



**SUPPORT PRICE POLICY
FOR
SEED COTTON, 2005-06 CROP**

**AGRICULTURAL PRICES COMMISSION
GOVERNMENT OF PAKISTAN
ISLAMABAD**

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CONTENTS

	Page No.
Executive Summary and Recommendations	1
1. Introduction	7
2. Sowing and Picking Times	8
3. Provincial Shares in Area and Production	8
4. Important Cotton Growing Districts	10
5. Changes in Area, Yield and Production	10
5.1 Long-term changes: 1994-95 to 2004-05	10
5.2 Short-term changes: 2004-05 vs 2003-04	11
6. Targets vs. Achievements: 2004-05	12
7. Factors Considered for Price Policy Options	13
7.1 Domestic supply, demand, stocks and price situation	14
7.2 Cost of production of seed cotton	16
7.3 Comparative economics of cotton and competing crops	20
7.4 Economics of fertilizer use on cotton	21
7.5 Nominal and real prices of seed cotton (phutti) at support and market prices: 1990-91 to 2004-05 crops	24
7.6 World supply, demand, stocks, trade and price situation	28
7.7 Parity prices of seed cotton	30
7.7.1 Domestic parity-price	30
7.7.2 Export/import parity price	30
7.8 Economic Efficiency in Seed Cotton Production	32
8. Consultation	35
9. To Sum Up	35
10. Quality Premium	38
11. Improving Productivity, Quality and Marketing	39
11.1 Improving productivity	39
11.2 Improving quality	42
11.3 Improving marketing	45
12. Acknowledgements	46
Annexes	47 to 67

TABLES

		Page No.
1	Provincial Shares in Area and Production of Cotton: Average of 2002-03 to 2004-05	8
2	Average Annual Growth Rates of Area, Yield and Production of Cotton: 1994-95 to 2004-05	11
3	Area, Yield and Production of Cotton: 2003-04 and 2004-05 Crops	11
4	Targets and Estimated Achievements of Area, Yield and Production of Cotton: 2004-05 Crop	13
5	Domestic Production, Demand, Stocks of Cotton (Lint): 2001-02 to 2004-05 (August-July)	14
6	Monthly Average Wholesale Prices of Seed Cotton (Phutti) in the Main Producer Area Markets During 2004-05 Crop (August-December)	15
7	Monthly Average Spot Prices of Raw Cotton at Karachi, 2003-04 and 2004-05 Crops (August - December)	16
8	Average Farmers' Cost of Production of Seed Cotton: 2004-05 and 2005-06 Crops	17
9	Major Cost Items of Seed Cotton: 2004-05 and 2005-06 Crops	18
10	Comparative Economics of Cotton and Competing Crops at Prices Realized by the Growers: 2004-05 Crops	21
11	Benefit Cost Ratios (BCRs) of Fertilizer Use on Seed Cotton: 1996-97 to 2004-05	22
12	Parity Ratio Between the Prices of Fertilizer and Seed Cotton: 1996-97 to 2004-05	23
13	Nominal and Real Prices of Seed Cotton (Phutti): 1990-91 to 2004-05	24
14	World Production, Consumption, Stocks and Trade in Cotton: 2002-03 to 2005-06	29
15	Export/Import Parity Prices of Seed Cotton as Worked Back from Various Reference Prices	32
16	Economic Efficiency Coefficients for Seed Cotton	33
17	Revised Grade and Staple Margins for Seed Cotton	38
18	Premia/Discounts for Various Grades/Staple Lengths for Lint	39

FIGURES

		Page No.
1	PROVINCIAL SHARES IN AREA OF COTTON: AVERAGE OF 2002-03 TO 2004-05	9
2	PROVINCIAL SHARES IN PRODUCTION OF COTTON: AVERAGE OF 2002-03 TO 2004-05	9
3	NOMINAL AND REAL SUPPORT PRICES OF SEED COTTON: 1990-91 TO 2004-05	25
4	NOMINAL AND REAL MARKET PRICES OF SEED COTTON: 1990-91 TO 2004-05	25
5	CIF NORTH EUROPE PRICES OF VARIOUS COTTONS: 1994-95 TO 2004-05	31

ANNEXES

		Page No.
I	RECOMMENDED SOWING TIMES OF AMERICAN COTTON	47
II	PROVINCE-WISE AREA (HECTARES), PRODUCTION AND YIELD OF COTTON IN PAKISTAN: 1994-95 TO 2004-05	48
III	PROVINCE-WISE AREA (IN ACRES), PRODUCTION AND YIELD OF COTTON IN PAKISTAN: 1994-95 TO 2004-05	49
IV	DISTRICT-WISE AREA AND PRODUCTION OF SEED COTTON: AVERAGE OF 2002-03 TO 2004-05	50
V	AVERAGE FARMERS' COST OF PRODUCTION ESTIMATES OF SEED COTTON IN THE PUNJAB: 2004-05 AND 2005-06 CROPS	51
VI	AVERAGE FARMERS' COST OF PRODUCTION ESTIMATES OF SEED COTTON IN SINDH: 2004-05 AND 2005-06 CROPS	52
VII	ECONOMICS OF COTTON AND COMPETING CROPS AT PRICES REALISED BY GROWERS: 2004-05 CROPS	54
VIII	PROFITABILITY OF FERTILIZER USE ON SEED COTTON AT THE MARKET PRICE: 2004-05	55
IX	CIF NORTH EUROPE PRICES OF VARIOUS COTTONS: 1994-95 TO 2004-05	56
X	PRICE OF SEED COTTON AS WORKED BACK FROM COTTON YARN (21'S) PRICE AT KARACHI (AUGUST, 2004 TO NOVEMBER 2004)	57
XI	EXPORT PARITY PRICE OF SEED COTTON AS WORKED BACK FROM ACTUAL AVERAGE EXPORT PRICE OF PAKISTANI COTTON	58
XII	EXPORT PARITY PRICE OF SEED COTTON AS WORKED BACK FROM THE CIF NORTH EUROPE QUOTATIONS OF INDX-B COTTONS AND PAKISTANI AFZAL 1-1/32"	59
XIII	EXPORT PARITY PRICE OF SEED COTTON AS WORKED BACK FROM THE FUTURE CONTRACT PRICE OF NEW YORK NO.2 COTTON (AVERAGE OF OCTOBER, 2005, DECEMBER, 2005 AND MARCH 2006)	60
XIV	EXPORT PARITY PRICE OF SEED COTTON AS WORKED BACK FROM THE AVERAGE FOB PRICE OF PAKISTANI COTTON YARN (20'S)	61
XV	IMPORT PARITY PRICE OF SEED COTTON AS WORKED BACK FROM THE AVERAGE QUOTED CIF NORTH EUROPE PRICE OF ORLEANS/TEXAS SLM 1-1/32"	62
XVI	IMPORT PARITY PRICE OF SEED COTTON AS WORKED BACK FROM THE ACTUAL AVERAGE CIF (KARACHI) PRICE OF IMPORTED COTTON	63
XVII	REQUIREMENT AND SUPPLY OF CERTIFIED COTTON SEED BY THE PUBLIC AND PRIVATE SECTOR IN PUNJAB: 1995-96 TO 2004-05	64
XVIII	REQUIREMENT AND SUPPLY OF CERTIFIED COTTON SEED BY THE PUBLIC AND PRIVATE SECTOR IN SINDH: 1995-96 TO 2004-05	65
XIX	ECONOMIC EFFICIENCY OF RESOURCE USE IN SEED COTTON AT AVERAGE FARM IN PUNJAB	66
XX	ECONOMIC EFFICIENCY OF RESOURCE USE IN SEED COTTON AT AVERAGE FARM IN SINDH	67

ABBREVIATIONS

AARI	:	Ayub Agricultural Research Institute
ALMA	:	Agricultural and Livestock Marketing Adviser
APCOM	:	Agricultural Prices Commission
APTMA	:	All Pakistan Textile Mills Association
BCR	:	Benefit Cost Ratio
BPS	:	Basic Pay Scale
CEC	:	Cotton Export Corporation
CIF	:	Cost, Insurance and Freight
CLCV	:	Cotton Leaf Curl Virus
COP	:	Cost of Production
CPI	:	Consumer Price Index
CRIM	:	Cotton Research Institute, Multan
CRIS	:	Cotton Research Institute, Sakrand
DAP	:	Di. Ammonium Phosphate
DRC	:	Domestic Resource Cost Co-efficient
ECC	:	Economic Coordination Committee
E&M	:	Economics & Marketing
EPC	:	Effective Protection Co-efficient
FBS	:	Federal Bureau of Statistics
FCA	:	Federal Committee on Agriculture
FOB	:	Free on Board
FSC&RD	:	Federal Seed Certification and Registration Department
FYM	:	Farm Yard Manure
GCP	:	Ghee Corporation of Pakistan
GDP	:	Gross Domestic Product
GOT	:	Ginning Out Turn
HSD	:	High Speed Diesel
ICAC	:	International Cotton Advisory Committee
ICPM	:	Integrated Crop Production Management
IPM	:	Integrated Pest Management
IPNS	:	Integrated Plant Nutrition System
IRRI	:	International Rice Research Institute (Group of rice varieties Grown in Pakistan which were developed at this Institute)
ITMF	:	International Textile Mills Forum
KCA	:	Karachi Cotton Association
MINFAL	:	Ministry of Food, Agriculture and Livestock
MOC	:	Ministry of Commerce
NARC	:	National Agriculture Research Centre
NIAB	:	Nuclear Institute of Agriculture and Biology
NPC	:	Nominal Cost Co-efficient
NWFP	:	North West Frontier Province
NSC	:	National Seed Council
OLS	:	Ordinary Least Squares
PAPA	:	Pakistani Agriculture Pesticides Association
PARC	:	Pakistan Agricultural Research Council
PCCC	:	Pakistan Central Cotton Committee
PCGA	:	Pakistan Cotton Ginners Association
PCSI	:	Pakistan Cotton Standards Institute
PSC	:	Punjab Seed Corporation
SSC	:	Sindh Seed Corporation
TCP	:	Trading Corporation of Pakistan
WTO	:	World Trade Organization

SUPPORT PRICE POLICY FOR SEED COTTON, 2005-06 CROP

EXECUTIVE SUMMARY

AND

RECOMMENDATIONS.

World production of cotton in 2004-05 is projected at 23.51 million tones, 14.85 per cent more than that of last year. Consumption is forecast to 21.90 million tonnes and the closing stocks are calculated to 9.32 million tonnes. These stocks are further forecast to increase to 9.43 million tonne in 2005-06. International prices of cotton have declined sharply. The average cif price of Sindh/Punjab (Afzal 1-1/32"), recorded at US cents 60 per pound during 2003-04, has declined to 46 cents in November 2004. The value of Index B cottons is at 49 cents as compared to its corresponding value of 66 cents in 2003-04.

2. Cotton production in the country has experienced wide fluctuations during the decade and has averaged at 10.8 million bales during last three year. The average annual growth in its production has been 2.4 per cent, 1.8 per cent on account of yield and 0.6 per cent due to area. The cotton farming is vulnerable to a host of insects/pests. Its production in recent years has especially become a risky proposition. Even in good crop years farmers have suffered because of low prices.

3. The swing in cotton production and prices have adversely affected all the cotton related sub sectors of the economy. In view of the importance of cotton, there is an urgent need to minimize incidences of these fluctuations and ensure minimum support price to cotton growers.

4. Punjab is the main cotton producer accounting for 80 per cent of its area and 77 per cent of the production. The share of Sindh in area is 19 per cent and in production 22 per cent. National production of cotton from the 2004-05 crop, as per Cotton Crop Assessment Committee's meeting held at Multan on 20th December 2004 is reported at 13.2 million bales. However, figures of arrivals at ginnery level (11.7 million bales as on 15-12-2004 compared with 7.5 million bales last year on the same date -56% increase) suggest even higher production this year.

5. The prices of fertilizers, diesel and other inputs have been on the rise. If increasing trend in the prices of inputs is not arrested, and quality of pesticides not improved Pakistani's export competitiveness in international market will be at stake. The quality of the cotton also needs to be improved to improve its competitiveness.

6. Annual meeting of the Agricultural Prices Commission's Standing Committee on Cotton was held at Islamabad on November 18, 2004. The meeting discussed, at length, the situation with regard to cotton crop, problems encountered by the farmers in cotton production and marketing, and emphasized the need for development of a suitable technology package for sustainable production of cotton. There was a consensus in the meeting for having a programme which ensured incentive prices to the farmers in general and in good crop years in particular.

7. Based on the analysis of relevant factors discussed in main text of this Report, likely pricing options for cotton, 2005-06 crop are summarized below.

Base		Worked back price of seed cotton at ginnery level
		Rupees per 40 kgs
1	Domestic price of yarn at Karachi	859
2	Export parity prices based on:	
	i) Actual average export price of Pakistani cotton:	
	- During 2003-04 (Aug-July)	923
	- During 1999-00 to 2003-04	871
	ii) Average cif (North Europe) value of Index-B cottons:	
	- During 2004-05 (Aug-Nov)	886
	- During 1999-00 to 2003-04	885
	iii) Average cif (North Europe) quotations of Afzal 1-1/32":	
	- During 2004-05 (Aug-Nov)	840
	- During 1999-00 to 2003-04	878
	iv) Futures contract prices of New York No.2 cotton (average of October 2005, December 2005 and March 2006)	756
	v) Average fob prices of Pakistani cotton yarn (20's):	
	- During 2004-05 (Aug-Nov)	829
	- During 1999-00 to 2003-04	823
3	Import parity prices based on:	
	i) Actual average cif (North Europe) quotations of Orleans/ Texas SLM 1-1/32"	
	- During 2004-05 (Aug-Nov)	1,175
	- During 1999-00 to 2003-04	1,197
	ii) Cif Karachi prices of imported cotton:	
	- During 2003-04 (Aug- July)	1,341
	- During 1999-00 to 2003-04	1,240
4	Average domestic market price of seed cotton in 2004-05 (September-November)	901
5	Cost of production for 2005-06 crop	
	Punjab	876
	Sindh	813

RECOMMENDATIONS

- **Support Price for 2005-06 Crop**

8. As per analysis of relevant factors, summarized in paras-70 to 80 of this Report, no increase in support price of seed cotton for 2005-06 is recommended.

- **Implementation of Support Price and Quality Premia/Discounts**

- i) TCP be assigned the task of implementing the support price policy of seed cotton through buying lint at the price to be based on the support price of seed cotton. Adequate resources be provided to TCP for the implementation of the support price policy.
- ii) TCP should also enforce the premia and discounts in the purchase of lint as given below:

**Premia/Discounts for Various Grades/Staple Lengths for Lint
offered to the Procurement Agency**

(Rs per 40 kgs)

Grade	Staple length				
	1"	1-1/32"	1-1/16"	1-3/32"	1-1/8"
Super	119	178	237	294	353
One	67	124	181	237	294
Two	4	60	116	170	226
Three	-54	Base	54	107	161
Four	-122	-70	-18	34	86
Five	-184	-134	-83	-34	17

- **Improving Productivity**

Improved Seed

- i) Public and private seed companies be asked to multiply and distribute the seed of recommended varieties for cultivation in sufficient quantity..
- ii) Provincial Agricultural Extension Departments should educate growers to cultivate only the recommended varieties and ensure the adoption of recommended agronomic practices and attaining optimum plant population.

Soil Management/Balanced Use of Nutrients

9. Provincial Agricultural Research Institutes should develop various bio-fertilizers and area/crop rotation specific fertilizer recommendations and publicize it through extension department and mass media.

Integrated Pest Management (IPM)

- i) The Government should strengthen the IPM Programme of NARC for its effective implementation in the entire cotton growing area..
- ii) The private companies should also be encouraged for commercial rearing and marketing of useful insects and other predators.

Quality Control of Pesticides

10. To check the menace of adulteration in pesticides and improve quality control thereon, the Agricultural Prices Commission recommends that:

- i) Each pesticide company be asked to appoint its own dealers for sale of a product imported and marketed by that company. Each branded product of a particular firm should only be available from the authorized dealer of that firm.
- ii) Magistrates be appointed/posted/transferred with Agricultural Department for speedy disposal of pesticide cases.
- iii) To avoid under dosing of pesticides, each importer and or distributor should indicate the nature of active ingredient and its concentration in a branded product to Provincial Directorate of Plant Protection who should fix/recommend the dose of each product for a particular pest or disease.
- iv) To reduce the cost of pesticides used on cotton, pest warning system should be strengthened through coordinating the services of provincial agriculture extension and pest scouting/warning departments.
- v) Provincial Plant Protection and Pest Scouting Departments should launch campaign to educate the growers about the composition of various insecticides and also render advice helping in minimizing the spray expenditure.

• Improving Quality and Marketing

Picking

11. The Provincial Extension Departments should launch educational campaign to apprise the growers about the improved practices of cotton picking. Picking should start when dew has dried and about 60% of the bolls have opened. Farmers be advised to store seed cotton for each variety

separately. First and last pickings and produce from healthy and non-healthy bolls may not be mixed.

Ginning

- i) A Ginning Research Institute should be established at Multan to deal with the issues of cotton ginning and related matters.
- ii) In order to avoid problems in crop estimation and exports, ginning factories should be advised to adhere to the standard weight of the bale of 170 kgs.

Proper packing and labeling

12. The Government should ensure truthful labeling of cotton bales and proper packing indicating the grade, staple length and micronaire of the cotton contained in the bale.

Contamination free cotton

13. Textile industry should support the production of contamination free cotton, purchasing all the bales of clean cotton and by making payment to ginneries according to the quality grades of lint determined by the PCSI.

Underweight and undue deductions

14. In order to check the malpractices of underweight and undue deductions in cotton marketing, supervisory committees consisting of the representatives of Provincial Agriculture Departments, local market committees, growers and cotton dealers may be constituted.

- **Monitoring of Imports**

15. The policy of duty free imports and exports of cotton has provided a level playing field for producers and consumers of cotton. Nevertheless there is a need for keeping track of imports and monitoring their origins and quality parameters.

(Dr. Muhammad Hanif)
Chairman

December 20, 2004.

SUPPORT PRICE POLICY FOR SEED COTTON, 2005-06 CROP

1. INTRODUCTION

Cotton, the largest cash crop, is annually cultivated over 3 million hectares, accounting for 14 per cent of the cropped area in the country. On an average, it contributes 22 per cent of the value added by major crops. Cotton farming is the principal source of raw material for the textile industry, the largest industry employing 40 per cent of the industrial labour. The foreign exchange earned from the exports of cotton and its made ups constitutes about 65 per cent of the earnings from merchandise exports. The cultivation of cotton also contributes in the production of edible oil, as cotton seed is an important source of oil. Cotton seed and its cakes are also used in feeding livestock.

2. The cotton production has experienced wide fluctuations, having peaked at 12.8 million bales in 1991-92, it fell to 8.7 million in 1993-94. It has averaged at 10.8 million bales during last three years. The current year (2004-05) production is estimated at 13.2 millions bales. Since production of cotton is vulnerable to a host of insects/pests its cultivation is a risky proposition. Even in good crop years farmers have suffered because of low prices. The swings in cotton production and prices have adversely affected all the cotton related sub sectors of the economy. In view of the importance of cotton, there is an urgent need to minimize incidence of these fluctuations.

3. To reduce price risk in cotton farming and ensure reasonable supply to industry, the Government has instituted the price support programme for seed cotton. For the year 2004-05, support price was fixed at Rs 925 per 40 kgs for base grade with staple length 1-1/32". The implementation of Support Price by TCP has been satisfactory. It has by now purchased 1.8 million bales with the result that farmers are getting better prices (close to the Support Price) in the open market.

4. The cotton trade has become increasingly quality conscious. Even the local manufacturers of textiles now demand standardized cotton for producing quality yarn and fabrics. These challenges are expected to become serious in future under the WTO regime. Thus, it is imperative for Pakistan to prepare and adjust its cotton production and marketing strategies to face the emerging challenges in the domestic and global markets. In order to improve yields, quality and marketing of cotton, the Commission has proposed a number of price and non price measures which need careful consideration of the Government.

2. SOWING AND PICKING TIMES

5. In major cotton growing districts of the Punjab and Sindh, sowing is generally recommended from the start of May to end June. Province-wise details of the recommended sowing times for cotton growing districts are given in Annex-I. Picking of cotton in Sindh and in some parts of the Punjab starts in August and may continue upto February in certain cases depending upon the crop and climatic conditions.

3. PROVINCIAL SHARES IN AREA AND PRODUCTION

6. Based on three years period of 2002-03 to 2004-05, annual production of cotton at country level has averaged at 11.15 million bales from 2.99 million hectares (7.39 million acres). The main cotton producing provinces Punjab and Sindh account for 79.5 and 19.1 per cent of cotton area and 77 and 22 per cents of its production, respectively (Table-1 and Figures-1 and 2).

**Table-1: Provincial Shares in Area and Production of Cotton:
Average of 2002-03 to 2004-05**

Country/ Province	Area		Production	
	000 hectares	Per cent	000 bales	Per cent
Pakistan	2993	100.0	11154	100.0
Punjab	2381	79.5	8589	77
Sindh	572	19.1	2452	22
NWFP	2	0.1	5	-
Balochistan	38	1.3	108	1

PROVINCIAL SHARES IN AREA & PRODUCTION OF COTTON: AVERAGE OF 2002- 03 TO 2004- 05

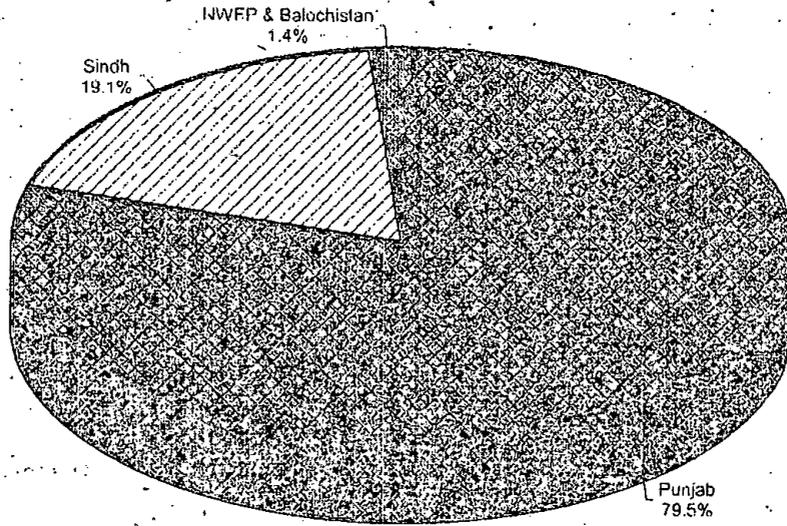


Fig-1: SHARES IN AREA

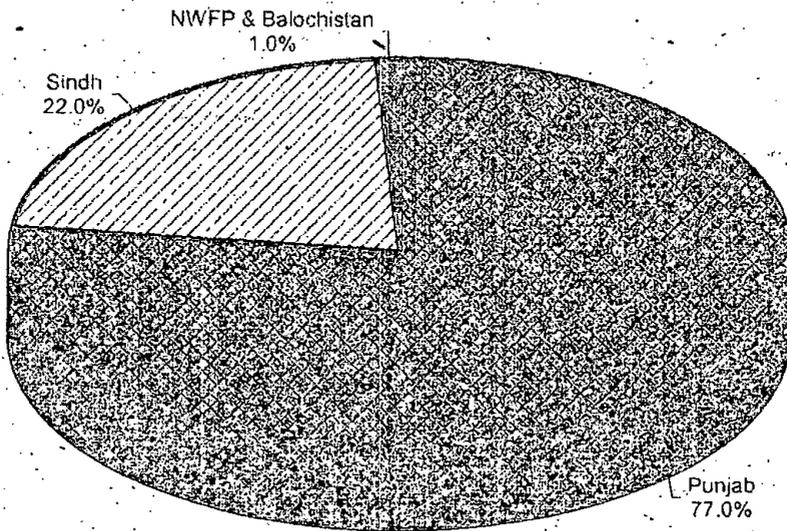


Fig-2: SHARES IN PRODUCTION

4. IMPORTANT COTTON GROWING DISTRICTS

7. District-wise data on area and production of cotton are given in Annex-IV. Districts producing more than 100 thousands bales of cotton per year are Rahim Yar Khan, Bahawalpur, Lodhran, Vehari, Khanewal, Rajanpur, Multan, Muzaffargarh, Bahawalnagar, D.G.Khan, Sahiwal, Jhang and T.T.Singh from the Punjab province and Sanghar, Ghotki, Khairpur, Nawabshah, Hyderabad, Mirpurkhas, Naushero Feroze and Sukkur from Sindh. These 21 districts account for more than 96 per cent of the cotton production in the country.

8. The districts of R.Y.Khan, Bahawalpur, Lodhran, Vehari, Khanewal, Rajanpur, Bahawalnagar Multan and Muzaffargarh, each producing more than half million bales per year altogether account for 68 per cent of the cotton in the country.

5. CHANGES IN AREA, YIELD AND PRODUCTION

9. During the period of 1994-95 to 2004-05, cotton crop area ranged between 2.65 and 3.21 million hectares (6.55 and 7.93 million acres) and yield between 506 and 702 kgs per hectare. The cotton production has ranged between 8.70 and 113.2 million bales during said period. Long and short term changes in area, yield and production are discussed below:

5.1 Long-term Changes: 1994-95 to 2004-05

10. Overall cotton production in Pakistan during 1994-95 to 2004-05 is estimated to have increased @ 2.4 per cent per year due to 1.8 per cent improvement in yield and 0.6 per cent expansion in its area (Table-2).

Table-2: Average Annual Growth Rates of Area, Yield and Production of Cotton: 1994-95 to 2004-05

Country/ Province	Area	Yield	Production
	----- Per cent -----		
Pakistan	(+) 0.6	(+) 1.8	(+) 2.4
Punjab	(+) 0.3	(+) 1.6	(+) 1.8
Sindh	(+) 1.5	(+) 2.9	(+) 4.4

Note: The growth rates have been worked out by estimating the equation, $Y=a(1+r)^x$, through Ordinary Least Squares (OLS) method from the data given in Annex-II.

11. During the period under reference, cotton production in the Punjab has risen by 1.8 per cent annually on account of 1.6 per cent improvement in yield and 0.3 per cent expansion in area. Cotton production in Sindh has increased by 4.4 per cent due to increases of 2.9 per cent in yield and 1.5 per cent in area.

5.2 Short-term Changes 2004-05 Vs 2003-04

12. Cotton production at country level from 2004-05 crop estimated at 13.2 million bales is 31.4 per cent higher than the level of 10.05 millions in 2003-04 (Table-3). The increase in production is due to 6.9 per cent expansion in area and 22.7 per cent improvement in yield. The record production of 13.2 million bales in 2004-05 at country level is the highest so far.

Table-3: Area, Yield and Production of Cotton: 2003-04 and 2004-05 Crops

Country/ Province	Area		Changes in 2004-05 over 2003-04	Yield		Changes in 2004-05 over 2003-04	Production		Changes in 2004-05 over 2003-04
	2003-04	2004-05		2003-04	2004-05		2003-04	2004-05	
	-- 000 hectares --		Per cent	--Kgs/hectare --		Per cent	-- 000 bales --		Per cent
Pakistan	2989.3	3195.4	(+) 6.9	572	702	(+) 22.7	10047.7	13200	(+) 31.4
Punjab	2386.8	2547.0	(+) 6.7	549	694	(+) 26.4	7702.0	10400	(+) 35.0
Sindh	561.4	611.6	(+) 8.9	680	750	(+) 10.3	2242.8	2700	(+) 20.4
NWFP	2.0	2.0	0.0	425	425	0.0	5.0	5.0	0.0
Balochistan	39.1	34.8	(-) 11.0	426	464	(+) 18.9	97.9	95	(-) 3.0

Note: Figures in parentheses are in thousand acres.

Source: Annex-II.

13. Cotton production in the Punjab estimated at 10.4 million bales during 2004-05 has increased by 35.0 per cent than that of previous year, due to 6.7 per cent expansion in area and 26.4 per cent improvement in yield. Cotton production in Sindh has increased by 20.4 per cent, due to increases of 8.9 per cent in area and 10.3 per cent yield. In the NWFP, cotton area and its yield remained the same as previous year. Cotton production in Balochistan has decreased by 3 per cent because of 11 per cent contraction in area.

14. Provincial Agricultural Departments have forwarded following reasons for changes in area, yield and production of cotton in 2004-05

Area:

- 1) Lucrative rates of seed cotton received by growers last year induced them to plant more area under cotton crop.
- 2) Sugarcane area has also shifted to cotton crop because of low rates received by the grower for their cane in the past couple of years.
- 3) Cotton area has also expanded in non-core areas i.e. districts of Kasur, Okara, Sahiwal, Pakpattan, Faisalabad, T.T.Singh and Jhang in Punjab and districts of Jacobabad, Sheikarpur and Larkana in Sindh.

Production:

- 1) Favourable weather conditions during boll formation and maturity period of the crop have enhanced the number of bolls and boll weight.
- 2) Cultivation of high yielding varieties of cotton i.e. CIM-496 and FVH-142 has also contributed to higher production.
- 3) Incidence of pest remained low during the season.
- 4) Supply of certified seed to growers increased.

15. Bearish cotton prices prevailing in domestic market, excellent crop stand in the fields as observed in the APCom Mini Survey in last fortnight of November 2004, more than 50 per cent increase in seed cotton arrivals at ginneries, and procurement of 1.8 million bales by the TCP (more than 10 per cent of production) are suggestive of the fact that final estimate of production of cotton may exceed 13.2 million bales by substantial margin.

6. TARGETS VS ACHIEVEMENTS

16. The Federal Committee on Agriculture (FCA) had fixed the target of domestic cotton production for 2004-05 crop at 10.72 million bales. Domestic cotton production estimated at 13.2 million bales is 23.1 per cent higher than the target (Table-4).

Table-4: Targets and Estimated Achievements of Area, Yield and Production of Cotton: 2004-05 Crop

Country/ Province	Area		Deviation from target	Yield		Deviation from target	Production		Deviation from target
	Target	Achieve- ment		Target	Achieve- ment		Target	Achieve- ment	
	000 hectares		Per cent	Kgs/ hectare		Per cent	000 bales		Per cent
Pakistan	3140.0	3195.4	(+) 1.8	581	702	(+) 20.8	10720.0	13200	(+)23.1
Punjab	2500.0	2547.0	(+) 1.9	558	694	(+) 24.4	8200.0	10400	(+) 6.8
Sindh	590.0	611.6	(+) 3.7	692	750	(+) 8.4	2400.0	2700	(+) 2.5
NWFP	10.0	2.0	(-) 80.0	340	425	(+) 25.0	20.0	5.0	(-) 75.0
Balochistan	40.0	34.8	(-) 13.0	425	464	(+) 9.2	100.0	95	(-) 5.0

Sources:

1. For targets: Minutes of the 80th Meeting of FCA held on 03-04-2003 at Islamabad.
2. For achievements: Annex-II.

17. In the Punjab and Sindh area, yield and production of cotton from 2004-05 crop has exceeded the target. In the NWFP and Balochistan targets of area and production are not achieved the yield however, has surpassed the target.

7. FACTORS CONSIDERED FOR PRICE POLICY OPTIONS

18. In formulating price policy proposals for seed cotton, 2005-06 crop, following factors have been considered and analysed.

- 7.1 Domestic supply, demand, stocks and price situation
- 7.2 Cost of production of seed cotton
- 7.3 Comparative economics of cotton and competing crops
- 7.4 Economics of fertilizer use on cotton
- 7.5 Nominal and real prices of seed cotton
- 7.6 World supply, demand, stocks, trade and price situation
- 7.7 Parity prices of seed cotton
 - 7.7.1 Domestic
 - 7.7.2 Export/Import
- 7.8 Economic efficiency in cotton production

7.1 Domestic Supply, Demand, Stocks and Price Situation

7.1.1 Domestic supply, demand and stocks

19. Information regarding domestic situation of cotton supply, demand and stocks for the years 2001-02 to 2004-05 is presented in Table-5.

**Table-5: Domestic Production, Demand, Stocks of Cotton (Lint):
2001-02 to 2004-05 (August-July)**

S.No.	Item	2001-02	2002-03	2003-04	2004-05
----- In million bales of 170 kgs each -----					
Supply					
1.	Beginning stocks	1.93	2.69	1.76	2.00
2.	Production	10.61	10.21	10.05	13.2
3.	Imports	1.08	1.10	2.31	0.02 (a)
4.	Total supplies (item 1+2+3)	13.63	14.01	14.12	15.22
Disposal					
5.	Mill consumption	10.53	11.45	11.40	11.40
6.	Non-mill consumption	0.14	0.50	0.50	0.50
7.	Exports	0.27	0.30	0.22	0.07(b)
8.	End season stocks	2.69	1.76	2.00	3.25
9.	Total disposal	13.63	14.01	14.12	15.22

Note: a) During August 2004.
b) August - October 2004.

Sources:

1. MINFAL, Islamabad.
2. All Pakistan Textile Mills Association (APTMA), Punjab Zone, Lahore.
3. Karachi Cotton Association (KCA), Karachi.
4. Pakistan Central Cotton Committee (PCCC), Karachi.

20. Domestic availability of cotton during 2003-04 totaled 14.12 million bales. About 11.90 million bales are reported to have been used by the domestic textile mills and non-mill sectors. Exports of cotton during 2003-04 has been estimated at 0.22 million bales leaving end year stocks at 2.00 million bales.

21. According to the latest estimates, 13.20 million bales have been harvested from 2004-05 crop. Adding opening stocks of 2.00 million bales and import of 0.02 million bales (upto August 04) total availability of cotton is estimated at 15.22 million bales, against the overall requirements 11.90 million (11.40 million bales mill and .50 million bales non mill consumption)

while 0.07 million bales (upto October 2004) have been exported. End year stocks are expected at 3.25 million bales provided no change in production and trade.

7.1.2 Price situation

7.1.2.1 Seed cotton (phutti) prices

22. Monthly average wholesale prices of seed cotton (phutti) prevailing in the main producing areas of Punjab and Sindh during the period of August to December 2004 are given in Table-6.

Table-6: Monthly Average Wholesale Prices of Seed Cotton (Phutti) in the Main Producer Area Markets During 2004-05 Crop (August-December)

Markets	August*	September	October	November	December**	Average
----- Rupees per 40 kgs,-----						
Punjab						
R.Y.Khan	931	956	861	881	830	892
Multan	-	945	868	889	851	888
Bahawalnagar	970	983	869	869	808	900
Khanewal	907	929	850	897	843	885
Vehari	903	969	888	919	829	902
Sahiwal	-	900*	864	868	820	863
D.G.Khan	-	913*	864	868	842	872
Average	928	942	866	884		886
Sindh						
Hyderabad	950	934	-	-	-	942
Mirpur Khas	958	911	784	798	-	863
Sanghar	-	-	803	838	765	802
Tando A. Yar	984	-	-	-	-	984
Average	964	923	794	818	765	899

Notes:

- * Average price of last week.
- ** Prices are UPTO 15 December 2004.

Sources:

1. Directorate of Agriculture (E&M), Punjab, Lahore.
2. PCCC, Karachi for Sindh.

23. Table-6 shows that monthly average wholesale prices of seed cotton (phutti) in the Punjab ranged between Rs 850 per 40 kgs in Khanewal in October 2004 and Rs 983 in Bahawalnagar in September 2004. prices of seed cotton were relatively high during the months of August and September 2004. However, during the months of October to December 2004 prices received by farmers were low as compared to support price of Rs 925 per 40 kgs.

24. In Sindh, average monthly prices ranged between Rs 784 in Mirpur Khas in October 2004 and Rs 984 in Tando Allah Yar in August 2004. Market price behaviour during the whole season was the same as in Punjab. Prices trended upward during the months of August and September and declined during the months of October to December and prices received by farmers were below the support price of Rs 925 per 40 kgs.

7.1.2.2 Cotton (lint) prices

25. Monthly average spot prices of cotton lint during August to November 2004 are presented in Table-7.

Table-7: Monthly Average Spot Prices of Raw Cotton at Karachi, 2003-04 and 2004-05 Crops (August – December)

Month	Base Grade-3, staple length 1-1/32", Micronaire Value between 3.8 to 4.9 NCL* (No Control Limit)	
	2003-04	2004-05
	Rupees per 40 kgs	
August	3180	2488
September	3070	2427
October	3859	2128
November	4045	2178
December **	3959	2174

Notes:

- * Prices include expenses from up-country @ Rs 50/40 kgs
- ** Prices upto 7th December 2004.

Sources: PCCC, Karachi.

26. Lint prices this year declined sharply as compared to previous year prices. The monthly average of spot price of lint at Karachi during 2004-05 season is estimated to have ranged between Rs 2128 and 2488 per 40 kgs. Last year corresponding prices ranged between 3070 and 4045 per 40 kgs.

7.2 Cost of Production of Seed Cotton

27. The cost of production is one of the important determinants of the support prices of farm commodities. However, its empirical estimation is beset with many conceptual problems and practical difficulties. The cultural practices, use level of inputs and crop husbandry practices vary

across the regions, resulting in considerable variations in yields. Estimation of the representative cost of production is quite problematic under such diverse farming conditions.

28. The cost of production of seed cotton for the 2005-06 crop in the Punjab and Sindh have been updated by adopting the input-output parameters as used in calculation of the COP estimates for the 2004-05 crop in conjunction with the latest prices of various inputs and custom hire rates of cultural operations. These rates were obtained through mini field survey conducted by the APCom during October-November 2004 in the major cotton growing areas of the Punjab and Sindh. The inputs prices and custom hire rates were discussed in the meeting of the APCom's Standing committee, held on 18th November 2004 at Multan and supplemented with the information provided by the representative of the Provincial Agricultural Departments and Farmer Associations. The detailed COP estimates are provided in Annex-V and VI while a summary of the results is presented in Table 8.

Table-8: Average Farmers' Cost of Production of Seed Cotton: 2004-05 and 2005-06 Crops

S.No	Items	Unit	2004-05 Crop	2005-06 Crop	Increase in 2005-06 over 2004-05
Punjab					
1.	Cost of cultivation	Rs/acre	14606	14903	297
2.	Yield	Kgs/acre	696	696	-
3.	Cost of production at farm level	Rs/40 kgs	839	856	17
4.	Marketing cost	"	18	20	2
5.	Cost of production at market/ ginnery	"	857	876	19
Sindh					
1.	Cost of cultivation	Rs/acre	11940	13843	1903
2.	Yield	Kgs/acre	608	700	92
3.	Cost of production at farm level	Rs/40 kgs	786	791	5
4.	Marketing cost	"	20	22	2
5.	Cost of production at market/ ginnery	"	806	813	7

Note: The figures have been rounded off.

Source: Annex-V and VI.

Punjab

29. As per details given in annex-V and VI and summary in the Table -8, growing one acre of seed cotton in the Punjab, during 2005-06 crop year, is likely to cost Rs 14,903, including land

rent. Based on the average yield of 696 kgs per acre, Ex-farm cost of production would work out to Rs 856 per 40 kgs. Accounting for marketing cost @ Rs 20 per 40 kgs, the cost of produce at the market/ginnery level would come to Rs 876 per 40 kgs, reflecting an increase of Rs 19 or 2 per cent over the corresponding cost of Rs 857 per 40 kgs of last year.

Sindh

30. The cost of cultivation of seed cotton, 2005-06 crop year, in Sindh is expected at Rs 13,843 per acre, inclusive of land rent. Based on the revised average yield of 700 kgs per acre, the farm level cost of production would be Rs 791 per 40 kgs. Taking into account marketing cost @ Rs 22 per 40 kgs, the market/ginnery level cost of the produce would come to Rs 813 per 40 kgs, showing an increase of Rs 7 or 1 per cent over the cost estimated at Rs 806 of the previous year.

7.2.1 Major cost items and variation therein

31. The major cost items of seed cotton during 2004-05 and 2005-06 crops are given in the Table-9 below:

Table-9: Major Cost Items of Seed Cotton: 2004-05 and 2005-06 Crops

S.No	Major cost items	Punjab			Sindh		
		2004-05 crop	2005-06 crop	Change in 2005-06 over 2004-05	2004-05 crop	2005-06 crop	Change in 2005-06 over 2004-05
		Rs/acre	Rs/acre	Per cent	Rs/acre	Rs/acre	Per cent
1.	Seed, cultivation and interculture	2502 (17)	2670 (18)	7	2883 (24)	3278 (23)	14
2.	Irrigation	1491 (10)	1642 (11)	10	1010 (8)	1116 (8)	10
3.	Plant protection	2769 (19)	2827 (19)	2	1848 (15)	1890 (13)	2
4.	Fertilizer including FYM	2063 (14)	2255 (15)	9	1872 (15)	2049 (15)	9
5.	Land rent	3333 (22)	3333 (22)	-	2000 (17)	3333 (24)	67
6.	Picking & others charges	2633 (18)	2357 (16)	(-) 10	2612 (21)	2486 (18)	(-) 5
7.	Total cost	14791 (100)	15103 (100)	2	12225 (100)	14153 (100)	16

Notes:

- Others include mark-up, management, land revenue, land tax, drainage cess and cutting of sticks.
- Figures in parenthesis are percent shares in total cost.

32. The largest share in the total cost in that of land rent (22 per cent in Punjab and 24 per cent in Sindh) followed by cultivation cost including interculture and seed (18 per cent in Punjab and 23 per cent in Sindh), plant protection (19 per cent in Punjab and 13 per cent in Sindh), fertilizer including FYM (15 per cent in both provinces), irrigation (11 per cent in Punjab and 8 per cent in Sindh), and others including picking (16 per cent in Punjab and 18 per cent in Sindh).

33. The cost of cultivation of seed cotton for the 2005-06 crop, in the Punjab, is expected to increase by Rs 312 (2 per cent) from Rs 15,103 to Rs 15,033. The contribution of different items in this increased cost are as: seed, cultivation and interculture (7 per cent), irrigation (10 percent), plant protection (2 percent), fertilizers FYM (9 percent). However, the increase in the cost was partially offset by decrease in picking and others (10 percent) on account of decreased market prices of seed cotton and downward adjustment in the mark-up.

34. The cost of raising one acre of seed cotton in Sindh, during 2005-06 crop is likely to escalate by Rs 1,928 (16 per cent) from Rs 14,153 to Rs 14,121. The shares of different items in the increased cost are: Land rent (67 per cent), seed, cultivation and interculture (14 per cent), fertilizers including FYM (9 per cent), irrigation (8 per cent) and plant production (2 per cent). However, the shares of picking charges and 'other' have witnessed 5 per cent due to decreased prices of seed cotton and downward adjustment in the mark-up.

7.2.2 Prices of major farm inputs

35. The average market prices of the major farm inputs used in estimation of the cost of production of seed cotton for the 2004-05 and 2005-06 crops and changes therein are given below:

Items	Units	2004-05	2005-06	Percent change
1. HSD	Rs/litre	23.84	26.03	2.52
2. Power tariff	Rs/KWH	2.98	2.98	-
3. DAP	Rs/bag	935	1040	10.76
4. Urea	Rs/bag	424	453	7.08
5. Seed	Rs/kg	50	52	6.12

7.3 Comparative Economics of Cotton and Competing Crops

36. Resource allocation among the competing enterprises is primarily guided by the economic considerations reflected in their gross cost, gross income, gross margin, net income, output-input ratio, etc. Cotton a kharif crop, competes with rice for land, water and other farm resources in the areas where cultivation of both the crops is technically feasible. Cotton also faces indirect competition from sugarcane which, being an annual crop, occupies the land throughout the year. The economics of cotton and competing crops has been analysed in terms of input-output prices paid and received by the growers during the 2004-05 crop year. The details of the analysis are provided in Annex-VII. A summary of various economic indicators for the Punjab and Sindh is also presented in Table-10.

Punjab

37. The market prices of seed cotton are reported low this year. However, the prices of basmati paddy are reported to have severely crashed in the open market. Resultantly, cotton has gained some edge over basmati and IRRI rice in respect of all the economic indicators adopted in this analysis, viz. Output-input ratio and gross revenue per unit of cash inputs, crop duration and irrigation water.

38. In case of indirect competition with sugarcane, both the cotton+wheat and cotton+sunflower rotations favourably compete with sugarcane. However, sugarcane performs better in terms of gross returns to purchased inputs.

Table-10: Comparative Economics of Cotton and Competing Crops at Prices Realized by the Growers: 2004-05 Crops

Province/Crop/ Crop combination	Output- input ratio	Gross revenue per		
		rupee of purchased inputs cost	day of crop duration	acre-inch of water used
		----- Rupees -----		
Punjab				
1. Cotton	1.04	2.33	64.79	706.77
2. Rice-Basmati	0.79	1.42	49.68	154.17
3. Rice-IRRI	0.98	1.77	52.04	151.08
4. Cotton+Wheat	1.01	2.24	62.50	673.10
5. Cotton+Sunflower	1.11	2.70	66.86	583.50
6. Sugarcane	0.99	2.90	49.85	409.15
Sindh				
1. Cotton	1.11	2.63	57.08	761.00
2. Rice-IRR	1.31	2.91	59.87	192.43
3. Cotton+Wheat	1.08	2.58	56.03	713.09
4. Cotton+Sunflower	1.15	2.97	62.04	595.58
5. Sugarcane	1.05	2.74	49.43	339.72

Source: Annexes-VII.

Sindh

39. Cotton farming has shown a poor performance than rice farming in terms of all the economic indicators adopted in this analysis except gross returns, to irrigation water where cotton has a definite edge over IRRI rice.

40. In case of indirect competition with sugarcane, the cotton+wheat and cotton+sunflower rotations have a distinct edge over sugarcane in view of most of the economic criteria except gross returns to purchased inputs where sugarcane marginally performs better than cotton+wheat combination.

7.4 Economics of Fertilizer Use on Cotton

41. The economics of fertilizer use on cotton crop has been analysed through estimating (i) Benefit Cost Ratio (BCR) of fertilizer use and (ii) parity ratio between the prices of fertilizers and seed cotton. The results are discussed below:

7.4.1 Benefit Cost Ratio (BCR)

42. BCR refers to the ratio between value of additional produce resulting from using a certain dose of fertilizers and the costs thereof, both direct and indirect. A BCR of greater than one means that benefits are higher than the costs entailed in the process and vice versa. To account for the variation in response of cotton to fertilizer use under different conditions the BCRs have been computed at four different response levels. The results of the exercise are set out in Table-11. A perusal of these data suggest that BCRs were the most remunerative in 1996-97 at all response ratios. However, this position could not be maintained in the following years and BCRs touched the lowest levels in 1999-00 resulting from low cotton prices. These ratios improved in 2000-01 but as a result of sharp fall in cotton prices in 2001-02, again the profitability of fertilizer use on this crop deteriorated. However, in the following two years the BCRs estimated at various response ratios reflect improvement in the profitability of fertilizer use on seed cotton which is attributable to better prices of seed cotton. During current season as a result of sharp fall in seed cotton prices, profitability of fertilizer use has deteriorated 37 per cent at all response ratios compared with the previous year.

Table-11: Benefit Cost Ratios (BCRs) of Fertilizer Use on Seed Cotton: 1996-97 to 2004-05

Year	Response Ratios (Seed Cotton: Nutrient) of			
	3.00:1	3.75:1	4.50:1	5.25:1
1996-97	3.05	3.62	4.13	4.60
1997-98	2.47	2.94	3.36	3.74
1998-99	2.66	3.15	3.60	4.00
1999-00	1.66	1.97	2.25	2.51
2000-01	2.51	2.96	3.35	3.71
2001-02	1.87	2.22	2.53	2.81
2002-03	1.97	2.45	2.79	3.11
2003-04	2.79	3.32	3.79	4.23
2004-05	1.75	2.09	2.39	2.67

Sources:

- 1) For 2004-05: Annex-VIII.
- 2) For 1996-97 to 2003-04: APCoM's Support Price Policy Reports on Cotton.

7.4.2 Parity ratio between prices of fertilizer and seed cotton

43. The ratio between prices of fertilizers and seed cotton indicates the quantity of seed cotton required to purchase a certain quantity of chemical fertilizers. Quantity of seed cotton needed to buy one nutrient tonne of nitrogen since 1996-97 has fluctuated between 0.58 to 0.98 tonnes. The lowest ratio of 0.58 was observed in 2003-04 crop season. However, in the current season purchasing power of seed cotton declined as parity increased to 0.82 due to disproportionate changes in the market price of urea and seed cotton.

44. The parity ratios between prices of phosphatic fertilizer and those of seed cotton have exhibited a similar pattern as discussed above in terms of nitrogen (Table-12).

Table-12: Parity Ratio Between the Prices of Fertilizer and Seed Cotton: 1996-97 to 2004-05

Crop Year	Sale Prices of		Market Prices of Seed Cotton	Quantity of Seed Cotton (phutti) needed to buy one nutrient tonne of	
	Nitrogen N	Phosphorous P ₂ O ₅		Nitrogen N	Phosphorous P ₂ O ₅
	-----Rupees per tonne-----			-----Tonnes-----	
1996-97	13478	19509	21225	0.64	0.92
1997-98	15870	19573	20825	0.76	0.94
1998-99	15217	19828	22675	0.67	0.87
1999-00	15217	24914	15500	0.98	1.61
2000-01	14130	22300	22700	0.62	0.98
2001-02	16960	24230	19150	0.89	1.27
2002-03	16760	24590	21875	0.77	1.12
2003-04	18040	25550	30950	0.58	0.83
2004-05	18400	34000	22550	0.82	1.51

Notes:

1. The nutrient prices of nitrogen (N) and phosphorous (P₂ O₅) have been worked out from the average sale prices of Urea and DAP as used in the COP estimates of the Punjab and Sindh in the support price policy for respective crop years.
2. Market prices are the average of monthly seed cotton prices, which prevailed during the harvest season in important markets of the Punjab and Sindh as given in the respective Support Price Policy Reports.

7.5 Nominal and Real Prices of seed Cotton (Phutti) at Support and Market Prices: 1990-91 to 2004-05 Crops

45. To ascertain overtime changes in the purchasing power of seed cotton, the nominal support and market prices, from 1990-91 to 2004-05 were deflated by the Consumer Price Index (CPI), the most common measure of inflation. The results are given in Table-13 and also shown in Figures 3 and 4.

Table-13: Nominal and Real Prices of Seed Cotton (Phutti): 1990-91 to 2004-05

Crop year	Nominal prices		Consumer Price Index (CPI)	Real Prices	
	Support	Market		Support	Market
	Rs per 40 kgs		1990-91=100	Rs per 40 kgs	
1990-91	245	330	100.00	245.00	330.00
1991-92	280	342	110.58	253.21	309.28
1992-93	300	386	121.45	247.02	317.83
1993-94	315	471	135.14	233.09	348.53
1994-95	400	810	152.73	261.90	530.35
1995-96	400	753	169.21	236.39	445.01
1996-97	500	872	189.18	264.30	460.94
1997-98	500	857	203.96	245.15	420.18
1998-99	-	936	215.66	-	434.94
1999-00	-	614	223.39	-	274.86
2000-01	725	957	233.24	310.84	410.31
2001-02	780	813	241.50	322.98	336.65
2002-03	800	921	248.98	321.31	396.91
2003-04	850	1370	257.77	329.75	530.72
2004-05	925	885	266.51	347.08	332.00

Notes:

- i) CPI for 2004-05 has been projected in view of the average rise in CPI during the three years.
 - ii) The support price of seed cotton (phutti) used here relates to the group of most commonly grown varieties like, Niab-78, Niab-Krishma, CIM-240, Niab-86, FH-87, CRIS-9, CIM-109, Gohar-87, H-682 and MNH-147 etc.
 - iii) No support price was fixed for 1998-99 and 1999-00 crops.
 - iv) The support prices fixed for 2004-05 crop was for the base grade 3 with staple length 1-1/32" and micronaire range of 3.89-4.9 (No Control Limit).
 - v) Market prices are the average monthly wholesale prices of seed cotton (phutti) during October November* in Multan market.
- Prices for 3 weeks.

Sources:

1. Economic Survey of Pakistan: 2003-04.
2. Directorate of Economics and Marketing (E&M) Punjab, Lahore.
3. APCom.

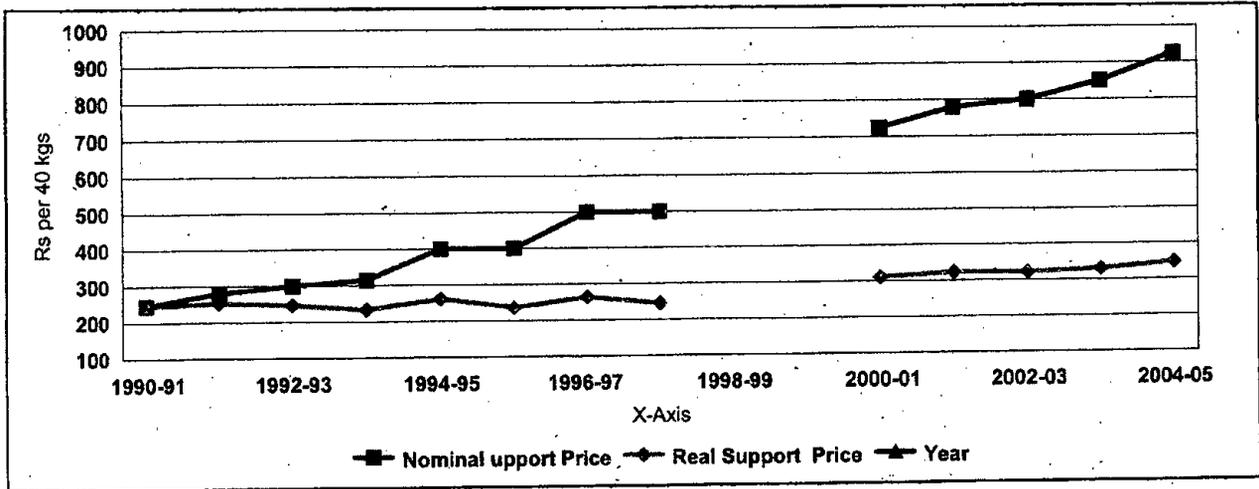


Fig- 3 Nominal and Real Support Price of Seed Cotton: 1990-91 to 2004-05

Note: The Support Price of Seed Cotton (Phutti) for 1998-99 and 1999-00 were not fixed by the govt

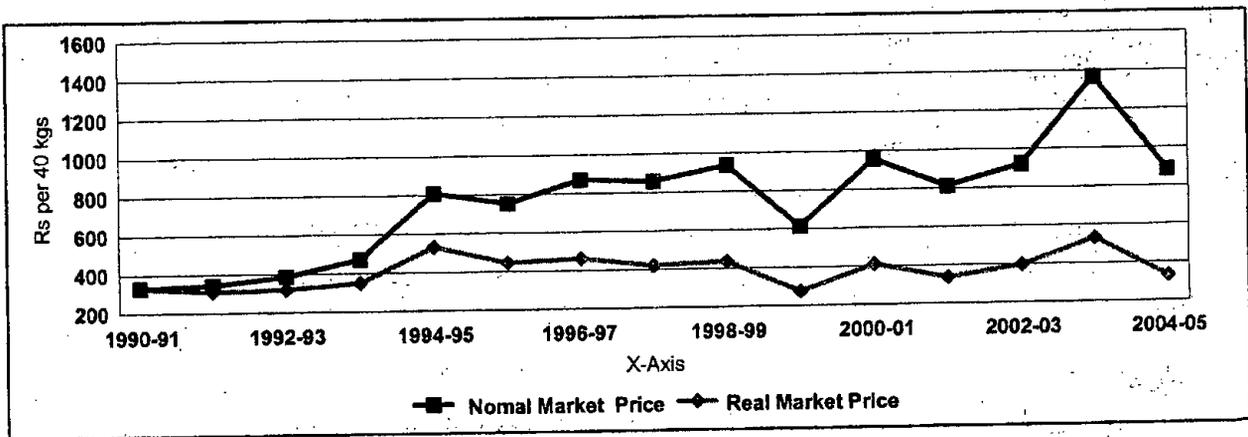


Fig- 4 Nominal and Real Market Price of Seed Cotton: 1990-91 to 2004-05

7.5.1 Support prices of seed cotton

46. The nominal and real support price of seed cotton, 1990-91 to 2004-05 are set out in Table-13 and depicted in Figure-3.

47. As per data in Table-13, the nominal support price of seed cotton during the period of 1990-91 to 2004-05, reflected an overall increase of 278 per cent i.e. from Rs 245 per 40 kgs in 1990-91 to 925 per 40 kgs in 2004-05. During the same period, the CPI has shown a rise of 167 per cent. Consequently, the real support price of seed cotton in 2004-05 crop year, estimated at Rs 347 per 40 kgs, showed an improvement of 42 per cent over the corresponding price in 1990-91.

48. The nominal support price of seed cotton during the period from 1990-91 to 1994-95 increased by 63 per cent while CPI rose by 53 per cent. As a result, the real support price of seed cotton during this period has improved by 7 per cent. In spite of 5 per cent raise in support price of seed cotton in the 1993-94 crop, the real value of support price fell to its lowest level of Rs 233 per 40 kgs. For 1995-96, the government did not revise the support price while CPI surged by 11 per cent over the previous year and 69 per cent against the base year's level, resulting in 10 and 4 per cent loss in the real support price of seed cotton as compared to that of 1994-95 and 1990-91 crops, respectively. In the wake of 25 per cent jump in the nominal support price in 1996-97 i.e. from Rs 400 to Rs 500 per 40 kgs, its real value soared by 12 per cent. Again, in 1997-98, the support price of seed cotton was not increased while CPI surged by 8 per cent. Consequently, the real support price of seed cotton declined by 7 per cent as compared to 1996-97 crop. For next two crop years i.e. 1998-99 and 1999-00, the government did not fix any support price of seed cotton while CPI rose by 10 per cent.

49. After two years interval, the support price of seed cotton was fixed at Rs 725 per 40 kgs in 2000-01 crop year. Its real value in terms of 1990-91 rupee is estimated at Rs 311 per 40 kgs. For 2001-02 crop, the ECC of the Cabinet fixed the intervention price of seed cotton at Rs 780 per 40 kgs, its real value, in terms of 1990-91 rupees, calculated at Rs 323, the 3rd highest level during the period under reference, showing an improvement of 4 per cent over the previous year. For next two crop years i.e. 2002-03 and 2003-04, the support price of seed cotton for these years

were fixed at Rs 800 and Rs 850 per 40 kgs respectively while CPI in these years surged by 7 per cent. As a result, the real value of seed cotton in these year's reached to Rs 330 per 40 kgs, the 2nd highest level during the period under review.

50. The support price of seed cotton (phutti) was enhanced from Rs 850 to Rs 925 per 40 kgs for 2004-05 crop, its real value in terms of 1990-91 prices is estimated at Rs 347, the highest level during the period under reference, reflects an improvement of 5 per cent over the previous year.

7.5.2 Market prices of seed cotton

51. The nominal and real market prices of seed cotton from 1990-91 to 2004-05 are set out in Table-13 and also depicted in Figure-4.

52. Table-13 reveals that the nominal market price of seed cotton averaging at Rs 330 per 40 kgs during the picking season of 1990-91 crop has surged to Rs 885 per 40 kgs in 2004-05, showing an overall raise of 168 per cent in the Multan market during October and November 2004. During the same period, the CPI soared by 167 per cent. Consequently, the real value of market price of seed cotton has surged from Rs 330 to Rs 332 per 40 kgs in 2004-05 in terms of 1990-91 prices, showing a marginal rise which is less than one per cent over the corresponding market price in 1990-91.

53. The market prices of seed cotton have shown many ups and downs during the period under reference experiencing a sharply rising trend during the period of 1990-91 to 1994-95, surged by 145 per cent. During the same period, the cumulative inflation in terms of CPI was estimated at 53 per cent. As a result, the real market prices of seed cotton surged 61 per cent, touching the 2nd highest value of Rs 530 per 40 kgs during the period under review. The market prices of seed cotton during 1995-96 to 2002-03 ranged between Rs 614 to Rs 957 per 40 kgs and their real value eroded by 11 per cent. In all the crop years except the year of 2004-05, the market prices of seed cotton have ruled higher than the support prices fixed by the government. The year 2003-04 was the best year for the cotton growers in terms of nominal and real market

prices of seed cotton, as the highest market price of Rs 1370 per 40 kgs was recorded. As a result, the real market price of seed cotton has reached at Rs 531 per 40 kgs, the highest level during the period under report, reflects 34 per cent rise against the pervious year, in terms of 1990-91 rupees.

54. The market prices of seed cotton during 2004-05 have averaged at Rs 885 per 40 kgs, indicating 35 per cent decline over the last year's level of Rs 1370 per 40 kgs. As a result, the real market price of seed cotton has eroded by 37 per cent against the previous year in terms of 1990-91 prices.

7.6 World Supply, Demand, Stocks, Trade and Price Situation

7.6.1 World supply, demand, stocks and trade

55. World production of cotton during 2003-04 was estimated at 20.47 million tonnes, 1.17 million tonnes (6.06 per cent) higher than in 2002-03. Adding the opening stocks of 8.52 million tonnes, total availability in 2003-04 worked out to 28.99 million tonnes, 0.83 million tonne(2.78 per cent) lower than that of previous year. For 2004-05, cotton production is projected at 23.51 million tonnes. Accounting for the opening stocks of 7.70 million tonnes, total supply of cotton would be 31.21 million tonnes, which shows an increase of 2.22 million tonnes (7.66 per cent) as compared to that in 2003-04. The International Cotton Advisory Committee (ICAC) has forecast production of cotton to decrease to 22.43 million tones in 2005-06.

56. The global consumption of cotton was estimated at 21.33 million tonnes in 2003-04, up by 0.71 per cent over the level of 21.18 million in 2002-03. For 2004-05, consumption is estimated to rise to 21.90 million tonnes, 2.67 per cent above than previous year. The consumption forecast for 2005-06 is 22.32 million tonnes.

57. End year stocks which were to 8.52 million tones in 2002-03 and further decreased to 7.70 million tones in 2003-04 are forecast to rise to 9.32 million tonnes in 2004-05 and further to 9.43 million in 2005-06.

58. World trade (exports) in cotton, reported at 7.34 million tonnes in 2003-04, is forecast to decrease to 6.68 million tonnes in 2004-05 but to increase to 7.01 million in 2005-06. Global supply, demand, stocks and trade situation for cotton is summarized in Table-14.

Table-14: World Production, Consumption, Stocks and Trade in Cotton: 2002-03 to 2005-06

S.No.	Item	2002-03 (Actual)	2003-04 (Estimated)	2004-05 (Projection)	2005-06 (Projection)
-----Million tonnes-----					
1.	Opening stocks	10.52	8.52	7.70	9.32
2.	Production	19.30	20.47	23.51	22.43
3.	Total supply (1+2)	29.82	28.99	31.21	31.75
4.	Likely consumption	21.18	21.33	21.90	22.32
5.	Trade imbalance and stock adjustment*	- 0.12	- 0.10	0.00	0.00
6.	Closing stocks (3-4+5)	8.52	7.70	9.32	9.43
7.	Trade (exports)	6.64	7.34	6.68	7.01

Sources:

- 1) International Cotton Advisory Committee – “Report on Supply and Use/Distribution of Cotton”, dated October 1, 2004.
- 2) Trade imbalance i.e. difference in world imports and exports may exist due to inclusion of linter and waste, changes in weight during transit, difference in reporting periods and measurement error. Need for stock adjustment may arise due to difference between calculated stocks and actual ones.

7.6.2 International prices

59. The world prices of cotton have fluctuated widely during the last ten years. The price of Sindh/Punjab (Afzal 1-1/32") averaging at US cents 73.82 per pound in 1994-95 rose to 82.17 in 1995-96, the highest level during the period under review. Since then these prices have shown a declining trend averaging at US cent 47.23 per pound during 1999-00. During 2000-01, prices recovered and averaged at cents 56.78, but declined to US cents 38.41 per pound in 2001-02 (the lowest level during the period under review). During 2002-03, price showed upward trend and averaged at US cents 51.36 per pound. During 2003-04 Sindh Punjab Afzal 1-1/32" has not been traded in international market. However these are interpolated from the historical differential data for analysis purpose. During current year the prices have declined and averaged at US cents 48.48 per pound (August-November 2004). The prices of other cottons have also showed a

similar pattern. Information on the cif prices of Sindh/Punjab (Afzal 1-1/32") and Orleans Texas (SLM 1-1-/32") and value of Index-B Cottons for the period 1994-95 to 2004-05 is presented in Annex-IX and depicted in Figure-5.

7.7 Parity Prices of Seed Cotton

7.7.1 Domestic parity price

60. A substantial proportion of cotton production is domestically processed into yarn by the spinning mills for domestic use and exports. Therefore, domestic prices of yarn can provide a useful reference for working back the price of its raw material (i.e. cotton and seed cotton). During August to November 2004, prices of yarn (21's) at Karachi have averaged at Rs 469 per bundle of 4.54 kgs. Accounting for various costs involved in processing of seed cotton into yarn viz conversion charges from lint into yarn, sales tax @ 15 per cent, storage and transportation charges, ginning charges and recoveries from sale of cotton waste and cotton seed, seed cotton prices work back to Rs 873 per 40 kgs. Details may be seen in Annex-X.

7.7.2 Export and import prices

61. Estimation of export parity price of a commodity is helpful in ascertaining its competitiveness in international market while its import parity price is a useful measure of determining the opportunity cost of resources used in its domestic production. Since Pakistan is exporting as well as importing cotton, both the export and import parity prices of cotton have been worked out for analyzing price policy options for the next crop season.

62. The export and import parity prices of seed cotton have been calculated on the basis of their actual as well corresponding quoted prices. Inter-bank exchange rate (buying rate for export parity and selling rate for import parity) has been used in these calculations. Detailed calculations in this connection are given at Annex-XI to XVI and summarized in Table-15.

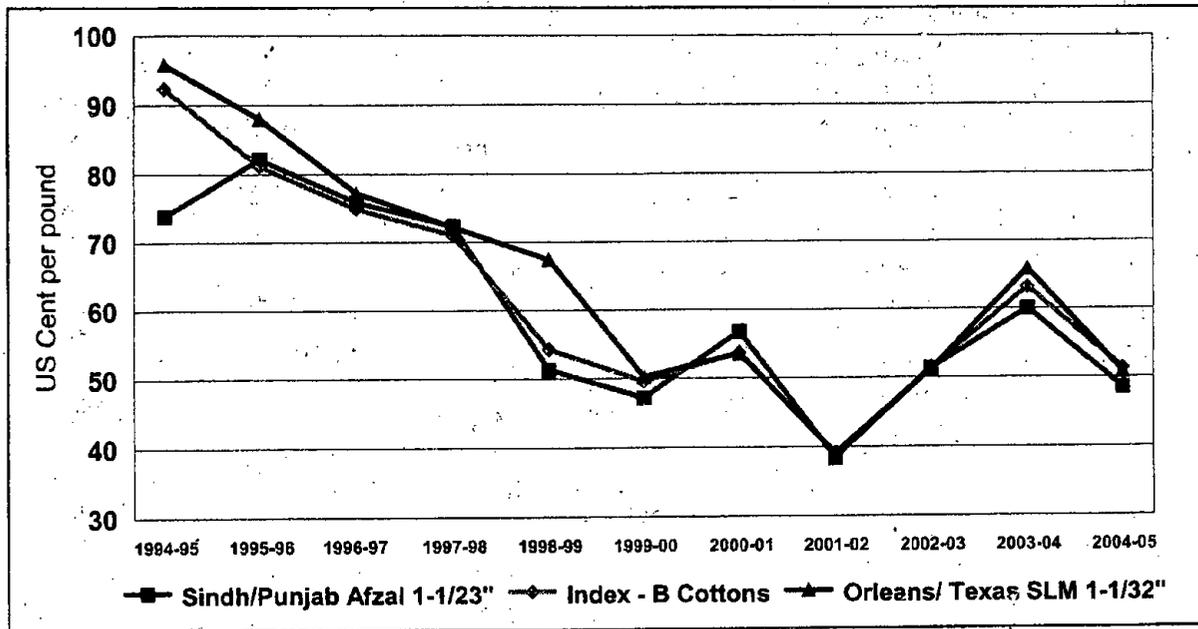


FIG - 5: CIF NORTH EUROPE PRICES OF VARIOUS COTTONS: 1994-95 TO 2004-05

Table-15: Export/Import Parity Prices of Seed Cotton as Worked Back from Various Reference Prices

S.No.	Base/period	Reference price	Worked back price of seed cotton at gin
		US cents/lb	Rs/40 kgs
1.	Export parity prices based on average:		
	i) Actual export price of Pakistani cotton		
	- During 2003-04 (Aug-July)	47.00	923
	- During 1999-00 to 2003-04	44.52	871
	ii) Cif (North Europe) value of Index-B cottons:		
	- During 2004-05 (Aug-Nov)	51.25	886
	- During 1999- 00 to 2003-04	51.17	885
	iii) Cif (North Europe) quotations of Afzal 1-1/32":		
	- During 2004-05 (Aug-Nov)	48.48	840
	- During 1999- 00 to 2003-04	50.76	878
iv) Futures contract prices of New York No.2 cotton (average of October 2005, December 2005 and March 2006)	48.05	756	
	US cents/kg		
v) Fob prices of Pakistani cotton yarn (20's):	181.00	829	
	- During 2004-05 (Aug-Nov)	180.00	823
	- During 1999- 00 to 2003-04		
2.	Import parity prices based on average:		
	i) Cif (North Europe) quotations of Orleans/Texas SLM 1-1/32"	US cents/lb	
	- During 2004-05 (Aug-Nov)	50.76	1,175
	- During 1999- 00 to 2003-04	51.96	1,197
		Rs/40 kgs	
	ii) Actual cif (Karachi) prices of imported cotton:		
- During 2003-04 (Aug-July)	3,487	1,341	
- During 1999-00 to 2003-04	3,189	1,240	

Sources: Annex-XI to XVI.

7.8 Economic Efficiency in Seed Cotton Production

63. The efficiency of resource use is an important indicator for judging the comparative advantage of a nation in the production of certain crop(s). It is mostly estimated in the form of nominal protection coefficient (NPC), effective protection coefficient (EPC), and domestic

resource cost coefficient (DRC). As Pakistan exports as well as imports cotton, efficiency coefficients have been estimated under both these situations. These coefficients are based on the cost of production of seed cotton data as used in APCom's Support Price Policy Papers. To ascertain the impact of overtime changes in input-output prices, the analysis has been carried out for the 2002-03 to 2004-05 crops. Moreover, to capture regional variations in the resource use efficiency, NPCs, EPCs and DRCs have been calculated for major cotton growing provinces of Punjab and Sindh. The coefficients are summarized in Table-16 whereas absolute values of gross revenues, traded costs, domestic sector costs, and transfers estimated at private and social prices are given in Annex-XIX to XX.

Table-16: Economic Efficiency Coefficients for Seed Cotton

Year/ Province	Under Importing Situation				Under Exporting Situation			
	NPC	EPC	DRC	Cost* Rs/US\$	NPC	EPC	DRC	Cost* Rs/US\$
Punjab								
2002-03	0.75	0.61	0.43	25.40	0.98	0.88	0.62	36.65
2003-04	0.91	0.83	0.36	21.25	1.22	1.21	0.53	30.95
2004-05	0.74	0.57	0.46	26.92	0.96	0.83	0.68	39.92
Average	0.81	0.68	0.41	24.27	1.08	1.02	0.67	39.35
Sindh								
2002-03	0.70	0.58	0.40	23.12	0.93	0.83	0.56	33.05
2003-04	0.80	0.71	0.34	19.28	1.06	1.01	0.48	27.65
2004-05	0.74	0.58	0.42	24.66	0.97	0.94	0.61	35.72
Average	0.75	0.63	0.37	22.10	1.03	0.97	0.59	34.78

* Cost incurred on buying domestic resources to earn/save one US\$.

7.8.1 Nominal Protection Coefficients (NPC)

64. NPC is estimated by dividing domestic prices with border prices (import/export parity prices) and measures the impact of output pricing policies without taking into consideration the distortions in input markets. The NPCs under export scenario were either close to one or greater than one whereas under importing situation these are substantially less than one. These coefficients support expansion in cotton production to meet the increasing raw material

requirements of the textile industry as the imports have been more expensive than the domestic production.

7.8.2 Effective Protection Coefficients (EPC)

65. Effective protection coefficient is the ratio between the value added in producing a commodity at private prices and at social prices. Unlike the NPC, which ignores the distortions in the input markets, EPC takes into account the impact of policy interventions in the input markets. Thus, it is a more meaningful measure for analyzing the protection/taxation of a given sector/commodity. The results of EPCs calculations also corroborate the inferences drawn from the estimates of NPCs.

7.8.3 Domestic Resource Cost (DRC)

66. Domestic resource cost (DRC) indicates the opportunity cost of domestic resources used per unit of the value added in the production of a commodity. The numerator in these calculations is the opportunity cost of non-tradable factors used in domestic production while denominator is the value addition calculated at social prices. DRC coefficient of greater than one indicates a "comparative disadvantage" in domestic production as the cost associated with its domestic production is greater than the economic cost of corresponding imports.

67. The results of the analysis (Table-16) indicate that DRCs have been much less than one during the period under analysis both under exporting and importing scenarios. Thus, Pakistan enjoys comparative advantage in cotton production. Based on the last 3 years' average prices, DRCs work out to 0.67 for the Punjab and 0.59 for Sindh, implying that cost of domestic resources involved in earning one US dollar through cotton export is 32 - 53 percent, less than the current exchange rate. Accordingly, increasing cotton production is an economic proposition even for exports.

68. DRCs calculated under cotton importing scenario (Table-16) are much lower than the corresponding coefficients estimated under exporting situation. As per these estimates cost of domestic factors involved in saving one unit of foreign exchange through increased cotton

production is only 33-46 percent of its market price. Thus expansion in production of cotton for import substitution is highly cost effective.

8. CONSULTATION

69. Annual meeting of the Agricultural Prices Commission's Standing Committee on Cotton was held at Islamabad on November 18, 2004. It was attended by the representatives of farmers' associations, ginners, KCA and APTMA, progressive growers, cotton experts and officials of the Federal and Provincial Governments concerned with the cotton production and marketing. The meeting discussed, at length, the situation with regard to cotton crop and problems encountered by the farmers in cotton production and marketing. Future prospects of cotton crop in the changing economic environment also engaged the attention of the Committee. The participants in the meeting emphasized the need for development of a suitable technology package for sustainable production of cotton. They highlighted the need for strict quality control in pesticides' marketing and underscored the role of Integrated Pest Management to arrest the increasing menace of pests and to protect the environment. The grower members expressed their concern about rising prices of inputs and pleaded for bringing stability in prices. Though happy about the prices of cotton in the current year, farmers were concerned about the sharp decline in yield and increasing risk in cotton production in the wake of serious pest infestation compounded by the failure of market to supply the requisite pesticides. There was a consensus in the meeting for having a programme which ensured incentive prices to the farmers in general and in good crop years in particular.

9. TO SUM UP

70. World production of cotton in 2004-05 is projected at 23.51 million tones, 14.85 per cent more than that of last year. Consumption is forecast to 21.90 million tonnes, thus the stocks comes to 9.32 million tonnes. The stocks are further forecast to increase to 9.43 million tonne in 2005-06.

71. International prices of cotton have declined sharply. The average cif price of Sindh/Punjab (Afzal 1-1/32"), recorded at US cents 60 per pound during 2003-04, has declined to 46 cents in November 2004. The value of Index B cottons is at 48 cents as compared to its corresponding value of 66 cents in 2003-04.

72. Based on the analysis of relevant domestic and international factors, the worked back prices of seed cotton alongwith market prices and cost of production are summarized below.

Base		Worked back price of seed cotton at ginnery level
		Rupees per 40 kgs
1	Domestic price of yarn at Karachi	859
2	Export parity prices based on:	
	i) Actual average export price of Pakistani cotton:	
	- During 2004-05 (August)	923
	- During 1999-00 to 2004-05	871
	ii) Average cif (North Europe) value of Index-B cottons:	
	- During 2004-05 (Aug-Nov)	886
	- During 1999-00 to 2003-04	885
	iii) Average cif (North Europe) quotations of Afzal 1-1/32":	
	- During 2004-05 (Aug-Nov)	840
	- During 1999-00 to 2003-04	878
	iv) Futures contract prices of New York No.2 cotton (average of October 2005, December 2005 and March 2006)	756
	v) Average fob prices of Pakistani cotton yarn (20's):	
	- During 2004-05 (Aug-Nov)	829
	- During 1999-00 to 2003-04	823
3	Import parity prices based on:	
	i) Actual average cif (North Europe) quotations of Orleans/ Texas SLM 1-1/32"	
	- During 2004-05 (Aug-Nov)	1,175
	- During 1999-00 to 2003-04	1,197
	ii) Cif Karachi prices of imported cotton:	
	- During 2004-05 (August)	1,341
	- During 1999-00 to 2003-04	1,240
4	Average domestic market price of seed cotton in 2004-05 (September-November)	901
5	Cost of production for 2005-06 crop	
	Punjab	876
	Sindh	813

73. The price of seed cotton as worked back from the domestic price of cotton yarn at Karachi during the current season comes to Rs 859 per 40 kgs against the monthly average market prices ranging between Rs 850 to 983 per 40 kgs from August 2004 to December 2004.

74. The worked back price of seed cotton from the actual export prices of Pakistani cottons, cif North Europe value of Index-B and Sindh/Punjab Afzal 1-1/32" cotton, during 2004-05 range between Rs 840 and 923 per 40 kgs. The prices of seed cotton worked back from corresponding average for 1999-00 to 2003-04, ranged between Rs 871 and 885 per 40 kgs. The worked-back price of seed cotton from the futures contract price of New York No.2 cottons (average of October 2005, December 2005 and March 2006) quoted on 1st December 2004 comes to Rs 756 per 40 kgs.

75. The prices of seed cotton calculated from the average fob prices of cotton yarn (20's), during 2004-05 work back to Rs 829 per 40 kgs, and to Rs 823 when based on the average of corresponding price for 1999-00 to 2003-04.

76. The import parity price of seed cotton based on the cif North Europe quotations of Orleans/Texas SLM 1-1/32" during August 2004 to November 2004, comes to Rs 1,175 and to Rs 1,197 per 40 kgs when calculated from the corresponding average of quotations for 1999-00 to 2003-04. The import parity prices of seed cotton estimated from the actual average cif (Karachi) price of imported cotton in the current season comes to Rs 1,341, and to Rs 1,240 per 40 kgs based on the average for 1999-00 to 2003-04.

77. The monthly average of market prices in Punjab have ranged from Rs 850 to Rs 983 per 40 kgs during August 2004 to November 2004. The prices in Sindh markets during this period have ranged between Rs 784 and Rs 984 per 40 kgs. The overall average of market price during the period under reference works out to Rs 886 per 40 kgs. The market prices throughout the period remained generally below the Government announced support price of Rs 925 per 40 kgs.

78. The cost of production (COP) of seed cotton at ginnery level for the 2004-05 crop is estimated at Rs 876 per 40 kgs for Punjab, and Rs 813 per 40 kgs for Sindh.

79. As discussed above all the parity prices except the import parity prices are lower than the existing support price of Rs 925 per 40 kgs. Under existing scenario the cotton production import parity criterion cannot be used for determining the support price of seed cotton. Domestic as well as world stocks are increasing. International prices of cotton have declined sharply. Domestic market prices remained generally below the support price level of Rs 925 per 40 kgs. Keeping in view the above mentioned developments in domestic and international markets no increase in support price of seed cotton crop for 2005-06 crop is recommended.

80. The task of implementing the support price of seed cotton should remain with TCP. Since the support price for seed cotton is implemented through procuring the cotton lint, the price of lint be fixed accordingly. TCP should also enforce the premia and discounts for various grades and staple lengths.

10. QUALITY PREMIUM

81. The ECC of the Cabinet in its meeting held on 24-3-2004 decided to fix the support price for seed cotton 2004-05 crop at Rs 925 per 40 kgs. for "base grade 3" and the premium/discount rates for higher/lower quality grades and staple length were also approved. For the cotton crop of 2005-06, the revised grade and staple margins are given below in Table-17.

Table-17: Revised Grade and Staple Margins for Seed Cotton

Grade	Staple length				
	1"	1-1/32"	1-1/16"	1-3/32"	1-1/8"
----- Rupees per 40 kgs -----					
Super	13	30	47	64	81
One	3	20	37	54	71
Two	-6	11	28	45	62
Three	-17	Base	17	34	51
Four	-30	-13	-4	21	38
Five	-43	-26	-9	8	25

Note: The above margins are applicable to the seed cotton of micronaire ranging between 3.8 and 4.9 NCL.

82. Since TCP purchases cotton lint instead of seed cotton, the premia/discounts on lint are calculated in Table-18. By providing premia/discounts on lint, the growers would be encouraged to produce quality seed cotton.

Table-18: Premia/Discounts for Various Grades/Staple Lengths for Lint

Grade	Staple length				
	1"	1-1/32"	1-1/16"	1-3/32"	1-1/8"
----- Rupees per 40 kgs -----					
Super	119	178	237	294	353
One	67	124	181	237	294
Two	4	60	116	170	226
Three	-54	Base	54	107	161
Four	-122	-70	-18	34	86
Five	-184	-134	-83	-34	17

11. IMPROVING PRODUCTIVITY QUALITY AND MARKETING

11.1 Improving Productivity

11.1.1 Improved seed

83. Improved seed is considered a key to enhance crop productivity. The breeders though have evolved high yielding cotton varieties and both the public and private sectors are active in seed business but sufficient quantity of desired seed is not reaching the growers. Adulterated seed and seed of unapproved varieties is distributed by some agencies/traders. The growers are not aware of new varieties and sources of pure seed of these varieties and associated cultural and agronomic practices. As cotton is an open pollinated crop, the experts recommend to cover the entire area with the certified seed every year. The data presented in Annex-XVII to XVIII reveal that during the decade ending 2004-05 supply of certified seed has fluctuated sharply against its requirements in all the provinces. However, supply position in Sindh has been seen more disappointing. Thus, production of certified seed and its proper propagation need to be encouraged in public as well as private sector. Revival of Sindh Seed Corporation may help improve the seed supplies in Sindh.

11.1.2 Plant population

84. Inadequate plant population is reported to be an important factor in poor yield. Against the recommended plant population of 23,000 per acre in the Punjab, 16000 have been reported in major cotton growing areas of the Punjab implying that heading towards desired plant population alone can enhance cotton crop productivity upto 30 percent. Main implying factor in this regard are inferior seed quality poor soil health poor land handing, marginal tubewell irrigation and soft problems. Improved soil and farm management practices as evolved and recommended by the researchers need to be adopted through comprehensive promotional campaigns by the extension service. The farmers should be educated about preservation of farm yard manure in pits before adding to the soil compost from crop residues and farm waste, avoiding too many dry cultivation, selecting proper farm implements for inculture, inducting green manuring in crop rotation.

11.1.3 Balanced use of fertilizers

85. Intensive cropping and inadequate use of organic manures have depleted the soils of major and minor nutrients. Moreover, increasing salinity, sodicity, agro-chemicals pollution and soil erosion are posing serious threat of soil de-gradation, resulting in its declining capacity to support crop cultivation. To arrest further deterioration of soil and soil fertility there is an urgent need of launching a comprehensive and well coordinated campaign for adding organic as well as inorganic nutrients to the soil. Use of farm yard and green manure incorporation of crop residues, use of bio fertilizers, composts and balanced doses of various fertilizers are all necessary to arrest deterioration in soil and enhance its fertility. For better achievement on the subject, provincial agricultural research institutes are required to develop various bio fertilizers and area/crop specific fertilizer recommendations of both principal and micro nutrients and their wide publicity through mass media for apprising farmers about their importance in farm production.

11.1.4 Integrated Pest Management (IPM)

86. Cotton crop is attacked by a host of insects/pests. To control them various pesticides are used in different compositions and their use has increased sharply in recent years leading to huge

imports of various pesticides. The indiscriminate use of pesticides poses a serious threat to the flora and fauna as well as the environment. The adoption of an integrated approach involving certain cultural, biological and chemical measures simultaneously is required to check the menace. These measures may include: (i) use of varieties resistant to insects and diseases; (ii) adoption of cultural practices that prevent build up of pests; (iii) trapping of pests; (iv) selective and judicious use of pesticides including bio-pesticides; (v) biological control by predators, parasitoids or insect pathogens; (vi) microbial control; and (vii) physical control. Realizing the importance of the Integrated Pest Management (IPM), the government has established a National Integrated Pest Management Programme (NAT-IPM) at NARC, Islamabad.

87. Under the programme pest resistant varieties, specifically resistant to bollworms, leaf hoppers, bacterial blight and root rot of cotton have been identified. Cultural practices and other measures have also been identified to check the population of various pest and diseases under natural conditions without the use of any pesticide/insecticide. About one hundred natural enemies (predators) have been identified. A lot of research in this respect needs to be done in future. The government, therefore should strengthen the National IPM programme for accelerating research and encourage the private companies for commercial rearing and marketing of useful insects and other predators. Moreover, recommendations of the Programme also need to be widely publicized.

11.1.5 Quality control of pesticides

88. In the APCom's Standing Committee meeting held on 18-11-2004 and filed survey of 2004-05 crop, the growers have complained about the adulteration and in turn ineffectiveness of the pesticides being marketed. As a result, the economy of both the farmers and country has suffered. Some experts on plant protection are of the view that quality of pesticides has also deteriorated due to their local manufacturing and formulation under generic scheme. To arrest the sale of adulterated pesticides and their indiscriminate use, strict quality control is needed. For this purpose, following suggestions are made:

- (i) Each pesticide company be asked to appoint its own dealers for sale of a product imported and marketed by that company. Each branded product of a particular firm should only be available from the authorized dealers of that firm.

- (ii) Magistrates be appointed/posted/transferred with Agricultural Department for speedy disposal of pesticide cases.
- (iii) To avoid under dosing of pesticides, each importer and or distributor should indicate the nature of active ingredient and its concentration in a branded product to Provincial Directorate of Plant Protection who should fix/recommend the dose of each product for a particular pest or disease.
- (iv) To reduce the cost of pesticides used on cotton, pest warning system should be strengthened through coordinating the services of provincial agriculture extension and pest scouting/warning departments.
- (v) Provincial plant Protection and Pest Scouting Departments should launch campaign to educate the growers about the composition of various insecticides and also render advice helping in minimizing the spray expenditure.

11.2. Improving Quality of Cotton

11.2.1 Picking

89. Cotton quality can be improved to a considerable extent by making improvement in the picking techniques. For this purpose, following steps are required to be followed by the growers.

- i) The cotton picking should not start before 10.00 A.M, when dew has fully dried.
- ii) The picking should start from the lower portion of the plant and be done in a line.
- iii) The picked cotton of each variety should be placed separately under dry and clean conditions.
- iv) Only cotton clothes should be used for handling the produce.
- v) The produce of 1st and last pickings may be kept separately.
- vi) The produce from dirty, pre-matured un-opened and infected boll should not be mixed with the healthy produce.

11.2.2 Ginning

90. By adopting the modern techniques of ginning cotton quality can be improved. The staple length and strength is adversely affected, if defective machinery is used in ginning. The domestic

ginning industry usually uses the saw gins of poor and low quality. The saws are rarely replaced but their teeth are sharpened. This process adversely affects the cotton quality, as the teeth get deformed. Ginning has been identified as one of the weakest links in the processing of cotton. It is imperative that modern ginning machinery, pre-ginning cleaners and the lint cleaning apparatus be installed in gins to up-grade and modernize the cotton ginning sector. For this purpose, incentives and loans on easy terms and conditions may be provided to the ginners. Further for getting lint of higher grades, research on different types of ginning and cleaning machines and ginning techniques should also be undertaken. In this respect earlier recommendation of APCoM for the establishment of a Ginning Research Institute at Multan is reiterated for implementing during 2005-06 season.

11.2.3 Contamination free cotton

91. The cotton spinning industry has been continuously affected by the presence of contamination in the raw cotton. The contamination has been mostly the result of presence of human and animal hair, bird feathers in raw cotton and the use of jute and polypropylene bags in handling cotton at various stages. In order to fetch higher prices in the international market, the production of contamination free cotton is most necessary. Therefore, government in the past had introduced the system for the standardization. For this purpose PCSI stepped forward and with its available resources launched the programme in 2001-02 season. To reduce the contamination in Pakistani cotton, Rahim Yar Khan, Ghotki and Nasirabad districts were selected in the three cotton growing provinces of country.

92. As reported by APTMA, the contamination level in R.Y. Khan has been reduced to 4 to 5 grams per bale from 19 grams. The ginning factories where PCSI prescribed procedures for the production of high quality contamination free cotton had been fully adopted, the contamination level gone down and recorded within the range of only 0.74 to 1.97 grams per bale. At international level, Pakistan used to be the most cotton contaminated country and ranked at No.2 in 1999, it has been lowered down in 2001 at 25th position which is quite encouraging.

93. As a result of the success of the programme in 2002-03 season, it was extended to the districts of Sanghar (Sindh), Bahawalpur (Punjab) and whole of Balochistan. For its implementation PCSI had established sub offices at the selected districts. Administrative, operational and marketing arrangements were included in the PCSI line of action. The classers after classification of lint cotton, issued quality certificate for each lot. The buyers were required to pay premium according to the contamination level over and above the quality premium in addition to the prevailing market price of cotton. Over 1300 persons have been trained in classing and grading by PCSI. The provincial governments prohibited the use of jute bags in handling/transporting of seed cotton/cotton lint. These arrangements have brought considerable improvement in quality of Pakistani cotton because the contamination level has gone down.

94. Despite the above mentioned encouraging steps, the Cotton Standardization Ordinance 2002 has not been properly enforced as yet. The cotton marketing is still being carried out on old traditional practices and the system of premium and discount in cotton marketing is yet to be adopted. The APTMA which is the main cotton buyer should start purchases of cotton on the basis of payments of premium based upon quality grades of lint. It will encourage the ginners to practice the quality grades of seed cotton and pay the growers accordingly. For the improvement of cotton quality PCSI has decided to establish cotton fibre testing laboratories equipped with HVI's in the districts of Sanghar, Ghotki, R.Y. Khan, Vehari and Multan. In order to further refine the programme of contamination free cotton, APCom had suggested the following measures in its previous support price policy paper, which are reiterated to be implemented during 2005-06.

- PCGA should gin and press seed cotton lots according to the grades of PCSI.
- The Ministry of Industries should persuade the APTMA to adopt the cotton pricing system of premium and discounts based upon its quality, as required under the Cotton Standardization Ordinance 2002.

11.3 Improving Marketing

11.3.1 Underweighting and undue deductions

95. The role of middlemen and beoparies in underweighting & undue deductions in cotton marketing is very notorious phenomenon and is not of recent origin. It is among the chain of malpractices which is looting the growers since decades. During the course of field survey in main producing areas of Punjab & Sindh and meeting of APCom's Standing Committee on Cotton held on 18-11-2004 at Multan, the growers have complained about the undue deductions and underweighting of their produce. For improving the situation, supervisory committees consisting of growers, dealers, cotton ginneries and representatives of the provincial Agriculture Departments should be constituted and re-activated:

11.3.2 Proper packing and labeling

96. To attract buyers and to fetch better prices in the market the presentation and look of a product is very important. If cotton is properly packed and labeled, it will economize the time of transaction by satisfying both the buyers and sellers. In the past sometime false labeling had defamed the country at international level. It is therefore urgent that proper labeling and packing may be ensured. The concerned quarters should ensure that each lot of cotton lint be labeled according to the grade, staple length and micronaire actually contained in it.

11.3.3 Weight of a cotton bale

97. Although standard net weight of a cotton bale is fixed at 170 kgs, but in the market cotton bales of different weights are noticed. It is reported that different ginneries produce bales of short weight ranging from 165 to 168 kgs. For example, even the statement of PCGA of first December 2004, has shown the average weight of a bale as 166.58 kgs. The bales of different weights created problems in crop estimation and the exports. In order to improve the situation and to avoid such problems and confusions all the ginneries should produce cotton bales of 170 kgs standard weight.

12. ACKNOWLEDGEMENTS

98. The assistance and co-operation of the following staff members is appreciated in the preparation of the Report on Support Price Policy for Seed Cotton 2005-06 Crop.

Officers		
1.	Mr. Muhammad Ashiq (Coordinator)	Chief
2.	Mr. M.B. Malik	Chief
3.	Mr. M.B. Siddiqui	Chief
4.	Mr. Asghar Ali	Deputy Chief
5.	Mr. Abdul Rauf Chaudhry	Deputy Chief
6.	Mian Muhammad Mukhtar	Deputy Chief
7.	Mr. G. S. Soomro	Deputy Chief
8.	Mrs. Vigar-un-Nisa	Deputy Chief
9.	Mr. Rafique Ahmad Khan	Deputy Chief
10.	Mr. Sherzada Khan	Assistant Chief
11.	Mr. Muhammad Ikram	Assistant Chief
12.	Mr. Sardar Ali Khan	Assistant Chief
13.	Syed Wasim Raza Zaidi	Assistant Chief
14.	Mr. Sajjad Hussain	Assistant Chief
15.	Rana Muhammad Akbar	System Analyst
16.	Mr. Muhammad Saleem Butt	Computer Programmer
17.	Mr. Muhammad Azim Hakro	Computer Programmer
18.	Mr. Muhammad Amin	Assistant Chief
19.	Mr. Hussain Ali Turi	Assistant Chief
20.	Syed Riaz Ali Shah	Assistant Chief
Staff		
21.	Mr. Muhammad Rauf (Composed the Report)	Stenographer
22.	Mr. Muhammad Mushtaq	Stenographer
23.	Mr. Hafeez Ahmad	Stenographer
24.	Mr. Muhammad Altaf	Stenographer
25.	Mr. Shamir Ahmad	Stenographer
26.	Mr. Muhammad Hussain	Stenographer
27.	Mr. Muhammad Naeem	DMO
<p>Dr. Muhammad Hanif Chairman, APCom</p>		

RECOMMENDED SOWING TIMES OF AMERICAN COTTON

Province/District	Time of Sowing
PUNJAB	
Faisalabad, Sargodha	1 st May to 15 th June
Jhang, Toba Tek Singh,	1 st May to 15 th June
Mianwali	10 th May to 15 th June
Sahiwal, Pak Pattan, Okara,	1 st May to 15 th June
Multan, Lodhran, Vehari	1 st May to end of June
Khanewal,	15 th May to 15 th June
Bahawalpur, R. Y. Khan,	1 st May to 15 th June
Bahawalnagar	1 st May to 20 th June
Muzaffargarh, Layyah, D.G. Khan, Rajanpur	1 st May to end of June
SINDH	
Mirpur Khas, Tharparkar	1 st March to 15 th April
Hyderabad, Badin	10 th April to 10 th May
Sanghar	Mid April to mid May
Dadu, Khairpur, Sukkur, Ghotki	Mid May to 10 th June
Nawabshah	1 st May to 31 st May
NWFP	
D.I. Khan	1 st May to 31 st May
BALUCHISTAN	
Lasbela, Dera Murad Jamali, Nasirabad	1 st May to 31 st May

- Sources:**
1. Cotton Research Station, Multan
 2. PCCC, Karachi
 3. Cotton Research Institute, Sakrand

**PROVINCE-WISE AREA(HECTARES), PRODUCTION AND YIELD OF COTTON
IN PAKISTAN:1994-95 TO 2004-05**

YEAR	PUNJAB	SINDH	NWFP	BALUCH	PAKISTAN
AREA -----000 hectares-----					
1994-95	2244.4	405.6	0.3	2.5	2652.8
1995-96	2463.3	529.3	0.2	4.5	2997.3
1996-97	2540.2	601.2	0.3	6.9	3148.6
1997-98	2348.4	600.3	0.5	10.5	2959.7
1998-99	2282.8	630.2	0.4	9.4	2922.8
1999-00	2329.3	633.5	0.3	20.0	2983.1
2000-01	2386.4	523.6	0.2	17.3	2927.5
2001-02	2526.4	547.4	1.6	40.4	3115.8
2002-03	2208.3	542.6	1.9	40.8	2793.6
2003-04	2386.8	561.4	2.0	39.1	2989.3
2004-05	2547.0	611.6	2.0	34.8	3195.4
YIELD -----kgs per hectare-----					
1994-95	562	538	227	313	558
1995-96	602	598	255	495	601
1996-97	476	637	340	493	506
1997-98	494	662	272	494	528
1998-99	494	576	298	496	512
1999-00	643	638	340	493	641
2000-01	609	696	340	496	624
2001-02	542	759	436	502	579
2002-03	590	756	412	543	622
2003-04	549	680	425	426	572
2004-05	694	750	425	464	702
PRODUCTION -----000 bales-----					
1994-95	7410.0	1282.1	0.4	4.6	8697.1
1995-96	8720.0	1861.5	0.3	13.1	10594.9
1996-97	7103.4	2250.2	0.6	20.0	9374.2
1997-98	6817.0	2335.5	0.8	30.5	9183.8
1998-99	6628.0	2134.1	0.7	27.4	8790.2
1999-00	8804.0	2377.4	0.6	58.0	11240.0
2000-01	8540.0	2141.1	0.4	50.4	10731.9
2001-02	8046.0	2443.2	4.1	119.3	10612.6
2002-03	7664.0	2411.8	4.6	130.2	10210.6
2003-04	7702.0	2242.8	5.0	97.9	10047.7
2004-05	10400.0	2700.0	5.0	95.0	13200.0

Note: One bale =170.09 kgs = 375 lbs

Sources:

1. For 1994-95 to 2002-03: Agricultural Statistics of Pakistan 2002-03, MINFAL, Islamabad
2. For 2003-04: Final estimates provided by Provincial Agriculture Departments.
3. For 2004-2005: Meeting of the Cotton Crop Assessment Committee held on 20th December 2004 at Multan.

**PROVINCE-WISE AREA (IN ACRES), PRODUCTION AND YIELD OF COTTON
IN PAKISTAN:1994-95 TO 2004-05**

YEAR	PUNJAB	SINDH	NWFP	BALUCH	PAKISTAN
AREA -----000 acres-----					
1994-95	5546.1	1002.3	0.7	6.2	6555.3
1995-96	6087.1	1308.0	0.5	11.1	7406.6
1996-97	6277.1	1485.6	0.7	17.1	7780.5
1997-98	5803.1	1483.4	1.2	25.9	7313.7
1998-99	5641.0	1557.3	1.0	23.2	7222.5
1999-00	5755.9	1565.4	0.7	49.4	7371.5
2000-01	5897.0	1293.9	0.5	42.8	7234.1
2001-02	6243.0	1352.7	4.0	99.8	7699.5
2002-03	5456.9	1340.8	4.7	100.8	6903.3
2003-04	5898.0	1387.3	4.9	96.6	7386.9
2004-05	6293.9	1511.3	4.9	86.0	7896.2
YIELD -----kgs per acre-----					
1994-95	227	218	92	127	226
1995-96	244	242	103	200	243
1996-97	192	258	138	200	205
1997-98	200	268	110	200	214
1998-99	200	233	120	201	207
1999-00	260	258	138	200	259
2000-01	246	281	138	201	252
2001-02	219	307	176	203	234
2002-03	239	306	167	220	252
2003-04	222	275	172	172	231
2004-05	281	304	172	188	284
PRODUCTION -----000 bales-----					
1994-95	7410.0	1282.1	0.4	4.6	8697.1
1995-96	8720.0	1861.5	0.3	13.1	10594.9
1996-97	7103.4	2250.2	0.6	20.0	9374.2
1997-98	6817.0	2335.5	0.8	30.5	9183.8
1998-99	6628.0	2134.1	0.7	27.4	8790.2
1999-00	8804.0	2377.4	0.6	58.0	11240.0
2000-01	8540.0	2141.1	0.4	50.4	10731.9
2001-02	8046.0	2443.2	4.1	119.3	10612.6
2002-03	7664.0	2411.8	4.6	130.2	10210.6
2003-04	7702.0	2242.8	5.0	97.9	10047.7
2004-05	10400.0	2700.0	5.0	95.0	13200.0

Note: One bale =170.09 kgs = 375 lbs

Sources:

1. For 1994-95 to 2002-03: Agricultural Statistics of Pakistan 2002-03, MINFAL, Islamabad
2. For 2003-04: Final estimates provided by Provincial Agriculture Departments.
3. For 2004-2005: Meeting of the Cotton Crop Assessment Committee held on 20th December 2004 at Multan.

**DISTRICT-WISE AREA AND PRODUCTION OF SEED COTTON:
AVERAGE OF 2002-03 TO 2004-05**

S.No.	Province/District	Area	Percentage	Production	ANNEX-IV	
					Area Production Yield	000 hectares 000 bales Kgs/ha Yield
PUNJAB						
1	R.Y.Khan	305.67	10.21	1074.93	9.97	598.15
2	Bahawalpur	276.12	9.23	1040.29	9.65	640.82
3	Lodhran	201.12	6.72	880.57	8.16	744.70
4	Vehari	225.68	7.54	844.80	7.83	636.71
5	Khanewal	188.72	6.31	698.03	6.47	629.11
6	Rajanpur	161.59	5.40	691.35	6.41	727.70
7	Bahawalnagar	196.27	6.56	658.02	6.10	570.25
8	Multan	182.78	6.11	656.83	6.09	611.22
9	M.Garh	202.34	6.76	648.93	6.02	545.50
10	D.G.Khan	99.96	3.34	409.21	3.79	696.32
11	Sahiwal	84.99	2.84	182.07	1.69	364.37
12	Jhang	54.22	1.81	124.85	1.16	391.62
13	T.T.Singh	46.94	1.57	113.16	1.05	410.03
14	Faisalabad	39.80	1.33	86.69	0.80	370.53
15	Layyah	37.23	1.24	77.06	0.71	352.09
16	Pakpattan	38.17	1.28	75.65	0.70	337.06
17	Okara	10.12	0.34	17.57	0.16	295.35
18	Kasur	10.11	0.34	12.65	0.12	212.75
19	Mianwali	4.05	0.14	9.13	0.08	383.61
20	Sargodha	7.96	0.27	7.26	0.07	155.06
21	Bhakkar	2.97	0.10	6.58	0.06	377.06
22	M.B.Din	2.56	0.09	2.70	0.03	179.61
23	Jhelum	0.41	0.01	0.38	0.00	158.94
24	Khushab	0.40	0.01	0.34	0.00	143.38
25	Sheikhupura	0.40	0.01	0.29	0.00	123.32
26	Chakwal	0.14	0.00	0.13	0.00	157.64
PUNJAB Sub-total		2380.7	79.5	8319.5	77.1	594.38
SINDH						
1	Sanghar	113.26	3.78	480.33	4.45	721.35
2	Ghotki	112.17	3.75	458.59	4.25	695.37
3	Khairpur	73.85	2.47	312.77	2.90	720.40
4	Nawab shah	63.63	2.13	281.29	2.61	751.93
5	Hyderabad	52.62	1.76	223.33	2.07	721.92
6	Mirpurkhas	51.65	1.73	187.03	1.73	615.88
7	N.Feroze	36.11	1.21	152.15	1.41	716.70
8	Sukkur	32.84	1.10	130.87	1.21	677.85
9	Dadu	10.72	0.36	44.96	0.42	713.28
10	Jacobabad	8.62	0.29	30.30	0.28	597.65
11	Larkana	5.89	0.20	21.11	0.20	609.18
12	Shikarpur	5.25	0.18	18.33	0.17	593.54
13	Badin	4.45	0.15	13.50	0.13	515.90
14	Thatta	0.52	0.02	1.59	0.01	517.12
15	Tharparikar	0.27	0.01	0.72	0.01	462.99
SINDH Sub-total		571.9	19.1	2356.8	21.9	701.02
NWFP Sub-total		1.97	0.07	4.87	0.05	420.90
BALOCH. Sub-total		38.23	1.28	104.57	0.97	465.19
PAKISTAN Total		2992.77	100.00	10785.73	100.00	612.99

Note:

1. Data have been arranged in descending order of production.
2. Percentage share calculated on the basis of country total.
3. Districts in which Seed Cotton is not grown or for which the data are not available, are excluded.

Source:

Ministry of Food, Agriculture and Livestock, Islamabad.

**AVERAGE FARMERS' COST OF PRODUCTION ESTIMATES OF SEED COTTON
IN THE PUNJAB: 2004-05 AND 2005-06 CROPS**

S. No.	Operations / Inputs	Average No. of oprs/units/acre	2004-05 crop		2005-06 crop		Change in 2005-06 over 2004-5
			Cost per unit	Cost per acre	Cost per unit	Cost per acre	
1	2	3	4	5 = 3 * 4	6	7 = 3 * 6	8 = 7-5
-----Rupees-----							
1.	Land preparation:						
1.1	Deep ploughing	0.228	410.00	93.48	425.00	96.90	3.42
1.2	Rotavator	0.233	450.00	104.85	485.00	108.35	3.49
1.3	Ploughing	3.200	150.00	480.00	155.00	496.00	16.00
1.4	Planking	0.421	75.00	31.58	75.00	31.58	0.00
1.5	Ploughing+planking	1.341	150.00	201.15	155.00	207.86	6.70
1.6	Levelling (tractor hrs)	0.537	200.00	107.40	205.00	110.09	2.69
2.	Seed and sowing operations:						
2.1	Seed (kgs)	7.843	50.00	382.15	52.00	397.44	15.29
2.2	Sowing:						
2.2.1	Ploughing+planking	0.394	150.00	59.10	155.00	61.07	1.97
2.2.2	Ridging	0.228	150.00	34.20	155.00	35.34	1.14
2.2.3	Drilling	0.772	150.00	115.80	155.00	119.86	3.86
2.2.4	Manual labour for sowing, bund making and gap filling (m.days)	0.369	100.00	36.90	120.00	44.28	7.38
3.	Irrigation: (Nos)						
3.1	Canal	2.156	-	93.02	-	85.00	-8.02
3.2	Private tubewell	1.706	276.00	470.86	300.00	511.80	40.94
3.3	Mixed	2.739	212.00	580.87	230.00	629.97	49.30
3.4	Labour for irrigation and water course cleaning (m.days)	3.462	100.00	346.20	120.00	415.44	69.24
4.	Interculture:						
4.1	With tractor	2.640	150.00	396.00	155.00	409.20	13.20
4.2	Manual weeding/thinning (m.days)	4.600	100.00	460.00	120.00	552.00	92.00
5.	Plant Protection including application (weedicides + pesticides)	5.769	480.00	2769.12	490.00	2826.81	57.69
6.	Farm Yard Manure including transport and application 50% (trolley load)	-	-	142.00	-	155.00	13.00
7.	Fertilizers: (bags)						
7.1	DAP	0.731	953.00	696.64	1053.00	769.74	73.10
7.2	SSP	0.071	305.00	21.66	374.00	26.55	4.90
7.3	SOP	0.029	773.00	22.42	946.00	27.43	5.02
7.4	NPK	0.046	765.00	35.19	935.00	43.01	7.82
7.5	Urea	2.297	424.00	973.93	455.00	1045.14	71.21
7.6	CAN	0.224	289.00	64.74	313.00	70.11	5.38
7.7	NP	0.069	630.00	43.47	715.00	49.34	5.87
7.8	Fertilizer transport and application	3.467	18.00	62.41	20.00	69.34	6.93
8.	Mark up on investment @ 8 % per annum for 8 months on items 1 to 7 minus 3(1)	-	-	640.34	-	496.50	-143.84
9.	Management charges for 8 months	-	-	330.00	-	368.00	38.00
10.	Land rent for 8 months	-	5000.00	3333.33	5000.00	3333.33	0.00
11.	Average weighted land tax @ Rs 131/acre/annum for 8 months	-	120.00	80.00	131.00	87.33	7.33
12.	Land revenue including local rate, chaukidara, etc.	-	-	5.00	-	5.00	0.00
13.	Payment to pickers (Rs/ 40 kgs)	17.400	80.00	1392.00	70.00	1218.00	-174.00
14.	Cutting of cotton sticks	-	-	185.00	-	200.00	15.00
15.	Gross cost (item 1 to 14)	-	-	14790.59	-	15102.60	312.01
16.	Value of cotton sticks	-	-	185.00	-	200.00	15.00
17.	Net cultivation cost (item 15-16)	-	-	14605.59	-	14902.60	297.01
18.	Yield per acre (kgs)	-	-	696.00	-	696.00	0.00
19.	Cost of production at farm level: (Rs/40 kgs)						
19.1	Including land rent	-	-	839.40	-	856.47	17.07
19.2	Excluding land rent	-	-	647.83	-	664.90	17.07
20.	Marketing expenses (Rs/40 kgs)	-	-	18.00	-	20.00	2.00
21.	Cost of production at market/ginnery: (Rs/40 kgs)						
21.1	Including land rent	-	-	857.40	-	876.47	19.07
21.2	Excluding land rent	-	-	665.83	-	684.90	19.07

Note: Mark-up used for 2004-05 crop is @ 11 per cent:

**AVERAGE FARMERS' COST OF PRODUCTION ESTIMATES OF SEED COTTON
IN SINDH: 2004-05 AND 2005-06 CROPS**

S. No.	Operations / Inputs	Average No. of oprs/units/acre	2004-05 crop		2005-06 crop		Change in 2005-06 over 2004-5
			Cost per unit	Cost per acre	Cost per unit	Cost per acre	
1	2	3	4	5 = 3 * 4	6	7 = 3 * 6	8 = 7-5
-----Rupees-----							
1.	Land preparation:						
1.1	Deep ploughing	0.553	440.00	243.32	500.00	276.50	33.18
1.2	Ploughing	2.071	220.00	455.62	250.00	517.75	62.13
1.3	Planking	0.030	110.00	3.30	125.00	3.75	0.45
1.4	Ploughing+planking	1.333	220.00	293.26	250.00	333.25	39.99
1.5	Levelling (tractor hrs)	0.859	220.00	188.98	250.00	214.75	25.77
2.	Seed and sowing operations:						
2.1	Seed (kgs)	10.279	47.00	483.11	50.00	513.95	30.84
2.2	Sowing:						
2.2.1	Ploughing + planking	0.160	220.00	35.20	250.00	40.00	4.80
2.2.2	Ridging	0.236	220.00	51.92	250.00	59.00	7.08
2.2.3	Drilling	0.763	220.00	167.86	250.00	190.75	22.89
2.2.4	Manual labour for sowing, bund making and gap filling (m. days)	0.988	100.00	98.80	120.00	118.56	19.76
3.	Irrigation: * (Nos)						
3.1	Canal	3.148	-	93.09	-	93.09	0.00
3.2	Private tubewell	2.454	189.00	463.81	200.00	490.80	26.99
3.3	Mixed	0.413	167.00	68.97	176.00	72.69	3.72
3.4	Lift irrigation	0.251	42.00	10.54	43.00	10.79	0.25
3.5	Labour for irrigation and water course cleaning (m.days)	3.732	100.00	373.20	120.00	447.84	74.64
4.	Interculture:						
4.1	With tractor	0.524	220.00	115.28	250.00	131.00	15.72
4.2	With bullocks	1.259	220.00	276.98	250.00	314.75	37.77
4.3	Manual weeding/thinning (m.days)	4.700	100.00	470.00	120.00	564.00	94.00
5.	Plant Protection including application (weedicides + pesticides)	4.200	440.00	1848.00	450.00	1890.00	42.00
6.	Farm Yard Manure including transport and application 50 % (trolley load)	-	-	104.00	-	115.00	11.00
7.	Fertilizers: (bags)						
7.1	DAP	0.893	943.00	842.10	1047.00	934.97	92.87
7.2	TSP	0.009	715.00	6.44	822.00	7.40	0.96
7.3	Urea	1.834	423.00	775.78	452.00	828.97	53.19
7.4	CAN	0.016	307.00	4.91	325.00	5.20	0.29
7.5	AS	0.010	400.00	4.00	390.00	3.90	-0.10
7.6	NPK	0.042	790.00	33.18	877.00	36.83	3.65
7.7	NP	0.076	652.00	49.55	780.00	59.28	9.73
7.8	Fertilizer transport and application	2.880	18.00	51.84	20.00	57.60	5.76
8.	Mark up on investment @ 8 % per annum for 8 months on Items 1 to 7 minus 3(1)	-	-	551.46	-	439.43	-112.03
9.	Management charges for 8 months	-	-	330.00	-	368.00	38.00
10.	Land rent for 8 months	-	3000.00	2000.00	5000.00	3333.33	1333.33
11.	Land revenue including local rate, chaukidara, etc.	-	-	5.00	-	5.00	0.00
12.	Land tax @ Rs 200/acre/annum for 8 months	-	200.00	133.33	200.00	133.33	0.00
13.	Drainage cess @ Rs 24/acre/annum for 8 months	-	24.00	16.00	24.00	16.00	0.00
14.	Payment to pickers (Rs/ 40 kgs)	15.190	85.00	1291.15	80.00	1215.20	-75.95
15.	Cutting of cotton sticks	-	-	285.00	-	310.00	25.00
16.	Gross cost (item 1 to 15)	-	-	12224.99	-	14152.67	1927.68
17.	Value of cotton sticks	-	-	285.00	-	310.00	25.00
18.	Net cultivation cost (item 16-17)	-	-	11939.99	-	13842.67	1902.68
19.	Yield per acre (kgs)	-	-	607.60	-	700.00	92.40
20.	Cost of production at farm level: (Rs/40 kgs)						
20.1	Including land rent	-	-	786.04	-	791.01	4.97
20.2	Excluding land rent	-	-	654.38	-	600.53	-53.84
21.	Marketing expenses (Rs/40 kgs)	-	-	20.00	-	22.00	2.00
22.	Cost of production at market/ginnery: (Rs/40 kgs)						
22.1	Including land rent	-	-	806.04	-	813.01	6.97
22.2	Excluding land rent	-	-	674.38	-	622.53	-51.84

Note: Mark-up used for 2004-05 crop is @ 11 per cent.

Notes for Annex-V and Annex-VI

1. The physical input-output parameters for estimating cost of production of Seed Cotton, 2005-06 Crop, have been adopted from the Support Prices Policy for Seed Cotton, 2004-05 Crop, APCom Series No.210.
2. The inputs prices, custom hire rates of field operations, labour wage rate and transportation cost have been revised in the light of data collected through mini field survey conducted by the APCom during October-November 2004 in the major cotton producing areas of the Punjab and Sindh, discussion made and information provided by the Provincial Agriculture Departments and Farmers' Association in the meeting of the Standing Committee on Seed Cotton held on 18th November 2004 at Multan.
3. The canal water rate in the Punjab has been revised in the light of the data received from the Government of the Punjab.
4. The cost of plant protection measures has not been increased on account of new generic and low cost pesticides, However, the labour component (10 per cent) has revised in light of the new wage rate.
5. The cost of supplementary irrigation has been revised in view of the rise @ 2.52 per cent in the prices of diesel during February 2004 to December 2004. Based on the ratios of electric and diesel tube-wells of 10:90 in the Punjab and 41:59 in Sindh as reported in the Agriculture Statistics of Pakistan, 2002-03, MINFAL (Economic Wing), Islamabad, the average increases worked out to 8.33 per cent in the Punjab and 5.29 per cent in Sindh.
6. The prices of chemical fertilizers have been revised in light of the fertilizers prices published by the Federal Bureau of Statistics, Islamabad for the week ending on November 25, 2004 and supplemented with the data obtained through the field survey as mentioned above.
7. It has been noticed during the field survey and discussion with knowledgeable farmers that due to rises in the prices of fertilizers, the cost of FYM has increased substantially. Accordingly the material cost of FYM (60 per cent) has been increased by 10 per cent, while application charges have been revised in line with rise in the wage rate.
8. Land tax in the Punjab is the weighted average and have been computed from the varying rates of land tax as collected on inter net on 23.11.2004.
9. The management charges for a manger looking after a 25-acre farm and devoting one-fourth of his time to the managerial activities have been worked @ Rs 4598 per month salary of a Field Assistant at the 10th stages in BPS-6, including special additional allowance @ 25 per cent and 15 per cent ad-hoc relief each announced in the 2003-04 and 2004-05 budgets.
10. Land rent is the major item of the cost of cultivation. There is no precise measure for updating the land rentals. However, keeping in view the observations obtained during field survey and discussion made in the meeting of APCom's Sanding committee, land rentals have been adjusted accordingly.
11. Yield of seed cotton in Sindh has been revised in view of the discussion made in the meeting of APCom's Standing Committee and increasing trend of seed cotton in Sindh during the last four years.

**ECONOMICS OF COTTON AND COMPETING CROPS
AT PRICES REALIZED BY GROWERS: 2004-05 CROPS**

Province/crops/ crop combinations	Crop duration	Water used	Gross cost	Cost of purcha- sed Inputs	Gross revenue	Gross margin	Net Income	Output- input ratio	Revenue per		
									Rupee of Purchased inputs cost	Crop day	Acre inch of water used
1	2	3	4	5	6	7=6-5	8=6-4	9=8/4	10 = 6/5	11=6/2	12 = 6/3
	Days	Acre Inches	----- Rupees per acre -----				----- Rupees -----				
Punjab											
1. Cotton	240	22	14917	6680	15549	8869	632	1.04	2.33	64.79	706.77
2. Basmati paddy	180	68	11289	6280	8942	2662	-2347	0.79	1.42	49.68	154.17
3. IRRI paddy	180	62	9644	5295	8367	4072	-177	0.98	1.77	52.04	151.08
4. Wheat	180	17	11022	5040	10702	5662	-320	0.97	2.12	59.46	629.53
5. Sunflower (spring)	144	22	8313	2828	10125	7297	1812	1.22	3.58	70.31	460.23
6. Cotton+Wheat	420	39	25939	11720	26251	14531	312	1.01	2.24	62.50	673.10
7. Cotton+Sunflower	384	44	23230	9508	25674	16166	2444	1.11	2.70	66.86	583.50
8. Basmati paddy + wheat	360	75	22311	11320	19844	8324	-2667	0.88	1.74	54.57	261.92
9. Basmati paddy+Sunflower	324	80	19602	9108	19067	9959	-535	0.97	2.09	58.85	238.34
10. IRRI paddy + wheat	360	79	20566	10335	20069	9734	-497	0.98	1.94	55.75	254.04
11. IRRI paddy+Sunflower	324	84	17857	8123	19492	11369	1635	1.09	2.40	60.16	232.05
12. Sugarcane	394	48	19748	6778	19839	12861	-109	0.99	2.90	49.85	409.15
Sindh											
1. Cotton	240	18	12328	5205	13898	8493	1370	1.11	2.63	57.08	761.00
2. IRRI paddy	180	66	8237	3702	10776	7074	2539	1.31	2.91	59.87	192.43
3. Wheat	180	15	9375	3912	9834	5922	459	1.05	2.51	54.63	655.60
4. Sunflower (Spring)	144	22	8313	2828	10125	7297	1812	1.22	3.58	70.31	460.23
5. Cotton+Wheat	420	33	21703	9117	23532	14415	1829	1.08	2.58	56.03	713.09
6. Cotton+Sunflower	384	40	20541	8033	23823	17264	3182	1.15	2.97	62.04	595.58
7. IRRI paddy+Wheat	360	71	17612	7614	20510	12996	2998	1.17	2.71	57.25	290.28
8. IRRI paddy+Sunflower	324	78	16550	6530	20901	13495	4351	1.26	3.20	64.51	267.96
9. Suagarcane	488	71	22870	8800	24120	15320	7570	1.05	2.74	48.43	339.72

ANNEX-VIII

**PROFITABILITY OF FERTILIZER USE ON SEED COTTON
AT THE MARKET PRICE: 2004-05**

S.No	Item	Seed Cotton Nutrient Ratio of			
		3.00:1	3.75:1	4.50:1	5.25:1
		-----Kgs-----			
1	Yield increase due to use of additional 10 nutrient kgs of fertilizer per acre	30.00	37.50	45.00	52.50
		-----Rupees-----			
2.	Direct cost of 10 kgs of NPK fertilizer at the weighted average price of Rs 28.2 per nutrient kg (i.e. Rs 18.4, 34.0 and 42.0 per nutrient kg of N, P and K at the recommended NPK ratio of 2:1:1 (a)	282.0	282.0	282.0	282.0
3	Indirect cost due to the application of additional fertilizer as detailed below (b)	104.2	123.1	142.2	161.2
	3.1 Transportation and application charges of 19.15 kgs of fertilizer @ Rs 18.0 per bag of fertilizer	6.9	6.9	6.9	6.9
	3.2 Picking charges for additional produce @ Rs 82.5 per 40 kgs	61.9	77.3	92.8	108.3
	3.3 Marketing charges for additional produce @ Rs 19.0 per 40 kgs	14.3	17.8	21.4	24.9
	3.4 Mark up on direct cost of fertilizer (item 2+3.1) for 8 months @ 11% per annum	21.1	21.1	21.1	21.1
4	Total additional cost (item 2+3)	386.2	405.1	424.2	443.2
5	Value of additional produce @ Rs 902 per 40 kgs (c)	676.5	845.6	1014.8	1183.9
6	Benefit cost ratio (item 5 divided by item 4)	1.75	2.09	2.39	2.67

Notes: (a) The prices of N, P and K have been worked out from average of the prices of Urea, DAP, SOP and NPK used in COP estimates of the Punjab and Sindh for 2004-05 crop taken respectively as Rs 423.5, 948, 773 and 790 per bag of 50 kgs each.

ANNEX- IX

CIF NORTH EUROPE PRICES OF VARIOUS COTTONS: 1994-95 to 2004-05

Years Aug-Jul	Sindh/ Punjab Afzal 1-1/32"	Index- B Cottons	Orleans/ Texas SLM 1-1/32"	Difference between Sindh/ Punjab Afzal 1-1/32" and	
				Index- B Cottons	Orleans/Texas SLM 1-1/32"
----- US Cents per pound -----					
1994-95	73.82	92.34	95.82	-18.52	-22.00
1995-96	82.17	81.19	88.02	0.98	-5.85
1996-97	75.83	74.85	77.22	0.98	-1.39
1997-98	72.28	71.00	72.16	1.28	0.12
1998-99	51.28 *	54.30	67.46	-3.02	-16.18
1999-00	47.23	49.55	50.19	-2.32	-2.96
2000-01	56.78	53.70	53.57	3.08	3.21
2001-02	38.41	38.95	39.05	-0.54	-0.64
2002-03	51.36	51.42	51.16	-0.06	0.20
2003-04	60.00 *	63.17	65.85	-3.17	-2.68
2004-05	48.48	51.25	50.76	-2.77	0.49
August	N.Q	52.20	49.56	-	-
September	51.00	54.45	53.88	-3.45	0.57
October	48.38	50.45	50.80	-2.07	-0.35
November	46.06	47.90	48.80	-1.84	-0.90

Note * Not quoted during the year, however, interpolated from the historical differential data.

Sources:

1. Upto 1995-96: Support Price Policy for Seed Cotton, 1997-98 Crop.
2. For 1996-97: Reuters.
3. For 1997-98: (i) Cotton Outlook (various issues) for Sindh/Punjab Afzal 1-1/32"
(ii) Index - B. Cottons
4. For 1999-00 to 2004-05 Cotton Outlook (various issues).
5. For Orleans Texas SLM 1-1/32" from 1994- 95 to 2004-05 Cotton Outlook (various issues).

**PRICE OF SEED COTTON AS WORKED BACK FROM COTTON YARN
(21's) PRICE AT KARACHI (AUGUST TO NOVEMBER 2004)**

	Rupees
1 Average price of cotton yarn (21's) per bundle of 4.54 kgs	469
2 Average price of cotton yarn (21's) per kg	103
3 Recovery from sale of 0.16 kgs of cotton waste	2
4 Conversion charges from lint to yarn per kg	33
5 Value of 1.16 kgs of lint (item 2 + 3 minus item 4) (a)	72
6 Value of one kg of lint (item 5 divided by 1.16)	62
7 Value of 40 kgs lint	2493
8 Sales tax @ 15 % of item 9	325
9 Net value of 40 kgs lint after deducting sales tax (item 7 minus 8)	2168
10 Storage and transport cost from gin to mill per 40 kgs	40
11 Ex-gin price of 40 kgs lint (item 9 minus 10)	2128
12 Value of 80 kgs of cotton seed (b)	750
13 Ginning charges for 120 kgs seed cotton	300
14 Seed cotton price for 120 kgs (item 11+12 minus item 13) (c)	2578
15 Seed cotton price per 40 kgs (item 14 divided by 3)	859

- Notes:**
- (a) 1.16 kgs of lint = 1 kg of yarn + 0.16 kgs of waste
- (b) Average price of cotton seed for the period August 04, to 14th December, 2004 at Multan market was Rs 375 per 40 kgs.
- (c) 120 kgs of seed cotton = 80 kgs of cotton seed + 40 kgs of lint

Sources:

- 1 Karachi Cotton Association (KCA), Karachi.
- 2 Pakistan Central Cotton Committee (PCCC), Karachi.
- 3 Pakistan Cotton Ginner's Association (PCGA), Karachi
- 4 All Pakistan Textile Mills Association (APTMA), Karachi.

**EXPORT PARITY PRICE OF SEED COTTON AS WORKED BACK FROM ACTUAL
AVERAGE EXPORT PRICE OF PAKISTANI COTTON**

S.No	Item	2004-05 Aug - Oct	1999- 00 to 2003-04
		US Cents per pound	
1.	Actual average export price	47.00	44.00
		OR Rupees (a)	
	Actual average export price per 40 Kgs	2470	2313
2.	Marketing expenses (export & purchase incidentals, insurance & financial expenses) per 40 Kgs	150	150
3.	Ex- gin price of lint per 40 Kgs (item 1- item 2)	2320	2163
4.	Value of 80 kgs of cotton seed (b)	750	750
5.	Ginning charges for 120 kgs of seed cotton	300	300
6.	Value of 120 kgs of seed cotton (c) (items 3 +4 - item 5)	2770	2613
7.	Seed cotton price per 40 kgs (item 6 / 3.)	923	871

- Notes:
- a) Buying exchange rate for export of one US \$ = 59.60 Pak rupees, announced by State Bank of Pakistan as on 17th December 2004.
 - b) Average price of cotton seed for the period August 04, to 14th December, 2004 at Multan market was Rs 375 per 40 kgs.
 - c) 120 kgs of seed cotton = 80 kgs of cotton seed + 40 kgs of lint.
- Sources:
1. FBS , for export prices.
 2. KCA, Karachi for marketing expenses.
 3. Pakistan Cotton Ginners Association, Karachi for ginning charges.
 4. Pakistan Central Cotton Committee, Karachi for cotton seed price.

**EXPORT PARITY PRICE OF SEED COTTON AS WORKED BACK FROM THE CIF NORTH
EUROPE QUOTATIONS OF INDEX B COTTONS AND PAKISTANI AFZAL 1-1/32"**

S.No	Item	Index B Cottons		Afzal 1-1/32"	
		2004-05 Aug - Nov	1999-00 to 2003-04	2004-05 Aug - Nov	1999-00 to 2003-04
----- US Cents per pound -----					
1	Average cif North Europe quotations	51.25	51.17	48.48	50.76
2	Freight charges	4.50	4.50	4.50	4.50
3	Export price (item 1 - item 2)	46.75	46.67	43.98	46.26
4	Insurance, agents commission, and port handling charges @ 4% of export price	1.87	1.87	1.76	1.85
5	Net export price (item 3 - item 4)	44.88	44.80	42.22	44.41
OR ----- Rupees (a) -----					
		2359	2355	2219	2334
6	Marketing expenses (export & purchase incidentals, insurance & financial expenses) per 40 kgs	150	150	150	150
7	Ex- gin price of lint per 40 kgs (item 5 - item 6)	2209	2205	2069	2184
8	Value of 80 kgs of cotton seed (b)	750	750	750	750
9	Ginning charges for 120 kgs of seed cotton	300	300	300	300
10	Value of 120 kgs of seed cotton (c) (items 7 + 8 - item 9)	2659	2655	2519	2634
11	Seed cotton price per 40 kgs (item 10 / 3)	886	885	840	878

- Notes:
- Buying exchange rate for export of one US \$ = 59.60 Pak rupees, announced by State Bank of Pakistan as on 17th December 2004.
 - Average price of cotton seed for the period August 04, to 14th December, 2004 at Multan market was Rs 375 per 40 kgs.
 - 120 kgs of seed cotton = 80 kgs of cotton seed + 40 kgs of lint.

Sources:

- Cif quotations calculated from Annex- X.
- KCA, Karachi for marketing expenses.
- Pakistan Cotton Ginners Association, Karachi for ginning charges.
- Pakistan Central Cotton Committee Karachi, for cotton seed price.

**EXPORT PARITY PRICE OF SEED COTTON AS WORKED BACK FROM THE FUTURE'S
CONTRACT PRICE OF NEW YORK NO. 2 COTTON (AVERAGE OF
OCTOBER, 2005, DECEMBER, 2005 AND MARCH, 2006)**

S.No	Item	Price calculations
		US Cents per pound
1.	Future's contract price as on December 1, 04	48.05
2.	Grade and staple discount	4.60
3.	Discount on account of inland transportation and certification of stocks	6.00
4.	Parity price of Afzal 1-1/32" at Karachi	37.45
		OR Rupees (a)
	Parity prices per 40 kgs	1968
5.	Marketing expenses (export & purchase incidentials, insurance & financial expenses per 40 kgs	150
6.	Ex- gin price of lint per 40 kgs (item 4 - item 5)	1818
7.	Value of 80 kgs of cotton seed (b)	750
8.	Ginning charges for 120 kgs of seed cotton	300
9.	Value of 120 kgs of seed cotton (c) (items 6 + 7 - item 8)	2268
10.	Seed cotton price per 40 kgs (item 9 / 3)	756

- Notes:
- a) Buying exchange rate for export of one US \$ = 59.60 Pak rupees, announced by State Bank of Pakistan as on 17th December, 2004.
 - b) Average price of cotton seed for the period August 04, to 14th December, 2004 at Multan market was Rs 375 per 40 kgs.
 - c) 120 kgs of seed cotton = 80 kgs of cotton seed + 40 kgs of lint.
- Sources:
1. Cotton Outlook of Dec, 3, 2004 for future contract price.
 2. KCA, Karachi for marketing expenses.
 3. Pakistan Cotton Ginners Association, Karachi for ginning charges.
 4. Pakistan Central Cotton Committee, Karachi for cotton seed price.

**EXPORT PARITY PRICE OF SEED COTTON AS WORKED BACK FROM THE
AVERAGE FOB PRICE OF PAKISTANI COTTON YARN (20'S)**

S.No	Item	2004-05 Aug - Nov		1999- 00 to 2003-04
		US Cents per kg		
1.	Average fob price	181.00		180.00
		OR	Rupees	(a)
			108	107
2.	Fob expenses per kg (transport cost, wharfage, port handling & forwarding, adhesive & EDS)	2		2
3.	Export packing cost per kg	1		1
4.	Sales tax	14		14
5.	Value of 1 kg yarn (item 1 - (items 2 + 3)	91		91
6.	Recovery from 0.16 kgs cotton waste	2		2
7.	Conversion charges of lint into yarn per kg	33		33
8.	Value of 1.16 kgs cotton lint (b) (items 4 +5 -item 6)	60		60
9.	Price of one kg cotton lint (item7/1.16) OR Price of 40 kgs cotton lint	52		51
		2076		2058
10.	Transport cost from ginnery to mill, local tax(per 40kgs)	40		40
11.	Ex-gin price of 40 kgs lint (item 8 - item 9)	2036		2018
12.	Value of 80 kgs cotton seed (c)	750		750
13.	Ginning charges for 120 kgs of seed cotton	300		300
14.	Seed cotton price of 120 kgs (item10+11- item12) (d) OR	2486		2468
15.	Seed cotton price per 40 kgs (item 13/3)	829		823

- Notes:
- Buying exchange rate for import of one US \$ = 59.60 Pak rupees, announced by State Bank of Pakistan as on 17 th December. 2004.
 - 1.16 kgs of lint = 1 kg of yarn +0.16 kgs of waste.
 - Average price of cotton seed for the period August 04, to 14th December, 2004 at Multan market was Rs 375 per 40 kgs.
 - 120 kgs of seed cotton = 80 kgs of cotton seed + 40 kgs of lint.

Sources:

- Cotton Outlook various issues for fob price.
- APTMA, Karachi for items, 2, 3 and 9.
- Annex X for items 5 and 6.
- Pakistan Cotton Ginners Association, Karachi for ginning charges.
- Pakistan Central Cotton Committee Karachi, for cotton seed price.

**IMPORT PARITY PRICE OF SEED COTTON AS WORKED BACK FROM THE AVERAGE
QUOTED CIF NORTH EUROPE PRICE OF ORLEANS/ TEXAS SLM 1-1/32"**

S. No	Item	2004-05 Aug - Nov	1999-00 to 2003-04
		US cent per pound	
1.	Average cif North Europe quotations	50.76	51.96
2.	Freight charges	4.50	4.50
3.	Forwarding charges @ 1.5% cif (North Europe Quotations)	0.76	0.78
4.	Cif (Karachi) price	56.02	57.24
5.	Insurance, agents commission, and port handling charges @ 1.5% of cif (Karachi) price	0.84	0.86
6.	Landed cost at Karachi	56.86	58.10
		OR Rupees per 40 kgs (a)	
7.	Net cif (Karachi) price	2999	3064
8.	Handling charges at port and transport cost from port to textile mills at Karachi @ 2.5 % of cif price	75	77
9.	Ex- gin price of lint (item 7 + item 8)	3074	3140
10.	Value of 80 kgs of cotton seeds (b)	750	750
11.	Ginning charges for 120 kgs of seed cotton including ginning losses	300	300
12.	Value of 120 kgs of seed cotton (item 9 +item 10 - item 11)	3524	3590
13.	Seed cotton price per 40 kgs (item 12/ 3)	1175	1197

- Notes:
- a) Selling exchange rate for imports of one US \$ = 59.80 Pak rupees, announced by State Bank of Pakistan as on 17th December 2004.
 - b) Average price of cotton seed for the period August 2004 to 14th December 2004 at Multan was Rs 375 per 40 kgs.

- Sources:
1. Cif (North Europe) price Annex - X.
 2. KCA, for incidentals charges.
 3. Pakistan Cotton Ginners Association, Karachi for ginning charges.
 4. Pakistan Central Cotton Committee, Karachi for cotton seed price

**IMPORT PARITY PRICE OF SEED COTTON AS WORKED BACK FROM THE
ACTUAL AVERAGE CIF (KARACHI) PRICE OF IMPORTED COTTON**

S. No.	Item	2004-05 Aug 04	1999-00 to 2003-04
		Rupees per 40 kgs	
1.	Actual average cif (Karachi) price	3487	3189
2.	Handling charges at port and transport cost from port to textile mill at Karachi @ 2.5 % of cif price	87	80
3.	Ex- gin price of lint (Item 1+ item 2)	3574	3269
4.	Value of 80 kgs of cotton seed (a)	750	750
5.	Ginning charges for 120 kgs of seed cotton including ginning losses	300	300
6.	Value of 120 kgs of seed cotton (item 3 +item 4 - item 5)	4024	3719
7.	Seed cotton price (item 6/ 3)	1341	1240

Note: a) Average price of cotton seed for the period August 2004 to 14 th December 2004 at Multan was Rs 375 per 40 kgs.

- Sources:
1. FBS, for cif (Karachi price).
 2. KCA, for incidentals charges.
 3. Pakistan Cotton Ginners Association, Karachi for ginning charges.
 4. Pakistan Central Cotton Committee, Karachi for cotton seed price

ANNEX-XVII

**REQUIREMENT AND SUPPLY OF CERTIFIED COTTON SEED
BY THE PUBLIC AND PRIVATE SECTORS IN PUNJAB:
1995-96 TO 2004-05**

Crop Year	Seed Certified at				Total	Total Requirement	Area covered with certified seed
	NSC standard (a)		Relaxed standard (b)				
	Public	Private	Public	Private			
	----- Thousand tonnes -----						Per cent
1995-96	8.43	6.74	3.68	5.79	24.64	49.27	50.0
1996-97	4.50	4.12	-	-	8.62	50.80	17.0
1997-98	7.20	7.50	0.24	5.68	20.62	46.97	43.9
1998-99	0.24	2.65	4.03	8.20	15.12	45.66	33.1
1999-00	0.24	2.88	3.97	6.35	13.44	46.59	28.8
2000-01	3.14	27.85	1.73	-	32.72	47.73	68.6
2001-02	3.30	16.83	-	-	20.13	50.53	39.8
2002-03	5.74	27.98	-	-	33.72	44.17	76.3
2003-04	3.82	23.24	-	-	27.06	47.74	56.7
2004-05	5.35	24.63	-	-	29.98	50.68	59.2

- Notes:**
- (a) National Seed Council (NSC) standards has minimum 70 percent germination and 98 per cent purity, and maximum 0.2 per cent off-types.
 - (b) The relaxed standard varied form year to year depending on the climatic and other specific conditions pertaining to each year.
 - (c) The total seed requirement for each year has been calculated @ 20 kgs/ha.
- Sources:**
- i) Federal Seed Certification and Registration Department (FSC&RD), MINFAL, Islamabad.
 - ii) Working Paper for 81st meeting of FCA

ANNEX-XVIII

**REQUIREMENT AND SUPPLY OF CERTIFIED COTTON SEED
BY THE PUBLIC AND PRIVATE SECTORS IN SINDH:
1995-96 TO 2004-05**

Crop Year	Seed Certified at				Total	Total Requirement	Area covered with certified seed
	NSC standard (a)		Relaxed standard (b)				
	Public	Private	Public	Private			
	----- Thousand tonnes -----						Per cent
1995-96	0.08	-	0.40	0.46	1.94	15.88	12.2
1996-97	-	0.30	-	-	0.30	18.04	1.7
1997-98	0.22	0.38	-	8.37	8.97	18.01	49.8
1998-99	0.05	-	0.05	23.17	23.27	18.91	123.1
1999-00	0.01	-	0.05	0.80	0.86	19.01	4.5
2000-01	-	0.63	-	0.46	1.09	15.71	6.9
2001-02	0.02	1.46	-	-	1.48	16.42	9.0
2002-03	-	2.08	-	-	2.08	16.28	12.8
2003-04	-	1.92	-	-	1.92	16.84	11.40
2004-05	0.03	7.04	-	-	7.07	18.35	38.5

- Notes:**
- National Seed Council (NSC) standards has minimum 70 percent germination and 98 per cent purity, and maximum 0.2 per cent off-types.
 - The relaxed standard varied from year to year depending on the climatic and other specific conditions pertaining to each year.
 - The total seed requirement for each year has been calculated @ 30 kgs/ha.
- Sources:**
- Federal Seed Certification and Registration Department (FSC&RD), MINFAL, Islamabad.
 - Working Paper for 81st meeting of FCA.

ECONOMIC EFFICIENCY OF RESOURCE USE IN SEEDCOTTON
AT AVERAGE FARMS IN PUNJAB

(PAM)

Description	Gross Revenue	Traded cost	Domestic Factors Cost	Profits
-------------	---------------	-------------	-----------------------	---------

----- Rupees per acre -----

Based on Export parity prices**2002-03**

Private Prices	15043	5780	7089	2174
Social Prices	15278	4766	6529	3983
Transfers	-235	1014	560	-1809

2003-04

Private Prices	21751	6383	7223	8146
Social Prices	17861	5192	6646	6022
Transfers	3891	1190	577	2123

2004-05

Private Prices	15549	6974	7548	1027
Social Prices	16141	5770	7016	3354
Transfers	-592	1204	532	-2327

Average

Private Prices	15216	5717	6717	2782
Social Prices	14154	4860	6198	3096
Transfers	1062	857	519	-314

Based on Import parity prices**2002-03**

Private Prices	15043	5780	7089	2174
Social Prices	20074	4881	6540	8653
Transfers	-5031	899	549	-6479

2003-04

Private Prices	21751	6383	7223	8146
Social Prices	23764	5290	6655	11819
Transfers	-2012	1093	568	-3673

2004-05

Private Prices	15549	6974	7548	1027
Social Prices	20978	5890	6883	8205
Transfers	-5429	1084	665	-7177

Average

Private Prices	17476	6379	7287	3811
Social Prices	21619	5351	6693	9576
Transfers	-4143	1028	594	-5765

ECONOMIC EFFICIENCY OF RESOURCE USE IN SEEDCOTTON
AT AVERAGE FARMS IN SINDH

(PAM)

Description	Gross Revenue	Traded cost	Domestic Factors Cost	Profits
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----- Rupees per acre -----

Based on Export parity prices**2002-03**

Private Prices	12860	4585	6017	2259
Social Prices	13839	3814	5616	4408
Transfers	-979	771	401	-2150

2003-04

Private Prices	17167	4823	6111	6233
Social Prices	16158	3949	5722	6487
Transfers	1009	874	389	-254

2004-05

Private Prices	13728	5807	6269	1652
Social Prices	14214	4802	5699	3714
Transfers	-486	1006	570	-2061

Average

Private Prices	13171	4667	5549	2955
Social Prices	12767	3980	5179	3607
Transfers	404	687	370	-653

Based on Import parity prices**2002-03**

Private Prices	12860	4585	6017	2259
Social Prices	18146	3814	5616	8716
Transfers	-5286	771	401	-6457

2003-04

Private Prices	17167	4823	6111	6233
Social Prices	21459	3949	5722	11788
Transfers	-4292	874	389	-5555

2004-05

Private Prices	13728	5807	6269	1652
Social Prices	18437	4802	5699	7937
Transfers	-4709	1006	570	-6284

Average

Private Prices	14588	5072	6132	3384
Social Prices	19350	4188	5679	9483
Transfers	-4763	883	453	-6099

