

Impact of Polymulching in Reducing the Infestation of Pink Bollworm on Cotton

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With a M.Sc. and Ph.D. in Agronomy, Dr.M.S.Kairon has 46 years of experience in teaching

and research in the cotton sector. He has extensive experience of working for cotton production technology relating to water use, nutrient management, weed control and other cultural practices in India as well as other countries, such as Myanmar, Vietnam and Senegal (West Africa). He is the recipient of several awards

including Hexmar Award in Agronomy from the Indian Society for Cotton Improvement (1992-93), Special Award from the Haryana Agronomist Association,

India (1993), Award from the Agronomy Society of India (2000) and Award from the Magnum Foundation of India as a Friends of Farmers (1999). He has published about 304 articles on cotton at the National and International level. At present, he is the President KVSS –Kairon Foundation, Sakarla, Parseoni, Nagpur.

The Pink bollworm pest was never a native of Maharashtra, but it started appearing in this state after 10 years of Bt cultivation. The official approval for Bt cotton took place in 2002 (Boll event Mon.531) in India after the success of Navbharat 151, which played a key role in

controlling the Pink bollworms effectively. It is undisputed that the Bt cotton journey has

been successful in increasing the cotton production and controlling the bollworms till 2015. The area under Bt cotton increased from 30,000 ha in 2002 to an estimate of 1,12,000 ha in 2015, which resulted in 52% reduction of insecticide and doubling of average productivity area. Now, the average yields have been stagnating at 450-560 kg/ha

over the past 10 years. Large scale adoption of Bt cotton has resulted in the cotton plant developing resistance against the Pink bollworm.

The monophagous (feed on single type of food source) Pink bollworm, Pectinophora gossypiella



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have developed resistance to cry1Ac and cry1Ab in 2010. Pink bollworm started appearing in cotton Bt hybrids and causing serious damage on a large scale over the past 2-3 years specially in Gujarat and in the year 2017 in Maharashtra which became the main victim of Pink bollworm.

An experiment was conducted in 2016- 2017 at M S Kairon Research Foundation at village Sakarla, District Nagpur, in collaboration with Bajaj Polymin Luk Plastcon Ltd. (a group company of Bajaj Steel Industries Ltd., manufactures of cotton ginning and pressing machines). This





experiment revealed that Polymulch TM can help in reducing the attack of Pink bollworm upto 60-80% and increase the cotton production by 65% on an average by reducing the weed infestation as well as increase in water use efficiency and nutrient uptake upto the level of 25-30%.

Effective measures need to be taken for the next season and a strategy needs to be formed for prevention of PBW attack on cotton crop including off season, post harvest, off season and pre planting. A lot of governments funds can be saved and utilised in increasing the production and income of the farmers which is not only beneficial for the farmers, but the country as a whole





Post-Harvest Activities

- 1. Allowing cattle grazing over the left over green bolls of the cotton crop at the end of the season
- 2. Timely crop termination to end the season well in time
- 3. Timely clean up/removal of cotton stables immediately after harvest
- 4. Avoiding stacking of cotton stalks for fuel purpose over long period
- 5. Deep ploughing of the cotton fields should be carried out to avoid survival of larvae by exposing pupae to sun which will largely bring down attack of the PBW in the coming season.
- 6. Cultural practices which should be followed are as follows:
 - i. Plastic mulching to be used throughout the country.
 - ii. Cotton ginning factories to be fumigated for killing the PBW, larvae and pupae.





- iii. Pheromone traps to be used in all the factories and fields during the crop season.
- 7. Early maturing varieties/hybrids must be
- 8. Early sowing with plastic mulching is required.
- 9. Balanced use of fertilizers with proper dose of NPK and FYM
- 10. Promote desi cotton up to 10 20%, thus creating bio-diversities among the cotton species.
- 11. Foliar of potassium nitrate 2% to be applied between flowering and boll formation period at an interval of 7-10 days along with insecticides.

Recommended Insecticides

- 1. Ekalyx
- 2. Spinocid
- 3. Avanth
- 4. Cypermethrin or any synthetic pyrethroids

(The views expressed in this column are of the author and not that of Cotton Association of India)

COTTON STATISTICS & NEWS

Production of Fibres

(In Mn. Kg)

Production of Fibres (In Mn. Kg)								
As on	Raw Cotton				Cellulosic	Sub Total		
	(OctSept.)	PSF	ASF	PPSF	VSF			
2010-11	5765	896.33	79.48	3.74	305.10	1284.65		
2011-12	6239	829.74	77.71	4.08	322.64	1234.17		
2012-13	6290	848.05	73.59	4.26	337.49	1263.39		
2013-14	6766	845.95	96.12	3.71	361.02	1306.80		
2014-15	6562	881.56	92.54	4.62	365.17	1343.89		
2015-16	5746	893.95	106.81	4.70	341.91	1347.37		
2016-17 (P)		898.97	96.37	3.64	364.99	1363.97		
2017-18 (P) (AprOct.)		508.65	58.29	1.90	222.52	791.36		
		20	15-16					
April		73.62	9.45	0.35	28.62	112.03		
May		75.55	9.50	0.30	18.42	103.77		
June		67.17	7.88	0.31	19.50	94.86		
July		70.75	9.15	0.40	29.70	110.00		
August		74.07	9.35	0.47	30.63	114.52		
September		74.24	7.95	0.46	30.42	113.07		
October		76.66	9.23	0.38	31.34	117.61		
November		74.98	8.15	0.30	30.72	114.15		
December		76.65	9.36	0.45	31.49	117.95		
January		79.10	9.40	0.46	31.33	120.29		
February		73.52	8.58	0.42	28.07	110.59		
March		77.64	8.81	0.41	31.67	118.53		
		2016	5-17 (P)					
April		73.56	8.86	0.37	30.32	113.11		
May		77.07	9.39	0.44	31.72	118.62		
June		77.46	9.28	0.45	21.87	109.06		
July		79.32	8.07	0.30	30.41	118.10		
August		79.92	8.20	0.35	31.96	120.43		
September		76.96	9.02	0.22	31.14	117.34		
October		79.51	6.75	0.16	32.46	118.88		
November		71.06	7.10	0.24	31.18	109.58		
December		71.65	7.28	0.29	32.09	111.31		
January		72.68	7.78	0.20	32.11	112.77		
February		63.78	7.42	0.20	28.24	99.64		
March		76.00	7.22	0.42	31.49	115.13		
		2017	7-18 (P)					
April		72.23	7.62	0.26	30.51	110.62		
May		75.90	7.79	0.32	29.59	113.60		
June		71.90	7.65	0.24	31.55	111.34		
July		75.73	8.47	0.13	35.52	119.85		
August		73.58	9.49	0.32	33.14	116.53		
September		68.91	8.42	0.32	29.35	107.00		
October		70.40	8.84	0.32	32.86	112.42		
November		72.26	7.69	0.32	31.30	111.57		
December								
		73.36 72.36	7.00 5.14	0.32 0.32	30.84 30.89	111.52 108.71		

(P)= Provisional

Source : Office of the Textile Commissioner

Cotton Association of India Estimates Cotton Crop for the Season 2017-18 at 360 Lakh Bales; Reduces the Crop Further by 2 Lakh Bales than Its Previous Estimate

March estimate of the 2017-18 crop year beginning from 1st October 2017-18. In this latest estimate, the CAI has estimated cotton crop for the ongoing 2017-18 season at 360 lakh bales of 170 kgs. each, which is lower by 2 lakh bales one lakh bales each in the states of Maharashtra and Karnataka than its previous estimate of 362 lakh bales made in the month of March 2018. A statement containing the state-wise estimate of the cotton crop and the Balance Sheet for the cotton season 2017-18 with the corresponding data for the previous year is given below.

The projected Balance Sheet drawn by the CAI has estimated total cotton supply for the season at 410 lakh bales of 170 kgs. each which includes the opening stock of 30 lakh bales at the beginning of the season and the imports which the CAI has retained at 20 lakh bales as in the previous month. The CAI has estimated domestic consumption at 324 lakh bales while the exports for the Season are estimated at 65 lakh bales which is higher by 5 lakh bales than the CAI's estimate of the previous month as the country is now witnessing a good export demand. The carry-over stock at the end of 2017-18 season is estimated by the Association at 21 lakh bales, which is lower by 1 lakh bales of 170 kgs. each. than the CAI 's earlier estimate made in the last month.

The CAI estimates the cotton arrivals upto 31st March 2018 at 287 lakh bales as per the data received by it from upcountry associations and various other trade sources.

CAI's Estimates of Cotton Crop as on 31st March 2018 for the Seasons 2017-18 and 2016-17

(in lakh bales)

	Produc	ction *	Arrivals as on 31st March 2018 (2017-18)		
State	2017-18	2016-17			
Punjab	11.00	8.75	8.50		
Haryana	24.00	20.50	20.00		
Upper Rajasthan	10.00	7.25	9.00		

Lower Rajasthan	11.00	9.25	10.30	
Total North Zone	56.00	45.75	47.80	
Gujarat	105.00	89.00	76.05	
Maharashtra	80.00	80.00 88.00		
Madhya Pradesh	21.00	20.50	18.00	
Total Central Zone	206.00	197.50	160.80	
Telangana	53.00	48.00	46.00	
Andhra Pradesh	19.00	18.50	12.10	
Karnataka	17.00 17.00		14.70	
Tamil Nadu	5.00	5.50	2.50	
Total South Zone	94.00	89.00	75.30	
Orissa	3.00	3.00	2.50	
Others	1.00	2.00	0.60	
Total	360.00	337.25	287.00	

^{*} Including loose

The Balance Sheet drawn by the Association for 2017-18 and 2016-17 is reproduced below:-

(in lakh bales)

Details	2017-18	2016-17
Opening Stock	30.00	36.50
Production	360.00	337.25
Imports	20.00	27.00
Total Supply	410.00	400.75
Mill Consumption	280.00	265.00
Consumption by SSI Units	29.00	27.00
Non-Mill Use	15.00	15.75
Total Domestic Demand	324.00	307.75
Available Surplus	86.00	93.00
Exports	65.00	63.00
Closing Stock	21.00	30.00

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(Contd. from Issue No.52)

COTTON EXCHANGE MARCHES AHEAD

Madhoo Pavaskar, Rama Pavaskar

Chapter 8 Cotton Exchange Goes Global

Universal Cotton Standards

The overseas signatories to the Universal Standards Agreement have formed a committee named Universal Cotton Standards Overseas' Signatories Committee, with office at Liverpool in England, to put forward before the U.S. Department of Agriculture the joint views of the overseas buyers of American cotton on the grade standards proposed to be revised by the Department triennially. The Committee represents 18 cotton trade and industry organizations from as many as 15 different countries importing American cotton. The East India Cotton Association is a member of this Committee also.

Whenever changes are proposed in the grade standards by the U.S.D.A., which are not acceptable to the Cotton Exchange, it communicates its views to this Committee.

In 1989 the U.S.D.A. established formally an Advisory Committee for Universal Cotton Standards comprising all the members of the Universal Cotton Standards Overseas' Signatories Committee, besides eight U.S. cotton producers, four U.S. ginners, six U.S. cotton merchandisers and six U.S. textile manufacturers, to

conduct the business of the Universal Cotton Standards Conference triennially and to make recommendations for the establishment, revision or deletion of any grade standards of American Upland Cotton. A recommendation of the Advisory Committee to the U.S.D.A. requires the affirmative vote of at least three-fourths of the total eligible votes. While all the U.S. producers, ginners, merchants and manufacturers representing on the Committee have one vote each, the overseas signatory merchant associations have six votes together and likewise the overseas signatory spinner associations have six votes in all. Each foreign signatory association is entitled to nominate two representatives, who are experts in cotton classing, to serve on the Advisory Committee.

At the 24th Triennial Universal Cotton Standards Conference held in Memphis on June 15 and 16, 1995, on the recommendation of the Advisory Committee on the Universal Cotton Standards, the U.S.D.A. High Volume Instrument (HVI) calibration cottons, laboratory atmospheric conditions and sample conditioning practices and procedures as approved by the U.S.D.A. for HVI testing or HVI

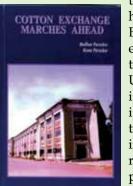
classification, were also included in the Universal Standards, in addition to the official cotton standards of the United States for colour and leaf grade of the American Upland Cotton. The incorporation of the HVI standards, practices and procedures for the measurement of fibre properties into the Universal

Standards Agreement has given a strong fillip to the use of HVI system among the member associations of the Universal Cotton Standards Overseas' Signatories Committee.

In the 20th century, the Universal Cotton Standards were prepared last in June 1998. The next

triennial Conference was supposed to be held in June 2001 of the New Millennium. But since the U.S. cotton industry wished to explore the possibility of reducing pepper trash and increasing large leaf content, the U.S.D.A. postponed the Conference and held it in June 2002. Such postponement enabled it to investigate the feasibility of change in the standards as desired by the U.S. Cotton industry. For that purpose, considerable research was undertaken to examine the possibility of encouraging production and improving ginning practices for reducing

pepper trash and increasing large leaf particles.



Incidentally, insofar as the Universal Cotton Standards provide common language of trade, they help improve market efficiency and performance. They facilitate easier communication between the cotton buyers and sellers based on the attributes of cotton as represented in the standards. They enable the spinners to negotiate fair and reasonable prices for American cotton based on its ultimate end use. Indian cotton ginners, trade and spinning industry have much to learn from the practices adopted for the Universal Cotton Standards to bring about the much required improvement in the Indian cotton quality. Since the Cotton Exchange participates regularly in the Universal Cotton Standards Conferences organised by the U.S.D.A., it can play an important role in this regard and offer appropriate advice to the government authorities for improving the quality standards of Indian cotton at all the stages of production, ginning and marketing.

E.I.C.A. and Standards

As a signatory to the Universal Cotton Standards Agreement, and also being a member of the Universal

Cotton Standards Overseas' Signatories Committee, the East India Cotton Association is now a member of the U.S. Advisory Committee on Universal Cotton Standards. As it is, the Cotton Exchange had long earned international recognition in the field of cotton classification and quality arbitrations. Two experts from the Exchange on cotton classing actively participate in the deliberations of the Universal Cotton Standards Conferences to approve the key sets of the Universal Cotton Standards and their matching replicas which are used for setting quality disputes.

The E.I.C.A.'s panel of sworn surveyors are designated, under the Universal Cotton Standards Agreement signed by the Cotton Exchange triennially, as the "Board of Cotton Examiners" for American Upland Cotton. As a result, the sworn surveyors of the Cotton Exchange are authorised to arbitrate on all disputes relating to the quality of American Upland Cotton by comparison with the approved Universal Colour and Leaf Grade Standards, or other fibre properties by HVI measurement as per the approved U.S.D.A. practices and procedures, after calibrating its HVI system with the U.S.D.A. HVI calibration cottons. The E.I.C.A. receives annually a complete set of the approved current Universal Standards for the American Upland Cotton for colour and leaf grade, and upto 20 pounds each of HVI calibration cotton type standards.

Since 1953 the Cotton Exchange has been carrying out arbitrations on all cottons imported from U.S.A. on the basis of the Universal Standards as per the rules of the Exchange. Earlier all such disputes were referred to arbitration at the Liverpool Cotton Association, involving considerable loss of foreign exchange. As stated in Chapter 5, the Cotton Exchange has now installed the HVI system to measure the fibre properties of all cottons – domestic or imported – in accordance with the U.S.D.A. HVI calibration cottons, and laboratory conditions and sample conditioning practices as approved by the U.S.D.A. Thus, the cotton testing and arbitration procedures of the Cotton Exchange have now been upgraded to meet the exacting global standards.

E.I.C.A. & CICCA

As a part of its efforts to ensure the just and fair trading practices in international cotton marketing, and to seek assistance when required in countering attempts to evade compliance with the arbitration awards by the overseas cotton buyers or sellers, at the instance of the former President of E.I.C.A., Mr. C.H. Mirani, the Cotton Exchange became a member of the Committee for International Co-operation between Cotton Associations (CICCA) in 1993. The Cotton Exchange was invited to join CICCA by the President and other office-bearers of the latter, on presentation

of an excellent paper by Mr. Mirani on the role of E.I.C.A. in international fair trading practices at the 51st Plenary Meeting of the international Cotton Advisory Committee held in Liverpool between September 28 and October 2, 1992. The paper was much appreciated by the CICCA representatives, who were hence keen to have closer association with the Cotton Exchange.

CICCA is a grouping of independent cotton trade associations who believe in fair trading practices and are willing to ensure that their members conform to such practices. It provides a forum for debate on matters of common interests, which allows collective pressures to be applied when appropriate.

As per the CICCA regulations, the member associations must have, or must be associated with, a recognised cotton arbitral authority and must support the existing methods of international cotton marketing. CICCA's involvement in the process of arbitration only extends to providing a facility that allows reports of default. CICCA also assists in resisting unilateral actions by the governments to frustrate and undermine the sanctity of international contracts. Such assistance is all the more useful to the Cotton Exchange in view of the Government of India's occasional arbitrary policies of disallowing shipments on export contracts already entered into in accordance with its declared decision.

The national cotton associations of as many as 12 major cotton importing and exporting countries are at present members of CICCA. By joining CICCA, the Cotton Exchange has developed close fraternal relations with the member associations from other nations. It also receives from CICCA information on matters of general interest to the international cotton trade. Insofar as CICCA maintains contacts with other international bodies like the International Textile Manufacturers Federation, the International Cotton Advisory Committee, etc. and makes representations to them as and when required, the Cotton Exchange can collectively with other member associations put forward its grievances with these bodies through CICCA. By joining CICCA, the Cotton Exchange has solemnly assured the overseas buyers and sellers of cotton that its members would maintain the standards of fair trading practices in international cotton marketing and ensure the proper performance of export-import contracts so as to reduce, if not eliminate, commercial disputes in such contracts, As India's international trade in cotton grows in the years to come, imports being already freed, and export liberalization announced, the utility of CICCA's membership to the Cotton Exchange as well as the cotton trade and industry will also enhance.

(To be continued)

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				UPC	OUNTRY	SPOT R	RATES				(R	Rs./Qtl)
	Standard Descriptions with Basic Grade & Staple in Millimetres based on Upper Half Mean Length [By law 66 (A) (a) (4)]					S	pot Rate		ntry) 201 L 2018	7-18 Cro	р	
Sr. No.	Growth	Grade Standard	Grade	Staple	Micronaire	Strength /GPT	2nd	3rd	4th	5th	6th	7th
1	P/H/R	ICS-101	Fine	Below 22mm	5.0-7.0	15	12007 (42700)	12007 (42700)	12007 (42700)	12007 (42700)	12007 (42700)	12007 (42700)
2	P/H/R	ICS-201	Fine	Below 22mm	5.0-7.0	15	12148 (43200)	12148 (43200)	12148 (43200)	12148 (43200)	12148 (43200)	12148 (43200)
3	GUJ	ICS-102	Fine	22mm	4.0-6.0	20	7367 (26200)	7367 (26200)	7311 (26000)	7311 (26000)	7452 (26500)	7452 (26500)
4	KAR	ICS-103	Fine	23mm	4.0-5.5	21	9083 (32300)	9083 (32300)	9026 (32100)	9026 (32100)	9026 (32100)	9026 (32100)
5	M/M	ICS-104	Fine	24mm	4.0-5.0	23	10011 (35600)	10011 (35600)	9954 (35400)	9954 (35400)	9954 (35400)	9954 (35400)
6	P/H/R	ICS-202	Fine	26mm	3.5-4.9	26	11248 (40000)	11248 (40000)	11135 (39600)	11135 (39600)	11248 (40000)	11248 (40000)
7	M/M/A	ICS-105	Fine	26mm	3.0-3.4	25	8323 (29600)	8323 (29600)	8211 (29200)	8211 (29200)	8211 (29200)	8211 (29200)
8	M/M/A	ICS-105	Fine	26mm	3.5-4.9	25	9195 (32700)	9195 (32700)	9083 (32300)	9083 (32300)	9139 (32500)	9139 (32500)
9	P/H/R	ICS-105	Fine	27mm	3.5.4.9	26	11389 (40500)	11389 (40500)	11276 (40100)	11276 (40100)	11389 (40500)	11389 (40500)
10	M/M/A	ICS-105	Fine	27mm	3.0-3.4	26	8802 (31300)	8802 (31300)	8745 (31100)	8745 (31100)	8858 (31500)	8858 (31500)
11	M/M/A	ICS-105	Fine	27mm	3.5-4.9	26	9561 (34000)	9561 (34000)	9505 (33800)	9505 (33800)	9617 (34200)	9617 (34200)
12	P/H/R	ICS-105	Fine	28mm	3.5-4.9	27	11445 (40700)	11445 (40700)	11332 (40300)	11332 (40300)	11445 (40700)	11445 (40700)
13	M/M/A	ICS-105	Fine	28mm	3.5-4.9	27	10517 (37400)	10517 (37400)	10404 (37000)	10404 (37000)	10545 (37500)	10545 (37500)
14	GUJ	ICS-105	Fine	28mm	3.5-4.9	27	11164 (39700)	11164 (39700)	11107 (39500)	11107 (39500)	11248 (40000)	11248 (40000)
15	M/M/A/K	ICS-105	Fine	29mm	3.5-4.9	28	11051 (39300)	11051 (39300)	10967 (39000)	10967 (39000)	11079 (39400)	11079 (39400)
16	GUJ	ICS-105	Fine	29mm	3.5-4.9	28	11473 (40800)	11473 (40800)	11389 (40500)	11389 (40500)	11501 (40900)	11501 (40900)
17	M/M/A/K	ICS-105	Fine	30mm	3.5-4.9	29	11445 (40700)	11445 (40700)	11360 (40400)	11360 (40400)	11473 (40800)	11473 (40800)
18	M/M/A/K/T/O	ICS-105	Fine	31mm	3.5-4.9	30	11726 (41700)	11726 (41700)	11642 (41400)	11642 (41400)	11754 (41800)	11754 (41800)
19	A/K/T/O	ICS-106	Fine	32mm	3.5-4.9	31	12176 (43300)	12176 (43300)	12120 (43100)	12120 (43100)	12232 (43500)	12232 (43500)
20	M(P)/K/T	ICS-107	Fine	34mm	3.0-3.8	33	15072 (53600)	15072 (53600)	14988 (53300)	14988 (53300)	15072 (53600)	15072 (53600)

(Note: Figures in bracket indicate prices in Rs./Candy)