

Progress of Cotton Cultivation in the South-Eastern Division with special reference to The Village Cotton Purchase Scheme

BY

H. A. PIERIS, B.A. (Cantab), A.I.C.T.A. (Trinidad)

DIVISIONAL AGRICULTURAL OFFICER, S. E. D.

Cotton Purchase Scheme 1948

COTTON cultivation in this newly established division, comprising Buttala and Wellawaya districts of Uva Province and the Hambantota District of Southern Province was resuscitated during the Maha Season, 1947, after a break of five years during the war period. During this period no cotton was grown except in the Tanamalwila area of Wellawaya District. In these years cotton had to make way to the more important food crops in view of the acute shortage of food. Chena permits for cotton cultivation were discontinued. Cotton cultivators fell into line with the rest in raising food crops under an organised drive initiated by Agricultural and Revenue Officers. The first opportunity was taken, however, after the termination of hostilities to launch out a cotton drive, after the tension of food production had somewhat abated. A planned programme was arranged for distribution of pure BP79 seed raised at the Cotton Rotation Station, Wirawila.

Since it was realised that the success of a venture of this nature depended largely on making seed available to all cultivators, especially in view of the fact that most of the cotton chenas were situated in distant jungle tracts, where transport facilities were difficult, arrangements were made to distribute the seed at convenient centres in different parts of the cotton growing belt. Every precaution was taken to ensure the proper and equitable distribution of seed to bona fide cultivators. Thereafter, cultivators were advised in regard to the more important cultural operations, weeding of plots, clean picking and grading. Cultivators were given an assurance regarding the purchase of their crops at the best possible market price offered by the Spinning and Weaving Mills in Colombo. Subsequent events have proved that the assurance of a guaranteed price and a ready market for the crop has in no small way contributed to the rapid expansion of this commodity as a village enterprise within a period of two years. The co-operation of the Divisional Revenue Officers was sought in collecting statistics regarding the cultivated extents, and crop forecasts, with a view to making arrangements for the "Purchase Scheme". Arrangements were made to procure the

necessary staff and material in preparation for the purchase, and when it was finally conducted every effort was made to handle the crop as expeditiously as possible so as to enable cultivators coming from distant places to get back to their homes before nightfall. Originally the purchase was arranged at three centres. Subsequently on representations made by the Divisional Revenue Officers that a few centres would necessitate cultivators to transport their crops over long distances, the number was increased to nine. The "Purchase" dates were also arranged to suit cultivators as they expressed a desire to dispose of their crops before the Sinhalese New Year in April. This meant a curtailment of the purchasing period and more organisation was necessary. However, this request was acceded to owing to the possibility of cultivators selling their crops to middlemen at reduced prices. Despite these precautions a few growers had disposed of their crops to traders but the latter were not admitted to the "Purchase" centres. Village Headmen were summoned to the "Purchase" centres for the purpose of identifying the bona fide cultivators with a view to eliminating the middlemen and traders.

The grading of cotton brought for sale on the whole was good particularly at Meegahajandura and Mattala centres. Cotton was clean and free from discolouration and stains. The bulk of the crop was first grade. Average yields obtained at the main centres were as follows:—

Angunupolapelessa and surrounding villages in East Giruwa Pattu 4 cwt. per acre
 Meegahajandura, Mattala, and surrounding villages in Magam Pattu 6-8 cwt. per acre
 Tanamalwila, Bodagama, and surrounding villages in Magam Pattu and Uva 5 cwt. per acre

The 1948 Purchase Scheme was a success. Cultivators were pleased with the price, namely, Rs. 32/50 for 1st grade cotton and Rs. 16/25 for second grade cotton offered by the Mills. It was evident therefore that a much greater extent would be brought under cultivation during the following season and a bigger organisation in respect of vehicles for transport of cotton, more staff, stores, &c., would be necessary for the next purchase scheme.

During the season under review 399 cultivators grew cotton in 375 acres approximately. A crop of 1,863½ cwt. was purchased which realised a sum of Rs. 50,003.43.

Cotton Purchase Statement for the Season 1947-48

Date	Centre	No. of Cultivators	Grade I		Grade II		Total		Amount Paid	
			Cwt.	lb.	Cwt.	lb.	Cwt.	lb.	Rs.	c.
5.4.48	Angunukolapelessa	50	212	35	—	—	212	35	6,552	38
6.4.48	Barawakumbuke	23	119	11	2	22	121	35	3,595	65
7.4.48	Meegahajandura	107	480	21	—	—	480	21	13,445	25
8.4.48	Maththala	70	433	20	—	—	433	20	12,129	0
9.4.48	Kotakumbuka	89	393	37	16	99	410	24	8,686	20
10.4.48	Ambalantota	41	137	81	9	29	146	110	3,962	35
10.4.48	Gonnoruwa	8	41	93	—	102	42	83	1,181	45
27.4.48	Bata-ata	1	1	6	—	—	1	6	29	50
27.4.48	Kinchigune	6	8	87	1	67	10	32	263	65
2.5.48	Middeniya	4	5	80	—	—	5	80	160	0
		399					1,863	44	50,003	43



(Block by Survey Department.)
 PLATE I. Cotton Plot (vr.) BP 79
 Experiment Station Hambantota



(Block by Survey Department.)
 PLATE II. Pure Plot of Cotton with kurakkan in foreground
 (Village Scheme)



(Block by Survey Department.)
 PLATE III. Maintenance of Purity Plot BP 79
 Experiment Station—Wirawila 1949



(Block by Survey Department.)
 PLATE IV. A typical Chena carrying pure crops
 of cotton, maize, kurakkan and chillie



(Block by Survey Department.)
PLATE V. A plot of pure Cotton (BP 79) with Tuticorin Chillie in foreground, grown by a
cultivator in Tanamalwila District—Uva (Village Scheme)

Cotton Purchase Scheme 1949

For Maha Season, 1948, timely arrangements were made in regard to procuring a supply of pure BP79 seed raised at the Rotation Station, Wirawila. The crop was ginned at the Spinning and Weaving Mills, Colombo. Only on receipt of the pure seed was the cotton purchased under the village scheme despatched to the Mills. This precaution was taken with a view to eliminating the slightest possibility of contamination of our pure seed with seed of other varieties at the gins.

As in the previous season a planned programme of seed distribution was undertaken. In accordance with lists submitted by Divisional Revenue Officers seed was distributed at convenient centres for over 2,000 acres. The season on the whole was favourable for the successful production of cotton, except in certain areas in Magam Pattu where unseasonal rains in January caused a reduction of the yield by affecting pollination of flowers. In areas where the normal rainfall was experienced good yields were recorded. The average yield per acre for the entire extent under cultivation was 5 cwt. Chenas rich in organic matter and those that received a good burn recorded a yield of 7-8 cwt. of seed cotton per acre. In some plots yields of over 10 cwt. per acre were not uncommon.

The general standard of cultivation was better than in the previous season. Growers are beginning to realise the benefit of clean production both in regard to cultivation, picking and grading of the crop. Cotton was grown generally as a pure crop. In bigger tracts, however, cotton was grown as a pure crop in rotation with crops of chillies, maize, kurakkan, sorghum, mustard and gingelly. A few cultivators had raised a crop of mustard as an associated or intercrop between rows of cotton spaced 4' x 4' apart and in the row. Yields up to 4 bushels per acre of mustard seed valued at Rs. 150 were produced without adversely affecting the yield from the cotton plots. Thus by the judicious introduction of a suitable cereal as an associated crop these cultivators were able to supplement their incomes from the cotton plots. It is pleasing to record the almost entire absence of pests and diseases in cotton during this season. This could be attributed not only to favourable weather conditions, but also to the attention paid to clean weeding of plots and clean picking of bolls.

Elaborate preparations were made this year regarding the Village Cotton Purchase Scheme in view of the large acreage involved and the large output of cotton—Nissen huts were procured with considerable difficulty and installed at some of the centres where stores were not available. Two such huts were installed at each centre, one for conducting the purchase and for storing cotton and the other for accommodating the staff for the duration of the purchase. Two new 3-ton lorries were purchased and the services of many others were obtained. A station waggon was also procured to enable the writer to carry cash from the Kachcheri to the purchase centres almost daily. Police escorts were provided at each centre. Consequent on this planned organisation the purchase was conducted without a hitch.

The only unsatisfactory feature was the inability to dispose of the crop to the Mills expeditiously owing to lack of sufficient storage facilities there. The Mills were in a position to take in only 500 bags of seed cotton per week, whilst the purchase rate per day was about 1000 bags. This necessitated the

storage of cotton at different purchase centres for an unduly long period. The cotton was thereafter despatched to the main store in Hambantota to await its final despatch to the Mills. The despatch of cotton was finally closed after five months from the date of purchase. This involved considerable expenditure in connection with transport, handling and watching with the result that a deduction of Rs. 4-5 per cwt. was made at the purchase in addition to a deduction in weight allowed for driage in the store for so long a period. Thus the advantage of an enhanced price offered for seed cotton was vitiated by these reductions. The remedy therefore is the early installation of another store at the Mills which could take in all the cotton within a few days of completion of the purchase. It is hoped that this would be available in time for the next Purchase Scheme in 1950.

Cotton Purchase Statement for the Season 1948/49

Centre	Number of Cultivators	Purchase	Grade I		Grade II		Amount paid to Cultivators Rs. c.	Total amount paid Rs. c.
			Number of Bags	Quantity Cwt. lbs.	Number of Bags	Quantity Cwt. lbs.		
1. Angunukolapellssa	241	1st	1,626	1,244 29	5	3 12	38,582 0	
		2nd	43	25 24	28	12 83	38 83	
							679 44	
							131 11	34,425 88
2. Barawakumbukka	126	1st	1,339	1,000 10	—	5 103	26,990 88	
		2nd	226	145 102	76	35 07	62 84	
							3,935 04	
							369 51	31,358 27
3. Middeniya	256	1st	1,330	975 81	12	4 34	26,390 28	
			26	15 82	44	20 74	46 16	
							423 72	
							211 61	27,011 77
4. Meegahajandura	131	1st	830	698 103	—	2 68	18,866 76	
							29 20	18,895 96
5. Mattala	100	1st	699	553 59	—	6 54	14,030 16	
		2nd	24	16 53	83	43 04	67 35	
							444 12	
							450 55	
Mattala paid at Kottakumbuka	3	1st	16	10 82	—	—	289 56	16,100 74
6. Gonnoruwa	59	1st	408	369 02	—	10 01	9,961 95	
		2nd	6	4 106	11	4 108	112 10	
							133 32	
							51 38	10,258 75
7. Ambalantota	56	1st	394	183 01	—	27 87	5,124 25	
		2nd	24	14 81	—	—	311 10	
							412 25	5,847 60
8. Bodagama	57	1st	325	259 67	—	—	7,268 75	7,268 75
9. Kotakumbuka	21	1st	152	119 70	2	1 52	3,351 75	
							16 95	3,368 70
10. Bata-ata	41	1st	123	75 93	23	6 44	2,123 25	
							71 60	2,194 85
11. Telulla	27	1st	80	50 08	—	1 55	1,402 0	
							16 70	1,418 70
12. Pelwatte	8	1st	58	26 100	—	—	753 0	753 0
13. Wellawaya	8	1st	36	19 39	—	1 26	541 45	
							13 80	555 25
14. Bundala	9	1st	23	7 104	—	102	213 81	
							10 20	224 1
15. Kinchigune	5	1st	4	2 21	1	20	58 80	
							1 80	60 60
	1,151	—	7,792	5,818 106	285	188 38	—	159,882 81

Cotton Growers' Union, Bodagama

A Cotton Growers' Union at Bodagama in Tanamalwila, Province of Uva, was sponsored by the Agricultural Production and Sales Society, Tanamalwila. Under this scheme about 100 acres were brought under cotton. Seed was supplied by the Range Agricultural Instructor. Cultivators were provided with cash advances for purposes of cultivation. Finally the crop produced by the members and other growers in the district was purchased by the Assistant

Cotton Purchase Scheme 1949



PLATE VI. *(Block by Survey Department.)*



PLATE VII. *(Block by Survey Department.)*



PLATE VIII. *(Block by Survey Department.)*

Registrar of Co-operative Societies, Province of Uva, and despatched to the Mills. In all a supply of 1,200 cwt. of seed cotton valued at Rs. 33,601 was purchased under this scheme. This arrangement was satisfactory for two main reasons. Cultivators had no need to resort to borrowing money from traders and middlemen for cultivation purposes and run the risk of having their potential crops mortgaged in lieu of cash borrowed. The Agricultural Officers were also relieved of the organisation involved in conducting a purchase in so remote a district especially in view of the large volume of work involved at a number of other centres. Co-operative schemes of this nature should be encouraged wherever possible as they are bound to promote better cultivation and greater production of cotton as an economic crop in village cultivation schemes.

Cotton Purchase Statement for the Season 48-49
(Conducted by Assistant Registrar, Co-operative Societies, Uva)

BODAGAMA COTTON GROWERS' ASSOCIATION

<i>Total Number of Cultivators</i>	<i>Area</i>	<i>Total Quantity Purchased Cwt. lb.</i>	<i>Amount paid Rs. c.</i>
300	... Bodagama and Tanamalwila (Province of Uva) ..	1,200 6	.. 33,601 50

Progress of Cotton work at Wirawila Rotation Station and Hambantota Cotton Experimental Station

Cotton Rotation Station, Wirawila.—During the Maha-season, 1948-49, the five-course rotation was altered to a four-course rotation and the land earmarked for a buffalo breeding station absorbed into the main rotation scheme. This was possible as it was decided to transfer the proposed buffalo breeding project to Ridiyagama where there were better facilities for such a project particularly a permanent supply of water and good pasture. With the addition of this new land and the curtailment of the rotation period, it was possible to multiply cotton (BP79) in an extent of 150 acres where only 60 acres had been grown before. In view of the extension of the village cotton cultivation scheme, it was necessary to bring a bigger area under cultivation at the rotation station for the purpose of raising sufficient pure seed for distribution under this scheme. Thus it was possible to raise sufficient seed for an extent of 4,000 acres for the Maha 1949-50 season. Actually only 136 of the 150-acre unit was brought under cultivation, making allowance for soil conservation drains, gullies, &c. The yield obtained was 49,531 lb., or an average yield of 364 lbs or $3\frac{1}{4}$ cwt. per acre. This is a fair average crop for a big extent of land where cotton was cultivated without an application of bulky organic manure. Cotton plots were treated with sulphate of ammonia at the rate of one cwt. per acre.

Cotton Experimental Station, Hambantota.—During the Maha season 1948-49, 14 varieties of medium staple cotton and one long staple cotton was grown in observation plots in an extent of 3.85 acres. The entire area received an application of 3 tons per acre of cattle manure only. The total output of seed cotton was $55\frac{1}{2}$ cwts. which calculated on an acreage basis yielded $13\frac{1}{4}$ cwts. This is an extremely high yield and demonstrates the advantage of organic manure on the cotton crop in lands under cultivation for many years.

Cotton Ginning.—During this year a small double roller gin imported from Messrs. Platt Bros., England, was installed at the Cotton Rotation Station, Wirawila. The object in view was to gin the BP79 crop raised at this station at the spot without having to send it to the mills in Colombo. By this innovation two important requirements have been served namely (a) Eliminating any possibility of the pure seed mixing at the Colombo mills, (b) Eliminating the necessity to withhold the village crop from the mills, until the rotation crop was sent there for ginning and the return of seed. The crop raised during 1948–49 season was expeditiously ginned in this newly installed gin, and thereafter the ginning of the Maha Illuppallama and Pelwehera crops amounting to 20 tons was undertaken.

It might be of interest to record the more important requirements in ginning with a gin of this type. It is important that the gin should not be fed too heavily, for as soon as the machine is overcharged the ginning at once ceases as the seeds from cotton already ginned form an effective barrier between the leather rollers and the seed cotton in the hopper. The system to adopt is to feed rather sharply and lightly always giving a full supply across the whole length of the rollers. The cotton should be fed with a lateral movement of the hand. This opens the cotton and prevents clogging or matting together.

Variety of Cotton recommended for Cultivation

The variety recommended for cultivation is BP 79, an Upland medium staple cotton from Uganda. It has stood the test of experimentation for many years under local conditions and has proved its worth. The cotton produced in this country has been favourably reported by the Cotton Technological Laboratory, Bombay, and the Shirley Institute, Manchester. Its staple length is $1\frac{1}{8}$ inches and is capable of spinning up to 60 counts. This variety is typical of the type used for over fifty per cent. of the world production. It was first introduced into the Rotation Station, Wirawila, during Maha 1944–45 where it was grown in "purity" plots. Seed from these plots was multiplied in a sixty (60) acre unit in the rotation scheme in the following season, when it was distributed for the first time for the village cultivation scheme during Maha season 1947 with conspicuous success.

Future Prospects of Cotton Cultivation

The cultivation of cotton in this division at present is on a sound footing. The prospects for the future are good. However, expansion of this agricultural enterprise as an economic undertaking in rural agriculture would to a great extent depend not so much as a shifting system of chena production but on a settled system of rotational agriculture. Cotton should be introduced in a system of alternate husbandry or ley farming where livestock play an important part in the cultivation scheme. In dry zone agriculture where preservation of soil fertility is an important consideration owing to the weathering action of sun and wind after the Yala season for about four months followed by precipitation of rain for about two months during the Maha season, it is of paramount importance to preserve soil fertility. This could be achieved by adopting an effective system of soil conservation and enriching the soil by cattle penning and incorporation of cattle manure and compost. The

value of cattle manure in land subject to annual cropping under dry zone conditions has been clearly demonstrated in the high yields obtained from cotton plots at the Experiment Station, Hambantota, during Maha season 1948.

The assurance of a guaranteed price and a ready market for the crop was an incentive to greater production of good quality cotton and adoption of better methods of cultivation. In order to encourage the picking and marketing of clean cotton it is advisable to offer a low price for dirty and stained cotton.

The economic production of cotton is important if the industry is to be developed on a proper basis. This may be achieved by (a) Increased mechanisation and improved methods of cultivation, (b) Higher yields, (c) Greater economic use of bye products for cattle food and fertilizer, (d) Greater local manufacture of yarn and cotton goods as a cottage industry.