, Mealybug, Dusky cotton bug and Red cotton bug. Foliage feeder: Leaf roller, Ash/Grey Weevil and Tobacco caterpillar Borers: Helicoverpa armigera, Spotted bollworm and Pink bollworm. Nematodes: Reniform, Root Rot and Hoplolaimus seinhorsti	Sap feeders: Jassids, Aphids, Thrips, Red cotton bug. Foliage feeder : Leaf roller, Semi Looper, Ash/Grey Weevil Borers : Helicoverpa armigera, Spotted bollworm, Spiny Bollworm, and Pink bollworm.	Sap feeders: Jassids, Aphids, Thrips, Red cotton bug. Foliage feeder: Tobacco caterpillar, Leaf roller, Semi Looper, Ash/Grey Weevil Borers: Helicoverpa armigera, Spotted bollworm, Spiny Bollworm, and Pink bollworm.
20. Diseases	Leaf curl virus (Gemini Virus), Bacterial blight, Root Rot, Myrothecium Leaf Spot, Fusarium wilt, Boll Rot, Para Wilt / New Wilt / Sudden wilt & Leaf reddening	Bacterial blight, Grey mildew, Fusarium wilt, Boll Rot, Para Wilt/ New Wilt / Sudden Wilt & Leaf reddening	Bacterial blight, Grey mildew, Fusarium Wilt, Boll Rot, Para Wilt / New Wilt / Sudden wilt & Leaf reddening
21. Management of Pests	As per recommendations of ICAR / SAUs	As per recommendations of ICAR / SAUs	As per recommendations of ICAR / SAUs
22. Pickings	3-4 (September-November)	3-4 (October to Mid December)	4-6 (October to December)
23. Harvesting	Mid December.	December - January	Mid January- February
24. Yield of Kapas in Qtls / Ha	18-22	Deshi variety: 14-18 Bt. hybrid : 20-25	10-15

Agronomic practices	4. Rajasthan	5. Karnataka	6. Madhya Pradesh
1. Soil	Sandy loam (100 % irrigated)	Black soil, sandy loam, red soil (Karnataka 75.4 % rainfed)	Light to deep black cotton soil (59.7 % rainfed)
2. land preparation	After harvesting the previous crop, 2-3 ploughings by cultivator.	2-3 ploughings	3-4 ploughings by cultivator. One deep ploughing in alternate year.
3. Normal Rainfall (MMs)	580 mm	1156.1 mm	1200 mm
4. Sowing time	April to 15th May (100 % irrigated)	Irrigated: 15th April -15th May in Ghata Prabha and 15th July to 15th August in Tungabhadra Canal area, Rainfed : With onset of Monsoon in June, Deshi cotton (Herbaceum): August- September (Dharwad and Gadag areas).	Irrigated cotton: March to May, Rainfed cotton: June - July with the commencement of South West Monsoon, Pre monsoon dry sowing: End of May or early June (rainfed).
5. Seed rate kg / ha	Bt. hybrid: 3 Packets [(each 500 grams- 450 (Bt. seed) +50 (refugia seed)]	Desi: seed drill sown : 7.5-10 kg, Hand dibbling : Variety : 5-6 kg, Hybrid: 2.5-3.0 kg, Bt. hybrid : 3 Packets.	Desi variety : 10-12 kg / Ha, American variety : 10-20 Kg / Ha, American Hybrid : 3.5-5 Kg / Ha & Bt. hybrid : 3 packets [(each 500 grams- 450 (Bt. seed) +50 (refugia)]
6. Species	<i>Gossypium hirsutum</i> , <i>G. arboreum</i> , Intra-specific hybrids of <i>hirsutum</i> and <i>arboreum</i> species and <i>Bt. cotton</i>	<i>G. hirsutum</i> , <i>G. arboreum</i> , <i>G. herbaceum</i> , Intra and Interspecific hybrid and Bt. cotton hybrid	<i>G. hirsutum</i> , <i>G. arboreum</i> , Intra and Interspecific hybrid and Bt. cotton hybrid
7. Variety /hybrid	Desi : RG 8, RG 18, HD 123, RG 542, American : Rs 2013, Rs 810, RST 9, Bikaneri Nerma, Bt. Hybrid : Bioseed 6588 BG II, Bioseed Bunt BG II, RC 650 BG II, MRCH 6304 BG I, RCH 314	Desi variety : Jayadhar, Renuka, DDHC 11, RAHS 14, DLSA 17, Variety/Hybrids : DHB 105, DCH 32, Varalaxmi, NHH 44, DHH 11, DHH 543 (suvidha), Bunny, Bt. Hybrid : Ajeet 155 BG II, Kanaka BG II	Desi hybrid: Swadeshi 5, Bt. hybrid : Ajeet 155 BG II, Rasi 659 BG II, Bhakti BG II, Brahma BG II, Kaveri BG II, Interspecific hybrid : DCH 32
8. Sowing method	Tractor drawn Seed drill or by dibbling. Hand dibbling at recommended spacing is commonly practiced for hybrid.	By hand dibbling.	By hand dibbling.
9. Spacing in cm.	Desi : 67.5 x 30 cm, American: 67.5 x 30 cm, Bt. hybrid: 108 x 60 cm, 90 x 67.5 cm	Desi : 60 x 30 cm, 90 x 20 cm, Variety / Hybrid: 90 x 60 cm	Desi : 60 x 60 cm, Bt. Hybrid: 90 x 60 cm, 90 x 90 cm
10. Sowing depth	4 - 5 cm	5 - 6 cm	3 - 4 cm
11. Thinning DAS	25 - 30 days	25 - 30 days	20 - 25 days
12. Fertilizers (N: P: K kg /ha.) (Based on Soil testing report)	Hybrid: 160 kg N, 40 kg P ₂ O ₅ , 20 Kg K ₂ O, Variety: 80 kg N, 40 kg P ₂ O ₅ , 20 Kg K ₂ O	Hybrid (Irrigated): 150 kg N, 75 kg P ₂ O ₅ , 75 Kg K ₂ O, Hybrid/Variety: 80 kg N, 40 kg P ₂ O ₅ , 40 Kg K ₂ O, Coastal Region: 100 kg N, 100 kg P ₂ O ₅ , 100 Kg K ₂ O, Hybrid (Irrigated): 120 kg N, 60 kg P ₂ O ₅ , 60 Kg K ₂ O	Hybrid (Rainfed) : 100 kg N, 50 kg P ₂ O ₅ , 30 Kg K ₂ O, Variety: 80 kg N, 40 kg P ₂ O ₅ , 30 Kg K ₂ O

Agronomic practices	4. Rajasthan	5. Karnataka	6. Madhya Pradesh
13. Micronutrients (Based on Soil testing report)	Zinc sulphate : 12 kg / ha.	Zinc sulphate : 12-15 kg / ha., Boron @ 5 kg / ha,	Zinc Sulphate : 25 kg / ha.
14. Bio fertilizers	Azotobactor @ 400-500 g / ha	500 gm Azospirillum / ha, 500 gm PSB / ha	PSB @ 400-500 g / ha
15. Weeding	Pendimithiline : 2-2.5 L / ha	Manual	Manual
16. Irrigation	Deshi: 4 - 5, American: 5 - 6, Bt. hybrids : 7 - 8	2 - 5 at critical stages	5 - 6 at critical stages
17. Intercrops	Uradbean / Moongbean	Herbaceum cotton +Chilly / Onion.	Cotton + Blackgram (1:1 or 2:1), Cotton + Soybean (2:1)
18. Cropping system	Cotton-Wheat, Cotton-Mustard, Cotton-Berseem	Mono cropped cotton, Cotton- Wheat, Inter cropping with Chilli, Groundnut, Blackgram, Greengram.	Mono cropped cotton , Cotton- Wheat, Cotton-Jowar (Two year rotation)
19. Insect pests	Sap feeders : Jassids, Whitefly, Mealybug, Dusky cotton bug and Red cotton bug. Foliage feeder : Leaf roller, Ash/Grey Weevil and Tobacco caterpillar, Borers : Helicoverpa armigera, Spotted bollworm and Pink bollworm. Nematodes : Reniform, Root Rot and Hoplolaimus seinhorsti	Sap feeders : Jassids, Aphid, Miridbug, Red cotton bug, Foliage feeder : Tobacco caterpillar, Leaf roller, Shoot Weevil. Borers : Helicoverpa armigera, Spotted bollworm, Spiny Boll Worm, Pink bollworm, Shoot Weevil.	Sap feeders : Jassids, Aphids, Thrips, Red cotton bug, Foliage feeder: Tobacco caterpillar, Leaf roller, Semi Looper, Ash/ Grey Weevil, Borers : Helicoverpa armigera, Spotted bollworm, Spiny Bollworm and Pink bollworm.
20. Diseases	Leaf curl virus (Gemini Virus), Bacterial blight, Root Rot, Myrothecium Leaf Spot, Fusarium wilt, Boll Rot, Para Wilt / New Wilt / Sudden Wilt & Leaf reddening.	Bacterial blight, Grey Mildew , Alternaria Leaf Spot, Para Wilt / New Wilt/ Sudden Wilt, Boll Rot, Leaf reddening.	Bacterial blight, Grey mildew, Fusarium wilt, Boll Rot, Para Wilt / New Wilt / Sudden Wilt & Leaf reddening
21. Management of Pests	As per recommendations of ICAR / SAUs	As per recommendations of ICAR / SAUs	As per recommendations of ICAR / SAUs
22. Pickings	2-3 (October - November)	4-5 (November - January)	4-6 (September - Mid December)
23. Harvesting	Mid December	Mid December – January	December
24. Yield of Kapas qtls / Ha	Deshi : 15 - 20, American : 20 - 25, Bt. hybrids : 25 - 30	Deshi : 10-15, Variety / Hybrid : 15-20	Deshi : 15-16, Variety / Hybrid : 15-20

Agronomic practices	7. Tamil Nadu	8. Haryana	9. Andhra Pradesh
1. Soil	Mixed black calcareous and red sandy loam (75% rainfed)	Sandy to sandy loam (83.80 % irrigated)	Red soil and coastal black cotton soil, black & light red soil (65-70 % rainfed)
2. Land preparation	Two to three ploughings. Deep ploughing once in four or five years.	After harvesting the previous crop, 2 ploughing by Tractor drawn cultivator followed by 1 ploughing by Rotavator.	Two or three ploughings. Deep ploughing once in four or five years.
3. Normal Rainfall (MMs)	939.7 mm	617 mm	966.00 mm
4. Sowing time	Irrigated and rainfed cotton is planted in September-October, whereas the sowing of the rainfed crop in the southern districts is extended up to November. In addition, summer sowing in Tamil Nadu is done during February-March. Rice fallow cotton: Second half of the December to Middle of January.	April to 15th May (100 % Irrigated)	Onset of South West Monsoon to 15th August.
5. Seed rate kg/ha.	Variety: 7.5 kg, Bt. hybrid : 5 Packets (each 500 g)	Desi: 12-15 kg, Deshi / American hybrid: 2.5 kg, Bt. hybrid : 5 Packets	Variety : 10-12.5 kg, Bt. hybrid : 4 Packets/ha
6. Species	<i>G. hirsutum</i> , <i>G. barbadense</i> , Intra and Interspecific hybrid and Bt. cotton	<i>Gossypium hirsutum</i> , <i>G. arboreum</i> , Intraspecific hybrids of <i>hirsutum</i> and <i>arboreum</i> and Bt. cotton	<i>G. hirsutum</i> , Intra and Interspecific hybrid and Bt. cotton hybrid.
7. Variety /hybrid	Variety : MCU 5, MCU 7, LRA5166, SVPR, RCH2 & 32, Bt. hybrid : Bunny BG II, Kaveri BG II, Jadu BG II, Mallika BG II, RCH 659 BG II	Desi : RG 8, HD432, HD324, HD123, Deshi hybrid : AAH-1, American: HS-6, H1098, H117, HHH223, 287, Bt. hybrid : Rashi 602 BG II, Rashi 773 BG II, US 51 BG II, Shri Ram Bioseed 6488, 6588	Variety : LK861, NA1325, Pundur Cotton, Bt. hybrid : Jadoo BG II, Bhaskar BG II, Bakthi BG II, Jackpot, ATM.
8. Sowing method	By hand dibbling.	Tractor drawn Seed drill or by dibbling. Hand dibbling at recommended spacing is commonly practiced for hybrid.	By hand dibbling.
9. Spacing in cm.	Variety : 90x45, Hybrid / Bt. hybrids : 120x60	Desi : 67.5x30, American : 67.5x30, Bt. hybrids : 65.5 - 150 x 45 - 60	Variety: 60x20 , Hybrid / Bt. hybrids : 90 - 120 x 45-60
10. Sowing depth	5 - 7 cm.	4 - 5 cm.	6 - 8 cm.
11. Thinning DAS	20 - 25	20 - 25	20 - 25
12. Fertilizers (N:P:K (kg/ha.) (Based on Soil testing report)	Variety (Irrigated) : 80 kg N, 40 kg P ₂ O ₅ , 40 Kg K ₂ O, Rice Fallow Cotton: 60 kg N, 30 kg P ₂ O ₅ , 30 Kg K ₂ O, Rainfed Deshi Cotton: 40 kg N, 20 kg P ₂ O ₅ , 00 Kg K ₂ O	Hybrid : 175.50 kg N, 60 kg P ₂ O ₅ , 00 Kg K ₂ O, Variety : 87.50 kg N, 30 kg P ₂ O ₅ , 00 Kg K ₂ O	Hybrid : 120 kg N, 60 kg P ₂ O ₅ , 60 Kg K ₂ O, Variety : 90 kg N, 45 kg P ₂ O ₅ , 45 Kg K ₂ O

Agronomic practices	7. Tamil Nadu	8. Haryana	9. Andhra Pradesh
13. Micronutrients (Based on Soil testing report)	TNAU cotton plus @ 6.25 kg / ha on 65-70 DAS.	25 kg Zinc Sulphate / ha	As per SAUs recommendations
14. Bio fertilizers	Neem cake 250 kg / ha + <i>Pseudomonas fluorescens</i> @ 2.5 kg/ha.	As per SAUs recommendations	As per SAUs recommendations
15. Weeding	40 - 50 DAS, Pendimethalin @ 3.3 lit/ha or Fluchloralin @ 2.2 lit/ha.	As per SAUs recommendations	Manual
16. Irrigation	8 - 10	Desi : 4 Irrigations, American Variety: 5, Bt.: 6 to 7	2 - 4
17. Intercrops	Cotton + Onion, Cotton + Groundnut, Cotton + Blackgram (paired row), Mixed cropping with horse gram & minor millets	Urdbean / Moongbean	Cotton + Blackgram (1:2), Cotton + Pigeonpea, Cotton + Chilli, Mixed cropping with Soybean.
18. Cropping system	Mono cropped cotton, Rice-Cotton, Rice-Rice-Cotton, Cotton-Jowar, Cotton-Pulse-Jowar, Intercropping with onion, groundnut and blackgram	Cotton-Wheat, Cotton-Mustard, Cotton-Berseem	Mono cropped cotton, Cotton-Rice (Sequence), Cotton-Chilli or Cotton-Tobacco (Two year rotations)
19. Insect pests	Sap feeders : Jassids, Aphid, Mirid Bug, Foliage feeder : Tobacco caterpillar, Stem Weevil, Borers : Helicoverpa armigera, Spotted bollworm, Spiny Bollworm, Pink bollworm, Shoot Weevil.	Sap feeders : Jassids, Whitefly, Mealybug, Dusky cotton bug and Red cotton bug, Foliage feeder : Leaf roller, Ash/Grey Weevil and Tobacco caterpillar, Borers : Helicoverpa armigera, Spotted bollworm and Pink bollworm, Nematodes : Reniform, Root Rot and Hoplolaimus seinhorsti	Sap feeders : Jassids, Aphid, Mirid Bug, Foliage feeder : Tobacco caterpillar, Leaf roller, Ash/Grey Weevil and Borers : Helicoverpa armigera, Spotted bollworm, Spiny Boll Worm, Pink bollworm, Shoot Weevil.
20. Diseases	Bacterial blight, Grey Mildew, Alternaria Leaf Spot, Para Wilt / New Wilt/ Sudden wilt, Boll Rot, Leaf reddening.	Leaf curl virus (Gemini Virus), Bacterial blight, Root Rot, Myrothecium Leaf Spot, Fusarium Wilt, Boll Rot, Para Wilt / New Wilt / Sudden Wilt & Leaf reddening.	Bacterial blight, Grey Mildew, Alternaria Leaf Spot, Para Wilt / New Wilt/ Sudden Wilt, Boll Rot, Leaf reddening.
21. Management of Pests	As per recommendations of ICAR / SAUs	As per recommendations of ICAR / SAUs	As per recommendations of ICAR / SAUs
22. Pickings	Irrigated : 8-12 Rainfed : 7-8	Desi : 3-4, American Variety / Hybrids : 4, Bt. hybrid : 2-3 (end November)	4-5 (November to March)
23. Harvesting	July-August (Sowing : Feb - March) February-March (Sowing Sep - Oct)	Mid December	November - end of the March
24. Yield of Kapas in quintals / Ha	Variety : Rainfed : 10, Irrigated : 20 Bt. hybrid : Rainfed : 25, Irrigated : 40	Variety : 18 - 20 Bt. hybrid : 22 - 24	15-30

Agronomic practices	10. Telangana
1. Soil	Deep black soils and red loamy soils (65 % rainfed)
2. Land preparation	Two ploughings. Deep ploughing once in four or five years.
3. Normal Rainfall (MMs)	905.30mm
4. Sowing time	Commencement of South West Monsoon to 15th August.
5. Seed rate kg / ha	Varieties : 10-12kg American variety : 5 kg Hybrids : 2-2.5 packets
6. Species	<i>G. hirsutum</i> , <i>G. arboreum</i> , Intra and Interspecific hybrid and Bt. cotton hybrid.
7. Variety /hybrid	Variety : Narasimha (NA1325), Shivanandi (NDLH - 1755), NDLH 1938, WGCV 48, MCU5, LRA-5166, Kanchana (LPS141), LK-861, L-389, L-603, L-604, Hybrids : LAHH - 1, LAHH - 4, LAHH-5, NHH - 44, JKHy 1, Lam hybrid - 7, H - 6, H - 8, H - 10, Orugallu Krishna (WGHH-2), Savitha, NDLHH-390 and NDLHH-240, Bt. Cotton Hybrid: Jadoo, ATM, Bhakthi, Nawab, Sadanand, Bindas, Dheeraj.
8. Sowing method	By Hand dibbling
9. Spacing in cm.	Variety (normal sowing) : 105 x 60, 90 x 60 cm, Variety (closer spacing / HDPS sowing): 60 x 30, 60 x 15, 60 x 10, 45 x 10 cm, Hybrid (Bt. / non Bt.): 120 x 60, 120 x 45, 90 x 60, 90 x 45 cm.
10. Sowing depth	07-08 cm.
11. Thinning DAS	25-30 days after sowing
12. Fertilizers (N: P: K (kg / ha) (Based on Soil testing report)	Hybrid : 120 kg N, 60 kg P ₂ O ₅ , 60 Kg K ₂ O, Variety : 90 kg N, 45 kg P ₂ O ₅ , 45 Kg K ₂ O
13. Micronutrients (Based on Soil testing report)	MgSO ₄ @ 10g/l, Boron @ 1.5g/l and Zn SO ₄ @ 2g/l
14. Bio fertilizers	As per recommendations of ICAR / SAUs
15. Weeding	Pendimethalin or alachlor @ 1.0L / acre
16. Irrigation	08 - 10 irrigation depending upon soil type and topography.
17. Intercrops	Green gram / Black gram / Soybean / Cluster bean in 1:2 or 1:3 ratio, Red gram 4:1 / 6:1 / 8:1 ratio as per feasibility.
18. Cropping system	Mono cropped cotton , Cotton-Rice (Sequence), Cotton-Chilli or Cotton - Tobacco (Two year rotations)
19. Insect pests	Sap feeders : Jassids, Aphid, Mirid Bug, Foliage feeder: Tobacco caterpillar, Leaf roller, Ash/Grey Weevil and, Borers : <i>Helicoverpa armigera</i> , Spotted bollworm, Spiny Boll Worm, Pink bollworm, Shoot Weevil.
20. Diseases	Bacterial blight, Grey Mildew, Alternaria Leaf Spot, Para Wilt / New Wilt / Sudden Wilt, Boll Rot, Leaf reddening.
21. Management of Pests	As per recommendations of ICAR / SAUs
22. Pickings	05-06 (November - February)
23. Harvesting	Mid March
24. Yield of Kapas in quintals / Ha	13-15 qtls

For area specific information : please contact District Agriculture Officer / Scientist of nearby Agriculture University / ICAR Institute .

Crops Division

Ministry of Agriculture & Farmers Welfare (GOI),
Department of Agriculture, Cooperation & Farmers Welfare,
Krishi Bhavan, New Delhi-110001

Directorate of Cotton Development

Department of Agriculture, Cooperation & Farmers Welfare,
Ministry of Agriculture & Farmers Welfare (GOI), Bhoomi
Sarveksan Bhavan, Katol Road,
Nagpur 440013, Maharashtra

Note: For more information, please log on to : www.nfsm.gov.in