

AP - 1961-62

ACTIVITIES, ACHIEVEMENTS
AND
FUTURE PROGRAMME

EAST PAKISTAN AGRICULTURAL
DEVELOPMENT CORPORATION

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AND
FUTURE PROGRAMME
(1961 - 1963)

EVALUATION DIVISION
EAST PAKISTAN AGRICULTURAL DEVELOPMENT CORPORATION

CHAPTER I

INTRODUCTION

The recent Agricultural Census has revealed that there are 6.14 million agricultural farms having a total area of 21.73 million acres. Out of this only 18.85 million acres is the 'net cultivated' area. Against this acreage only 6.02 million acres are cropped more than one, giving a total cropped area 27.88 million acres.

The Population Census of 1961 revealed that the total population in East Pakistan in 1961 was 50.8 million against the figure of 42 million in 1951. The increase in 10 years was 20.9%. Of this total population 94.8% is rural. This heavy pressure of population on land has resulted in very small uneconomic holdings averaging about 3.5 acres per holding on the 'total farm area' basis and just about 3 acres if the 'net cultivated area' is taken into account. These holdings are also greatly fragmented and scattered into small plots of sizes varying from 0.1 to 2 acres.

There is little scope of increasing agricultural production by bringing under cultivation more new areas. The total land surface excluding riverine areas is 33.23 million acres. The land utilisation at present is given below :-

(1) Total farm area occupied by agricultural holdings	...	21.73 million acres.
(2) Tree Forest area other than forests in farms.	...	3.26 " "
(3) U.C.S.F.(Subject to Jhooming)	...	2.20 " "
(4) Cultivable wastes outside the farm area	...	1.96 " "
(5) Unculturable area(unculturable waste as well as land not available for cultivation because of towns, roads, home steads, ailes etc.)	...	4.08 " "
		<hr/>
Total :		33.23 million acres.

Out of the total forest area nearly 2.2 million acres are unclassified so-called forest. One third of this area can easily be brought under intensive tree cropping such as starting rubber plantation, Cashnut plantation, citrus plantation etc. instead of the present wasteful jhoom method of Cultivation. The remaining half, however, will have to be put under real forest, partially for exploitation as forest and partially for soil conservation. It is estimated that the forest area in a country should be between 20% and 25% of the total land surface in the tropical countries for rain-fall control and soil conservation. The present acreage

of real forest, however, comes to about 10%. So there is scope for expansion in this respect which is being done by the Forest Department.

The cultivable wastes in the terms as per agricultural census of 1960 is 0.47 million acres. Thus the Province has a total of 2.43 million acres of cultivable wastes. To bring this area under cultivation is a long-drawn and costly process. In order to quickly bring about a substantial increase in agricultural production to counteract the present dismal agricultural situation, it is essential that the present per acre yield of the different crops be increased through the adoption of modern scientific techniques used in the other developed countries.

It has been found through experiments in the Govt. Research & Experiment stations, and through trials on the cultivators' plots, that the out-put of different crops can certainly be greatly augmented by the use of the "Five Firsts" of agriculture, which are - (1) use of better seeds, (2) use of fertilizers, (3) use of better cultivation techniques, (4) adopting plant protection measures and (5) supplying adequate credit.

Agricultural development involves -

(i) Research (ii) Agricultural Education (iii) Agricultural extension (iv) Supplies and Services to support the extension work. These were solely being carried out by the Directorates of Agriculture, Live-stock etc. under the Agriculture Department. Though there has been some improvement in agricultural productivity, yet the steps so far taken had not adequately provided facilities required for increased production from the existing acreages.

So, on the recommendation of the Food and Agriculture Commission set up by the erstwhile Revolutionary Government, the East Pakistan Agricultural Development Corporation was established on October 16, 1961 by an Ordinance of the Government of East Pakistan.

The EPADC which is a semi-autonomous body was designed to be free from the impediments faced by purely Government organization and was required to take up the Supplies and Services function of the Department of Agriculture and also initiate and implement development in selected project areas.

The activities and achievements of the E.P.A.D.C. since October 16, 1961 to 31st October, 1963 are described in the chapters which follow.

CHAPTER II

FERTILISERS

Of the 'Five firsts' of agricultural development mentioned earlier the judicious application of right quantities of different kinds of chemical fertilizers in proper manner is the surest and quickest means of increasing the present yields of the different crops. Though the use of manures to supply necessary food materials for producing good yields was not unknown, the use of chemical fertilizers for this purpose was almost unknown to the cultivators of East Pakistan before 1951-52 except to Tea Estate Owners and 'Truck' Farmers. The Government took up the programme of fertilizers distribution in a planned manner for increasing crop yields since 1951-52. The use of chemical fertilizers since that year can be seen from the table given below :-

Annual Consumption of Different kinds of Chemical Fertilizers in East Pakistan since 1951-52.

(Kinds of Fertilizers used - Figures in tons)

YEAR	Ammonium Sulphate	Urea	T.S.P.	S.P.	M.P.	Total of all kinds	Sold to cultivators.	REMARKS
1	2	3	4	5	6	7	8	9
1951-52	2698	-	-	-	-	2698	2698	* Indicates
1952-53	3220	-	120++	-	-	3340	3340	quan. supplied
1953-54	6345	-	180++	-	-	6525	6525	to Pak. Tea
1954-55	9090	-	200++	-	-	9290	9290	Asson.
1955-56	1668	-	-	-	-	1668	1668	++ Indicates
1956-57	16083	-	-	-	-	25290	16083	total quan. of
1957-58	16077 9000*	1213	817	-	-	27106	18106	Triple & single Super Phosphate.
1958-59	17072 9063*	3719	508++	-	-	30362	21299	Δ The total
1959-60	27504 10137*	9227	2150++	-	-	49018	38881	quan. sold to
1960-61	16182 11200*	30383	8155++	-	1000	66920	55720	cultivators in 1962-63, though less than the
1961-62	18379 11000*	29727	6788++	-	1057	66951	55951	quan. sold in 1961-62 &
1962-63	3517 21000*	40171	3018	170	1407	72255	49184	1960-61, yet if the urea sold is converted
1963-64 (4 months from July to October of 1963-64)	324	37415	13681++	-	892	52312	52132	in terms of A/S then the total will be 89355 tons against 85696 tons in 1961-62 and 86013 tons in 60-61, since one unit of urea is equivalent to two units of A/S.

Ammonium Sulphate and Urea are Nitrogenous fertilisers, the latter being twice as effective as the former. Triple Superphosphate and single Superphosphate are Phosphatic fertilisers the former being more than twice as effective as the latter. Muricite of Potash is Potassic fertiliser. Nitrogen, Phosphorus and Potassium are the main three major elements which fall short in the absence or shortage of any one or more of these three elements is sure to affect the crop growth and its yields.

Nitrogen is required by the plant for vegetative growth and phosphate for good and deep root formation and more and plump grain and fruits. Potash is required for healthy balanced growth produce sturdy disease resistant plants.

Against 2,698 tons of fertilisers used during 1951-52 the total quantity used in 1963-64 in the 4 months ending October, 1963 was 52,132 tons. In the first years it was the nitrogenous fertilisers which received full stress because the effect of application of Ammonium Sulphate was visible within a few days from its application. The greater vegetative growth gave the plants the power to utilise more of the phosphate and potash in the soil and thus produce heavy yields as well. However, the practice of applying nitrogenous fertilizers only resulted in an unbalanced fertility status in the soil and within a few years the increase in yield began to fall. Consequently complaints from the users were received and resistance was created against use of fertilisers. In spite of this antagonism the use of fertilisers has greatly increased.

This scheme was handed over to the Corporation from 1st of June, 1962. In that year, therefore, the distribution was carried out by the Directorate of Agriculture, Corporation became responsible for the distribution fully from the 1st of July, 1962. But even at that time, since the Corporation had no organisation in the field, the assistance of the staff of the Directorate of Agriculture at the Thana and Union levels was taken in order to distribute the fertilisers among the farmers. That year the Corporation launched a drive for use of more fertilisers on the aman paddy with specific reference to the use of urea. This drive was initiated in order to match the off-take with the production of Urea in the Natural Gas Factory, Fenchuganj. As a result against about 30,000 tons of Urea sold in 1961-62, 40,000 tons was sold in 1962-63. The total of all kinds of fertilisers to the farmers in 1962-63 though less than sold in 1960-61 or in 1961-62 yet in terms of Ammonium Sulphate was greater by 4000 tons.

On every other developing country which made the same
while all-effects of using only nitrogenous fertilisers
and complaints from the farmers were received against
consequently, the Corporation for the year 1963-
for selling Superphosphates along with Urea.
the Corporation the Govt. agreed to issue agri-
and to the tune of Rs.1.50 cores in order to
farmers to purchase phosphatic fertiliser for appli-
cations on paddy crop. It also arranged to reduce the sale pri-

35696
1961-62
nit. of urea
equivalent to
of M.S.

of Triple Superphosphate from Rs.10.12 per maund to Rs.7.37 per maund. As a result 13,681 tons of Superphosphates were sold in the 4 months ending October/1963 during the current financial year against 4,089 tons sold to the farmers in the whole of 1962-63.

Field inspections have shown that except where the instructions for application of T.S.P. circulated during the Drive have been neglected, those who have used T.S.P. have got a much better crop than those who have not. This has been something of a major break through.

In respect of the scheme of fertilisers use, the Corporation is fully aware of the necessity of educating the farmers on the use of balanced fertilisers. The need of Potash along with the use of Urea and Phosphates is being brought home to the cultivators. The Corporation has prepared several posters depicting the benefits of the use of each kind of fertilisers singly as well as in combination. Posters on phosphate and potash have been prepared and issued. The Poster on Urea is ready for issue. Leaflets of different kinds on fertilisers use have also been issued. A booklet on judicious use of fertilisers giving the different doses of each kind for different types of crops under different soil conditions is under preparation and will shortly be issued.

The revised scheme on "procurement and Distribution of Fertilisers" has been approved by the Government. In it the programme is to distribute during 1963-64, the total quantity of 115,000 tons made up of :-

Ammonium Sulphate	...	12,000 tons	(14,000 tons for Tea Estates).
Urea	...	50,000	"
Triple Super Phosphate & Super Phosphate	...	40,000	"
Muriate of Potash	...	13,000	"

The programme for 1964-65 is for distributing 160,000 tons made up of :-

Ammonium Sulphate	...	12,000 tons	(10,000 tons for Tea Estates)
Urea	...	78,000	"
Triple Super Phosphate & Super Phosphate	...	50,000	"
Muriate of Potash	...	20,000	"

Emphasis has been placed in the scheme on putting fertilisers on sale through dealers so that the farmer may buy his fertilisers from the grocers' shop as he buys his salt and oil.

CHAPTER III

BETTER CULTIVATION TECHNIQUES

Good and proper preparation of field and timely supply of irrigation water to crops are as essential as application of fertilisers to increase the crop yields.

The scheme on "Mechanical Cultivation & Power Pump Irrigation" was transferred to the Corporation since 16th May, 1962. The performance of this scheme during the 2nd Plan period can be seen from the tables given below :-

POWER PUMPS

Year	No. of power pumps used.	Area irrigated	REMARKS
1960-61	1367 Nos.	62,142.00 acres	Under Agril. Director
1961-62	1555 "	73,992.00 "	-do-
1962-63	2024 "	1,33,343.00 "	Under the East Punjab Agric. Dev. Corporation

Each pump irrigated on an average 66.1 acre in 1962-63 against 47.5 acres per pump in 1961-62, and 45.46 acres per pump in 1960-61. The performance of the pumps during 1962-63 was also more efficient in terms of water supplied and fuel & manpower used, compared to that of the pumps during 1960-61.

TRACTOR

Year	No. of tractors used.	Area cultivated	REMARKS
1960-61	93 Nos.	11,060.00 acres	Under Agril. Directorate.
1961-62	125 "	8,104.00 "	-do-
1962-63	156 "	20,628.00 "	Under E.P.A.D.C.

Each tractor cultivated on an average 132.23 acres in 1962-63 against 64.82 acres in 1961-62 and 118.9 acres in 1960-61. The performance of the tractors generally during 1962-63 was 104% more efficient compared to that of the tractors during previous years.

The Operation of the scheme under the Corporation has, therefore, shown in the very first year a greatly improved performance.

It will be seen that the demand for pumps and tractors in this Province is increasing every year. As there is a great scope for utilization of more and more power pumps for irrigation of winter crops especially Boro paddy along the river banks and other places where surface water is available, the Corporation has arranged the procurement of another 1400 power pumps during the financial year of 1963-64. New schemes have also been drawn up which provide for the purchase of 3,400 and 2,400 power pumps in 1963-64 and 1964-65 respectively. The schemes are pending approval of the Government.

During 1963-64 the EPADC has arranged to utilise at least 2,750 power pumps irrigating approximately 226,000 acres and 4,200 power pumps in 1964-65 irrigating approximately 397,000 acres. As regards tractors, it is proposed to utilise 180 tractors cultivating 36,000 acres during 1963-64 and 200 tractors cultivating 40,000 acres in 1964-65.

The organization and operation of this scheme has been greatly stream-lined. Arrangements for timely repairing and over-hauling of the machinery has been made so that maximum number of pumps and tractors are put to operation and there is no difficulty in achieving the targets for 1963-64 and 1964-65.

The scheme and quite a number of odd makes of pumps and tractors scattered all over the Province, mixed up in different operational zones. As a result of this, great difficulties were faced and much time was consumed in effecting repairs and replacements. The Corporation has since sorted out the different odd makes of pumps and tractors and have arranged to standardise a particular make for particular zones. It is hoped that by this arrangement much of the idle hours of each machine would be eliminated.

The pumps and tractors are operated by Drivers who have received training. During the year 1963-64, 1100 persons have been trained to operate pumps. 60 more tractor-drivers have also been trained. In-service training programmes for other field staff have also been conducted and the Land Procurement Assistants properly briefed.

So far there was no standing orders regarding the operation of this scheme. As a result the field staff at times of difficulties were at a loss to take action for efficiently discharging the day-to-day duties in respect of power pump operation and tractor cultivation. For their guidance and use a detailed "Manual on the operation of Mechanical Cultivation & Power Pump Irrigation Scheme" has been written. This is under publication.

Construction of Zonal Workshops, Storage, Sheds etc. at Brahmanbaria, Bajitpur and Sylhet is expected to be completed by December, 1963. The land for the workshop at Naogann has already been acquired and handed over to the C&S Department for putting up the necessary structures. The land for the Workshop at Chittagong is expected to be received from the Chittagong Development Authority by the end of December, 1963.

200, 5-Cusec Morrison power pumps acquired under the U.K. are being mounted on pontoons, under construction in the EPIDC yard at Narayanganj. 40 of these pontoons will be ready for use in the 1963-64 irrigation season.

The Corporation has drawn up a scheme for the "Introduction of Power Tillers" for cultivation in East Pakistan. In this scheme it has been proposed to procure 200 numbers of tillers for making a 2nd stage trial to determine the performance of some of the selected types under cultivators conditions and to see whether the farmers like them before these are purchased or got manufactured in a large scale for distribution to them.

During the year 1962-63, the dues accrued on account of tractor and power pumps was Rs.42.10 lakhs and the outstanding dues of 1962 was Rs.20.90 lakhs. The total realisable dues of the two years was Rs.63.00 lakhs, against which the amount actually realised during 1962-63 was Rs.15.05 lakhs which is about 25% of the total realisable amount. Attempts are being made to improve the situation.

It may be mentioned that the use of the power pumps has enabled the cultivators to produce nearly 40,00,000 mds. of Boro paddy in 1962-63 which would not have been produced if the pumps were not supplied. The value of this paddy at Rs.10/- per md. comes to Rs.4.00 crores.

/sown or transplanted and the crop

Unless the land is properly prepared before the crop is sown or transplanted and the crop is properly cared for during its growth through inter-cultivation and keeping weeds, good crops cannot be expected. Even the use of fertilisers will not produce the full increased yields unless weeds are kept under control.

For this purpose, Government initiated the following schemes:

- 1) Procurement and Distribution of 30,000 Seed Drills and 75,000 Hand Hoes.
- 2) Manufacture of Paddle Threshers.
- 3) Mechanical Cultivation & Power Pump Irrigation.

In the first two years of the 2nd Plan period the Directorate of Agriculture got a number of Hand Hoes and Seed Drills manufactured and sent them to the Thana Seed Stores for sale to the cultivators in order to enable them to sow aus and jute paddy in rows and do inter-cultural operations in between the rows. However, the design was defective and thus the implements did not become popular. The Corporation has taken up on itself to design suitable inter-culture implements and Seed Drills before these are got manufactured in large scale for distribution to the cultivators. The scheme stands transferred to the Corporation since 1st June, 1962, but no expenditure has been incurred by the Corporation as yet as the models so far prepared have not as yet been adequately tested to see whether the farmers really like them.

CHAPTER IV

SEEDS

Improved varieties of good quality seeds of different crops is another tool in the hands of the practical agriculturists with which he can increase the yield per acre. It has been found that 10 to 15% increase in the yield can be effected by the use of improved good quality seeds. In order to make available to the cultivators improved seeds of good quality the Government for the 2nd Plan period initiated the following schemes :

- 1) Establishment of Twenty 100-acres, Five 500-acres and One 3000-acres Seed Multiplication Farms.
- 2) Increased Production with Improved Paddy Seeds through Registered Growers.
- 3) Increased Production with Improved Jute Seeds through Registered Growers.
- 4) Fruit Nursery in Seed Multiplication Farms.
- 5) Increased Food Production with Improved Suckers of Quick-growing fruits like Banana and Pine-apple.
- 6) Procurement & Distribution of Wheat Seeds.
- 7) Procurement & Distribution of Mustard Seeds.
- 8) Procurement & Distribution of Seed Potatoes, Ground-nut seeds and Winter Vegetable Seeds.
(This was a programme under the Government and given the scheme shape by the Corporation).
- 9) Procurement & Distribution of Maize Seeds.
- 10) Establishment of One Seed Testing Laboratory at Mymensingh.

The scheme for "Establishment of Seed Multiplication Farms" was transferred to the Corporation on 1.5.62. 22 S.M.Farms were transferred to the Corporation as per list given below :-

Name of the Division	Name of the Farm with year of Establishment	Total Farm Area (in acres)	TOTAL (In acres)
1	2	3	4
Chittagong	1. Jhilonja, Chittagong	1954	100.00
	2. Panchgachia, Noakhali	1957	100.50
	3. Sylhet Sadar	1954	102.00
	4. Itakhola, Sylhet	1954	122.24
Dacca	5. Mirpur, Dacca	1957	100.00
	6. Metrokona, Mymensingh	1956	99.44
	7. Kashimpur, Mymensingh	1956	100.00
	8. Madhupur, Mymensingh	1959	507.45
	9. Tambulkhana, Faridpur	1957	103.22
	10. Pangsa, Faridpur	1956	100.26

1	2	3		
Rajshahi	11. Thakurgaon, Dinajpur	1956	100.00	
	12. Nilphamari, Rangpur	1959	100.00	
	13. Rangpur Sadar	1958	102.80	
	14. Domar, Rangpur	1959	516.47	
	15. Kalyanpur, Rajshahi	1954	100.23	
	16. Tebnia, Pabna	1959	499.11	1,418
Khulna	17. Boalia, Khulna	1954	104.02	
	18. Charnajib, Barisal	1958	100.00	
	19. Sadhuhati, Jessore	1954	103.14	
	20. Noornagar, Kushtia	1954	102.72	
	21. Meherpur, Kushtia	1959	545.19	
	22. Dattanagar, Jessore-Kushtia	1950 and 1956	2756.60	3,712
	GRAND TOTAL =			6,566

The objective of the S.M. Farms is to produce foundation and improved varieties of different crops for East Pakistan. The production of seeds of major crops since 1958-59 in the S.M. Farms transferred to the E.P.A.D.C. can be seen from the statement given below :-

Statement showing Production of Seeds of Major
crops since 1958-59 in the S.M. Farms transferred
to E.P.A.D.C.

Date of Transfer to East Pakistan
Agril. Development Corporation ... 1st May, 1962

Total number of Seed Multiplication Farms :	100-acres S.M. Farm	-	17
	500-acres " "	-	4
	3000-acres " "	-	1
Total :			22

Gross Area : 6,566.89 acres

Area under cultivation on date of transfer : 4,753.00 "

Area since reclaimed : 510.00 "

Contd...

Y B A R	Total production in maunds of major Crops						
	Aus paddy	Aman paddy	Boro paddy	Jute Seeds	Sugarcane	Wheat	Mustard
1958-59	6,067	29,947	453	1,571	4,206	992	673
1959-60	11,817	15,281	382	538	23,906	1,011	661
1960-61	13,958	28,732	1,478	1,444	15,707	1,144	1,107
1961-62	18,000	31,000	1,000	1,700	20,000	1,000	1,700
1962-63	14,000	31,000	500	600	30,000	1,840	2,140
1963-64	18,000	Crop under harvest.	To be sown.	Crop under harvest.	Under planting.	Crop in the field.	Crop in the field.

These foundation seeds are sown through Registered Growers in case of paddy and jute. In case of sugarcane, wheat and mustard these are supplied to cultivators who are willing to use improved quality seeds. There were a number of defects in the scheme, one of them being production of seed through Barga system. The Corporation has abolished altogether the Barga system and has taken up the revision of the scheme to give it a more realistic shape, and to make radical improvements in the farms in many of which the soil is comparatively poor as they are to some extent carved out of lands previously waste. During the year 1962-63, the total income from the Farms was Rs.4.10 lakhs apart from the value of stock carried over to the following year. The expenditure incurred was Rs.20.43 lakhs. The Corporation has reclaimed 510 acres bringing the total area ~~bringing the total area~~ under cultivation to 5263 acres. Out of this area 120 acres was ear-marked for fruit nurseries and 4097 acres cultivated for growing Kharif crop in 1962-63. During the Rabi season of 1962-63, 2560 acres were put under different rabi crops. During the year 1963-64 we had put under Kharif crops 4350 acres and are in the process of growing rabi crops on 3110 acres.

The figures for actual utilisation of the land are :-

	1962-63	1963-64
Kharif ...	4,097 acres	4,350 acres
Rabi ...	2,559.73 "	3,110.26 "
Total Cropped Area :	6,656.73 acres.	7,460.26 acres.

It will be seen that the Corporation is trying to make fuller use of the area brought under cultivation in these Farms.

During the year 1962-63, 6-Deep Turbine Tube-wells have been sunk in the different Farms and 5 more are under installation. Arrangements have been made for procuring 5 Power Pumps, 20 Tractors and 5 Threshers for these Farms. These are now coming in.

The operation of these Farms are greatly suffering for shortage of Agriculture Graduates. Some new recruits have been taken and hoped to get more.

The scheme for "Increased Production with Improved Paddy through Registered Growers" was transferred to the EPADC with effect from 1.6.62. The scheme is meant to further multiply through Registered Growers foundation seeds produced on the S.M. Farms for all distribution to the cultivators in general. The target of replacement of the local seeds by the improved seeds of paddy by the end of 2nd Plan Period was 29.6%. When the scheme was transferred to the Corporation only 5% of the local seeds had been replaced. Frankly speaking the difficulty lies in confidently guaranteeing that the varieties recommended by the Department in their present state of purity on the Farms would yield better than the varieties already being used by the cultivators. Further, multiplication of registered seeds is a fairly technical matter and requires guidance of Agriculture Graduates of which there is a great shortage. The Corporation, therefore, has to go slow with this scheme till such time as a certain number of strains of the different types of paddy grown in East Pakistan are definitely established as better performing than the local ones in the different parts of the country. Meanwhile some improvements are also being made in seed selection which should improve the standard of the programme and performance of this scheme in physical terms. The programme and performance of this scheme in physical terms are given in the statement below :-

Scheme on Increased Production with Improved Paddy seeds through Registered Growers. Date of Transfer 1st June, 1964

Y E A R	Programme	Achievements			
		Seed Distributed.	Area covered	Seed Produced	Seed Certified
1960-61	71,500 mds	3920 mds.	5300 acr.	100,000 md.	71,500 mds.
1961-62	1,37,500 "	7250 "	10,200 "	180,000 "	1,37,500 "
1962-63	1,78,000 "	-	-	86,463 "	75,000 "
1963-64	2,00,000 "	-	-	28,000 " (Aus)	25,000 " (Aus)
1964-65	2,85,000 "				

The scheme for "Improved Jute Seeds through Registered Growers" was transferred to the Corporation on 1.6.1962. The improved varieties of the "Foundation" jute seeds produced on the S.M. Farms and the Farms operated by the Pakistan Central Jute Committee are proposed to be multiplied under this scheme through Registered Growers for ultimate distribution to the cultivators. The difficulty in expanding this scheme lies in the fact that the jute growers in majority of cases keep their own seeds and are disinclined to try new seeds. Nevertheless, there is some demand of improved jute seeds from those cultivators who have used them. As such the production of jute seeds have been kept limited to the demand and possibilities of disposal. The statement given below shows the performance of this scheme during the 2nd Plan period up-to-date :-

Scheme on Increased Production with Improved Jute Seeds through Registered Growers.

Transferred to EPADC on 1st JUNE, 1962.

YEAR	Programme	Achievements				REMARKS
		Seed Produced	Seed Certified	Seed Disposed	Area Covered	
1960-61	5,000 mds.	5,000 mds.	5,000 mds.	4,000 md.	40,000 acres.	The scheme was under the Directorate of Agricultural.
1961-62	8,000 "	8,000 "	8,000 "	1,000 "	10,000 "	
1962-63	1,550 "	1,550 "	1,500 "	1,500 "	15,000 "	The production of jute seeds has been kept limited to the demand and possibility of disposal.
1963-64	1,500 "	1,500 "	in Progress	-	-	

The scheme on "Fruit Nursery in Each S.M. Farm" was transferred to the E.P.A.D.C. on 1.6.62. Under this scheme it is proposed to multiply seeds, suckers, seedlings, grafts, gooties etc. of different fruits and vegetables for supplying the same to the cultivators so that fruits and vegetables, which would supplement the staple food crop, can be produced. Twelve out of seventeen 100-acres Farms and Three out of Four 500-acres Farms have 5-acres and 20-acres respectively ear-marked for Fruit Nurseries. The performance and programme of the scheme are shown in the statement given below :-

Contd..

Date of Transfer : 1st June, 1962.

The report relates to period from date of transfer

Location of the Nursery	Area	No. of seedlings/ suckers supplied to the farmers	Area to be with
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1962-63 Performance :

20-acres in Tebnia S.M. Farm, Pabna.		Banana 2,10,000 Nos.	35
		Pineapple 1,25,000 "	12
		Mango 600 "	1
20-acres in Madhupur S.M. Farm, Mymensingh.	77.60	Papaya 22 seers 1 ch. (seeds)	200
		Cocoanut 1500 Nos.	2
20-acres in Meherpur S.M. Farms, Kushtia		Citrus 24,000 "	25
		Others 2 seers (Seed).	200
		Seedling 2,90,000 Nos.	30

5-acres in each of the
following 100-acres Farms

1963-64 Programme

1. Netrokona S.M. Farm, Mymensingh		Banana 2,50,000 Nos.	
2. Itakhola " Sylhet.		Pineapple 2,20,000 "	
3. Sylhet " Sadar.		Mango	
4. Tambulkhana " Pabna	100.60	grafts 1,000 "	
5. Pangsa " Faridpur		Cocoanut	
6. Thakurgaon " Dinajpur		Seedlings 1,500 "	
7. Boalia " Khulna		Citrus, Grafts	
8. Nilphamari " Rangpur.		and Gooties 40,000 "	
9. Rangpur(S) " Rangpur.		Vegetable	
10. Sadhuhati " Jessore.		seedlings 1,00,000 "	
11. Noornagar " Kushtia		Papaya seeds 24 seers.	
12. Jhilonja " Chittagong.		Others 4 "	

TOTAL AREA EAR-MARKED = 120 Acres.

The scheme for "Increased Food Production with Improved S of Quick Growing Fruits, like Banana and Pine-Apple" was transf with effect from 1-6-62 but was again taken back by the Govern on 18-4-63 as this was a purely extension scheme. During the per this scheme was with the Corporation 3,953 and 1,751 Registered Growers for banana and pine-apple respectively were selected. 1, and 8,800 banana and pine-apple suckers respectively were precu distributed. The cash receipt was Rs.52,361/- against the expend of Rs.45,256/-.

The scheme on "Procurement and Distribution of Wheat Seeds" was transferred to the E.P.A.D.C. on 16-5-1962. The table given below shows the performance of this scheme during the year 1962-63 and 1963-64.

Scheme for Procurement & Distribution of Wheat Seeds.
Transferred to EPDC on 16-5-1962

YEAR	Programme	Achievements			REMARKS
		Quantity procured	Quantity distributed	Area covered	
1960-61	44,873	44,600 mds.	5000 mds.	5000 acres	The Scheme was under the Directorate of Agriculture.
1961-62	44,873	44,300 "	6750 "	2000 "	Only 2000 mds. could be disposed of as seed to cover an area of 2000 acr
1962-63	10,000	33,000 "	32457 "	32457 "	The quantity was increased to 33000 mds. at the orders of the then Governor from original programme of 10,000 mds., 543 mds. account for transit shortage. The distribution was made @ 5% subsidised rate.
1963-64	26,000	5,000 "	5000 "	5000 "	The reduction in quantity has been made under orders of the Government.
1964-65	30,000	-	-	-	

During 1963-64 though the demand was for more Wheat seeds yet the Corporation could not procure more than 5,000 maunds as the Government would not allow subsidy on the wheat seeds for more than 5,000 maunds and the Farmers are not prepared to buy the seeds at a price substantially higher than the market rate. It has ultimately been found that wheat seeds procured from West Pakistan cannot be sold to our cultivators without allowing a heavy subsidy on the same, because the market price of the food grain wheat as fixed by the Food Department was only Rs.14/- per maund whereas the total cost of procured wheat seeds comes to Rs.25/- per maund. The programme for 1964-65 is to procure 30,000 maunds.

The scheme for "Procurement & Distribution of Mustard Seeds" was transferred to the Corporation on 1st June, 1962. The performance of the scheme since 1959-60 is as shown below :-

	1959-60	1960-61	1961-62	1962-63	1963-64
Procured in maunds	18,000	3,980	12,060	2.5	-
Distributed in maunds	14,000	2,631	-	2.5 (sown in S.M. Farms)	-

This scheme has been kept in abeyance as there is no demand and so it is proposed to distribute only farm grown seeds.

The scheme on "Procurement & Distribution of Maize Seeds" was transferred to the Corporation on 1.7.1962 and its performance since 1959-60 is given below :-

	1959-60	1960-61	1961-62	1962-63	1963-64
Procured in maunds	12,000	23,500	-	-	-
Distributed in maunds	9,000	4,000	-	-	-

This scheme was initiated by the Department of Agriculture with a view to introduce a new food crop since maize is a short-period crop which can be grown as a "Catch Crop" between the two main crops on high land areas containing sufficient moisture. Initially, the cultivators responded favourably to the introduction of maize in certain localities. However the demand fell and the Corporation had to keep this scheme in abeyance. It is now thinking of the possibilities of introducing Hybrid Maize. The plan is to produce Hybrid seeds on the S.M. Farms for the present. If this proves successful and popular, it may then be possible to teach a selected number of Registered Growers the production of Hybrid maize for distribution to the farmers, so that the total yield of the maize crop is ultimately greatly increased on the present acreage by the use of these Hybrid seeds. Production of this seed is, however, a complicated business not to be undertaken by anybody who does not thoroughly understand it.

The scheme for "Procurement & Distribution of Seed Potatoes, Ground-nut Seeds and Winter Vegetables Seeds" was operated as a programme by the Directorate of Agriculture involving private trade upto 1959-60. In the year 1960-61 and 1961-62, the Directorate of Agriculture made direct purchase of Seed Potatoes and Winter Vegetable seeds under Crash Programme Scheme, and carried out the distribution through private trade and its own staff.

The Corporation gave the programme the shape of a scheme which was approved by the Provincial Planning Authority subject to certain modification in Jute, 1962. It, therefore, undertook the procurement of seed potatoes and winter vegetable seeds on its own. The statement given below shows the performance of this scheme:-

	1959-60	1960-61	1961-62	1962-63	1963-64
POTATO					
Procurement in mds.	80,000	1,20,000	72,000	78,631	34,006
Distribution in mds.	80,000	1,20,000	72,000	Handed over to Co-op. Marketing Society.	34,006
				1,69,958	
GROUND-NUT					
Procurement in mds.	-	1,500	-	-	-
Distribution in mds.	-	1,500	-	-	-
WINTER VEGETABLES					
Procurement in Lbs.	-	612	7,000	2,900	3,000
Distribution in Lbs.	-	612	2,700	2,900	Detail figure under collection.

During 1962-63 a total of 6,562½ tons (1,78,631 mds.) of Seed Potatoes were imported. Excepting for 8,673 mds., the total quantity was handed over to the Provincial Co-operative Marketing Society for effecting the distribution to the growers. Unfortunately, the organization which took over the responsibility was not fully geared for the task. As such a large quantity was unfortunately spoilt through rotting, as the seed potatoes are highly perishable goods if not properly and quickly handled.

During the year 1963-64 according to the Government policy were made to procure only 2,000 tons of imported seed potatoes from Holland, Burma and Shillong. The import of 600 tons from Shillong did not materialise as the Indian Government did not issue visas for our purchasers to go to Shillong and procure the seeds after proper selection. Out of 1,000 tons to be imported from Burma, it was possible to import 880 tons and the full quota of 400 tons from Holland was procured. Thus the total of 34,006 maunds was available for distribution to the growers. The quantity imported was reduced because the Cold Storage Plants established in the country gave an undertaking of supplying 2,000 tons of seed preserved in their Stores to the cultivators but ultimately these potatoes seem not to have been distributed as undertaken.

As regards Winter Vegetables Seeds the Corporation imported 2,900 lbs. of different kinds of seeds of winter vegetables from America in 1962-63. This came packed in quarter pound tins and were all sold to the Provincial Co-operative Marketing Society for retail sale to the cultivators. It is reported that all quantities were sold. During 1963-64, 3000 lbs. of which 800 lbs. were early and 2200 lbs. late varieties were imported from America and Japan. These seeds have been sent to the Thana Agriculture Officers for retail sale to the Farmers. The detail figures of actual sale are under collection.

The scheme for "Establishment of one Seed Testing Laboratory at Mymensingh" was transferred to the Corporation on 5.4.1963 and as such it could not be implemented in the year 1962-63. This laboratory is meant for testing the viability and purity of different kinds of seeds. Farmers' seeds as well as the seeds which the Corporation would be supplying to the cultivators would be tested in this laboratory.

The total cost of the scheme during the 2nd Plan Period is Rs.2.81 lakhs. It is proposed to erect the laboratory and its staff quarters within the area of the Agricultural University at Mymensingh where the site has been ear-marked during the current year 1963-64.

Generally speaking the production and the supply of definitely improved varieties of seeds of major crops are both highly technical and complicated matters requiring the attention of scientific agriculturist. The whole seed positions now under-going re-examination with a view to producing better results. Further, schemes are under draft for rehabilitating the Corporation's S.M.Farms. But seeds improvement is a slow process and expansion of this programme is bound to be correspondingly slow. However, every attempt will be made to make the best use of the existing facilities and make available to the cultivators improved seeds of the different crops as far as practicable.

CHAPTER V

PLANT PROTECTION MEASURES

Like all organisms, plants are susceptible to attacks from insects and diseases. It has been estimated that several crores of rupees worth of crops are lost annually due to insects, pests and plant diseases either through epidemic or endemic attacks. Science has evolved chemicals which when properly applied in right doses can control pests and diseases of plants as well as prevent their occurrence. The adoption of plant protection measures therefore has now become a part and parcel of agricultural practices in all

developed countries. In Pakistan too, the importance of this aspect has been realised and for several years past the Government has been operating the plant protection scheme to prevent huge losses in crop production due to attack of pests and diseases.

There are two aspects of this scheme which are :-

1. Procurement of Plant Protection Materials.
2. Field Operation making use of those materials.

The Procurement and Supply of Plant Protection Materials was till recently the responsibility of the Central Government which now has been transferred to the Corporation. The funds for purchase of the materials, have however, not yet been made available.

The Plant Protection Materials ordered against allocation of 1962-63 worth about Rs.56 lakhs have started arriving at Chittagong. The list of plant protection materials required to be procured this year (1963-64) has been finalised in consultation with the Directorate of Agriculture, Government of East Pakistan.

CHAPTER VI

STORES

In order to make the supplies easily available at the doors of the farmers and as well as to stock reserve supplies at different convenient points the Government has initiated the following 2 schemes, viz.

- 1) Construction of 4,000 Union Agricultural Stores.
- &
- 2) Construction of 52-Inter-mediary Godowns.

The performance of the scheme on Construction 4,000 Union Agricultural Stores is given in the chart produced below :-

Scheme on Construction of 4,000 Union Agricultural Stores.

Transferred to the East Pakistan Agric.Dev.Corpn. on 1st August, 1962.

Y E A R	Programme as per A.D.P.	Achievements		
		No. of sites selected.	No. handed over to C&B	No. of stores constructed.
1960-61	1054	1054	1054	1049
1961-62	1055	1055	1055	994
1962-63	1119	1119	1107	723
1963-64	772	173	42	-

Out of 1119 Union Agricultural Stores scheduled to be constructed during the year 1962-63, 723 have so far been completed. The remaining are under construction. Against the programme of construction of 772 Union Stores during 1963-64 to complete the total number of 4,000, 179 sites have already been selected out of which 42 handed over to the C&B Department, Government of East Pakistan.

As regards scheme on Construction of 52 Inter-mediary Godowns the performance is shown in the table given below :-

Scheme on Construction of 52 Inter-mediary Godowns.

Transferred to E.P.A.D.C. on 1st August, 1962.

Y E A R	PROGRAMME	ACHIEVEMENTS				REMARKS
		No. of sites selected	No. handed over to C&B	No. of Godowns completed.	No. under construction.	
1961-62	23	23	23	20	3	Lots of delay in getting clearance
1962-63	29	26	16	-	16	

Out of 29 Inter-mediary Godowns to be constructed in 1962-63 works on 16 has been started. On the remaining 13 no work could be taken up for difficulties of site procurement which have now been cleared up, except for a few where Court's injunctions have prevented further progress.

A scheme for more Inter-mediary Godowns is under preparation.

C H A P T E R VII

LIVESTOCK IMPROVEMENTS

Services

The following activities of the Directorate of Livestock/were transferred to the Corporation with effect from the 1st July of 1962 and were operated under the Manager, Livestock Division, EPADC :-

- i) Development of Poultry in East Pakistan
9 Poultry Farms out of the total 12 under the scheme.
- ii) Establishment of Artificial Insemination Centres in East Pakistan.
- iii) Sylhet Cattle Farm.

The scheme on "Development of Poultry in East Pakistan"(9 Poultry Farms) was transferred to E.P.A.D.C. on 1.7.1962.

These Poultry Farms are located at Pahartali and Sitakunda in Chittagong district, Comilla, Sylhet, Rangpur, Jamalganj in Bogra district, Daulatpur in Khulna, Jessore and Barisal. At the time of transfer these farms had only 1,663 layers against 5,625. The total number of adult birds was 3,043 and chicks 4,840.

The Corporation has brought about a great improvement and the stock position in the month of May, 1963 was 6,906 adult birds and 17,709 chicks.

During the 4 months (July to October, 1963) of 1963-64 from these 9 farms 5,223 birds of all ages and 94,174 eggs both for hatching and table purpose were sold.

Upto date these farms have served only those of immediate surroundings, so that an unduly large proportion of the stock has gone for table purposes which is not their main object and not enough sold for breeding. The Corporation has just now introduced a "mail order" system whereby farmers requiring eggs for hatching may order them through their Thana Agricultural Officers on payment of the cost in certain places to which despatch of eggs is found to be practical on account of good communication. In this way the produce of the farms will do far more for the improvement of the local strains of poultry.

The scheme on "Establishment of Artificial Insemination Centres in East Pakistan" was transferred to the Corporation with effect from 1-7-1962 and taken back by the Government in January, 1963. Thus the scheme was under the control of the Corporation for barely six months. During this period 6,873 cows were artificially inseminated giving an average fertility percentage of 73%. Orders for equipments worth Rs.27,000 were also placed. The total expenditure against this scheme was Rs.1,21,470 against a revised budget of Rs.1.55 lakhs. The receipt amounted to Rs.334.81 on account of sale produces from the 5 centres.

The Sylhet Cattle Farm was part of the normal activities of the Directorate of Livestock Services and was not run under any scheme. This farm was in a very poor condition at the time of its transfer to the Corporation.

As a matter of fact the climate of Sylhet is not at all suited for Cattle breeding and the Corporation is considering changes in the objectives of this institution and other arrangements for breeding of stock.

CHAPTER VIII

CREDIT

It is well known that the majority of our farmers are indebted and they cannot take up any agricultural improvements without being helped with credit either in kind or in cash. The Agricultural Census of 1960 reveals that 49% of the farmers are indebted. The majority requiring debts upto Rs.1,000/-.

According to the Charter, the Corporation is required to make suitable arrangements for making available credit to the cultivators. The Corporation does not actually give cash credit, but works in with credit giving agencies. The Corporation supplies the goods against credit given by the above mentioned agencies. The Corporation does, however, give Power Pump Irrigation directly on credit.

CHAPTER IV

PROJECTS

According to the Charter the Corporation is required to take up all round agricultural development in selected areas of the province which would be termed as "PROJECT AREAS".

The Corporation had drawn up the scheme for the "Survey and Investigation for Development of Chittagong Hill Tracts" which has been approved by the Government. Negotiations have been taken up for engaging a Firm of Consultants to carry out the survey and its recommendations, regarding the possibilities of agricultural development in that district. It may be mentioned that this district has a total area of 5093 sq. miles of which 1600 sq. miles are under reserved forest, 120 sq. miles under lake, and 100 sq. miles under rivers. The remaining 3,973 sq. miles consist of unclassified forest which is just jhoom land and unculturable high hills with steep patches of plain land cultivation. It is proposed to bring as much of this unclassified so called forest as possible under scientific hillside cultivation instead of the present destructive practice of jhooming and to put the rest under forest. This will provide a great accession to our natural wealth as well as an improvement in the incomes of the hillmen.

Under the rehabilitation scheme of the Chittagong Hill Tracts, those people actually displaced by the construction of the Kaptai dam, are being rehabilitated and 8,000 acres have been brought under hillside plantations last year. The experience gained from the working of this scheme along with the report submitted by the Consultants, will be used for developing the agriculture of this district. The survey scheme is expected to cost Rs.41.41 lakhs. A reference to the map of the district will show the area proposed to be surveyed.

Other Project Areas will be taken up as more trained staff becomes available.

CHAPTER X

ADMINISTRATION, TRAINING & FINANCE

Up-to-date the Corporation has been able to engage for its administration either by deputation from Government Service or by direct recruitment 41 Officers, 201 Assistants and 103 skilled and unskilled workers. These are engaged in the 4 Wings of the Corporation's Head Quarters which organises and coordinates the activities of the different schemes mentioned in foregoing Chapters.

The Corporation has started inservice training of its officers of district and zonal level and sent a few of them abroad for receiving training in the use of fertilizers and irrigation engineering.

During the year 1961-62 against the budget provision of Rs.129.2 lakhs, the Corporation had incurred an expenditure of Rs.58.38 lakhs. The total funds made available, however, by the Government was Rs.80 lakhs which means 74% of the fund provided was utilised which can be said to be a good performance for a new organisation.

During the year 1962-63, the revised estimate for expenditure was Rs.1071.75 lakhs against which the fund provided by the Government was Rs.638.89 lakhs. The Corporation incurred a booked expenditure of Rs.719.89 lakhs and had committed liability of Rs.171.23 lakhs. It also paid out during this year Rs.7.19 lakhs as outstanding dues of the year 1961-62. The total Utilization therefore during 1962-63 comes to Rs.898.31 lakhs which is 83.9% utilisation of the revised estimates.

For the year 1963-64 the revised estimate of expenditure has been worked out at Rs.1662.21 lakhs, out of which a booked expenditure up to the end of October, 1963 was Rs.75.51 lakhs and liabilities committed was Rs.125.42 lakhs giving a total utilization of 12 $\frac{1}{2}$ % during the first 4 months of the current financial year.