AGRICULTURAL SECTOR SUPPORT PROGRAM

AGRICULTURAL DATA COLLECTION COMPONENT

QUARTERLY REPORT
APRIL 1 - JUNE 30, 1993

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1. HIGHLIGHTS:

The Area Sampling Frame section ordered a large number of aerial photographs and contact prints for sample segment points from the Survey of Pakistan (SOP) during the quarter but since they were out of developing fluid no photos were delivered. This substantially slowed progress of the project. Field layout work continued in the Punjab for those segments that are not covered by aerial photography. OY wheat surveys were conducted in 7 districts and a Wheat Yield Validation survey was also conducted. A Steering Committee meeting was held in Quetta. Three TDY's from the National Agricultural Statistics Service (NASS) also visited the ADC Project during the quarter. Mr. Birkett updated the wheat and cotton yield forecasting models, prepared preliminary documentation. He also analyzed results of the 1992 Rice Yield Validation survey. Mr. Lippert worked on segment lay-out problems in terraced areas and in areas with no permanent boundaries. Mr. Sivers, Chief of the NASS International Programs office visited the project and consulted with key ADC Project officials, both in Islamabad and in the provinces.

2. FRAME CONSTRUCTION:

During the quarter, FBS referred 681 sample segment points for Punjab Province to Survey of Pakistan (SOP) for preparing photo enlargements. 1246 photo enlargements are required to be prepared for Punjab Province see Table 1 . During the quarter, no enlargement could be prepared because SOP was out of chemicals required for their preparation and they were not expecting to receive the next supply of chemicals in the near future. Survey of Pakistan authorities were requested to consider the possibility of preparation of photo enlargements, if the required chemicals were arranged by FBS. SOP accepted the proposal and USAID was requested to make arrangements for the supply of chemicals to the SOP. A specimen of chemicals provided by USAID was approved by them. SOP estimated that 1000 packets of the chemicals would be required to meet FBS requirements for preparation of photo enlargements and contact prints. During the quarter, the first installment of 10 packets of chemicals were supplied to SOP.

Field layouts work (for segments with no aerial photography) in Punjab Province was started in October, 1992 and 610 out of 782 (reported as 722 in the Jan - Mar Quarterly Report) were completed by the end of this quarter (see Table 1). 21 were unapproachable and the remaining 151 will be layed-out at the time of the Rabi 1993 acreage survey.

1096 random points for sample segments for the Sindh Province were marked on topo maps and referred to SOP for ascertaining the list of sample segments for which photo enlargement could be prepared. Survey of Pakistan said that photo enlargements could be prepared

for 920 segments. Field layouts will have to be prepared for 176 segments. SOP was also requested to prepare 305 contact prints for marking sample points. In all up to June, 1993 SOP has been asked to prepare 970 contact prints for Sindh Province.

692 random points for sample segments for the NWFP were marked on the topo graphic maps and referred to SOP during this quarter, for obtaining the list of sample segments for which photo enlargements could be prepared.

TABLE 1: THE POSITION OF FIELD LAYOUTS PREPARED/PENDING AND ENLARGEMENTS FOR PUNJAB PROVINCE AS OF JUNE 30, 1993

S.NO	NAME OF DIST	TOTAL SEGMENTS	LAYOUTS PREPARED	LAYOUTS UNAPPRO-ACHED	LAYOUTS PENDING	TOTAL LAYOUTS	TOTAL ENLARGEMENTS
01	ISLAMABAD	18	0	0	18	18	0
02	RAWALPINDI	50	0	0	50	50	0
03	JHELUM	38	15	0	8	23	15
04	ATTOCK	70	56	6	1	63	7
05	CHAKWAL	60	53	1	0	54	6
06	GUJRANWALA	78	8	0	1	9	69
07	GUJRAT	74	21	0	3	24	50
08	SIALKOT	72	55	3	1	59	13
09	SARGODHA	78	15	0	0	15	63
10	KHUSHAB	74	36	1	0	37	37
11	MIANWALI	80	44	1	4	49	31
12	BHAKKAR	62	43	0	0	43	19
13	LAHORE	26	13	0	0	13	13
14	KASUR	54	21	0	1	22	32
15	SHEIKHUPRA	80	13	0	4	17	63
16	OKARA	60	11	0	2	13	47
17	FAISALABAD	84	3	0	0	3	81
18	TOBATEKSING	40	3	0	0	3	37
19	JHANG	102	16	0	1	17	85
20	MULTAN	102	7	0	6	13	89
21	KHANEWAL	48	13	0	1	14	34
22	VEHARI	58	2	0	3	5	53
23	SAHIWAL	80	7	0	4	11	69
24	BHAWALPUR	80	22	0	7	29	51
25	BHAWALNAGAR	90	52	0	3	55	35
26	RAHIMYARKHAN	100	14	0	3	17	83
27	D.G..KHAN	62	16	7	9	32	30
28	RAJANPUR	54	19	1	4	24	30
29	MUZAFFARGARH	86	18	1	6	25	61
30	LAYYAH	68	14	0	11	25	43
	TOTAL	2028	610	21	151	782	1246

3. SURVEY ACTIVITY:

Last quarter a sample of wheat OY and post harvest loss plots was placed in wheat fields found in the 1993 Rabi acreage survey (see Item 4 of the Jan - Mar, 1992 Quarterly Report for a full description of these plots and procedures) and wheat OY surveys were conducted last quarter and this quarter. The results of these wheat OY surveys are shown in Appendix 1 and the results of the wheat post harvest loss surveys are shown in Appendix 2.

The second Wheat Yield Validation survey in 7 pilot districts was conducted during the quarter to determine the farmer's utilized yield per hectare (see Item 3 of the Jan - Mar 1993 Quarterly Report for a full description of this survey and how the results will be used. See Item 4 of the same report for a description of the sample design). Results of this survey will be shown in the October - December 1993 quarterly report.

The 1992-93 sugarcane OY data are shown by Appendix 3. Prior to the 1992-93 season, the OY plot was two rows wide and 7 meters long - - divided into seven partitions of one meter each. However, results from the 1990-91 and 1991-92 surveys showed that a plot 4 meters in length gave essentially the same per hectare yields as one 7 meters in length (see Item 3 of the April - June 1992 Quarterly Report for a full discussion of this subject). Therefore, beginning with the 1992-93 season, the plot length was reduced to 4 meters.

Counts and measurements are made in each partition and per hectare yields are computed from the first partition, from partitions one and two combined, from partitions one, two and three combined, etc. until all four partitions are incrementally used-up. The results of this survey by partition are shown by Appendix 4.

The first Rice Yield Validation survey was conducted during the 1992 season. The purpose of this survey is to determine the average yield per hectare realized by the farmer in the seven pilot districts. The yield indicated by the Area Sampling Frame Objective Yield (ASF OY) survey is essentially a biological yield and does not take into account normal losses incurred by the farmer during the harvesting, drying and threshing of his crop. This ASF yield is naturally higher than the average yield realized by the farmer. A measure of the difference between yield from the ASF OY survey and the farmer realized yield is needed so a statistically sound adjustment factor can be determined. This adjustment factor will be used to adjust the yield from the OY survey down to that realized by the farmer.

The "Rice Yield Validation" survey is planned for three consecutive years and will make possible the computation of this adjustment factor. See Item 4 of this report for a full description of the sampling design.

Results of the 1992 "Rice Yield Validation" survey are shown in Appendix 5.

4. SAMPLING:

No samples were selected during this quarter. The sample design for the 1992-93 "Wheat Yield Validation" survey was shown in Item 4 of the Jan - Mar 1993 Quarterly Report. The sample design for the 1992 "Rice Yield Validation" survey was shown in the Jul - Sept 1992 Quarterly Report.

5. GOP SUPPORT:

The third meeting of the Steering Committee of the ADC Project was held in Quetta on June 27, 1993. The agenda for this meeting is shown by Appendix 6. The minutes from the meeting are shown by Appendix 7.

Since some of the people at the meeting were not too familiar with the Area Sampling Frame (ASF), the ADC Project Team Leader started off the program by making a presentation on construction of the ASF. As can be seen from the agenda, most of the meeting time was spent on future plans for the ADC Project and items that must be resolved before the Project becomes operational.

Plans were made at this meeting to hold the fourth Steering Committee meeting in December, 1993.

6. TRAINING:

The Wheat Yield Validation enumerators schools were taught in late March (see Item 6 of the Jan - March, 1993 quarterly report).

7. CONSULTATION:

Tom Birkett, a TDY expert from the National Agricultural Statistics Service (NASS), set up the wheat yield forecasting model in January of 1992 and a cotton yield forecasting model in April of 1992 (see Item 7 of the April - June 1992 Quarterly Report).

This quarter, Mr. Tom Birkett returned to the ADC Project to update the wheat and cotton yield forecasting models through the 1992 crops and forecast the March 15 yield for the 1993 wheat crop. He also prepared preliminary documentation of the two models. In addition, he analyzed the 1991/92 wheat and 1992 rice yield validation data in conjunction with the model work. His Scope of Work is shown by Appendix 8. A copy of his Trip Report documenting his accomplishments can be obtained from FBS or the ADC Project Office.

Mr. Ed Lippert, a TDY expert from NASS visited the ADC Project in this quarter to work on several problems involved with segment layouts.

In summary, this TDY was asked to:

1) Recommend the best method for determining the center of a segment on the ground (in the field) when there are few <u>if any</u> permanent boundaries in level, semi-level and terraced areas.

2) Recommend a workable method for laying-out and enumerating segments which fall in semi-level and terraced areas.

3) Recommend a procedure that will enable the field workers to find the segment and locate its center once the photo or gird sheet containing the segment sketch is given to them for enumeration.

4) Document his recommendation in a Trip Report.

A copy of Mr. Lippert's trip report can be obtained from the ADC Project office or from the ADC Cell of FBS. Mr. Lippert's "Scope of Work" is shown by Appendix 9.

Mr. Larry Sivers, Director of NASS International Programs office visited the ADC Project during the quarter for a management TDY. He met with a number of officials and also made ADC Project trips to Abbottabad, Lahore and Sheikhupura. A copy of his Trip Report is shown by Appendix 10.

8. DELIVERABLES FOR THE QUARTER:

The deliverables for the quarter as defined in the <u>ADC NINTH YEAR WORKPLAN</u> included:

- Wheat OY samples selected by 13 February, 1994
- Wheat OY survey results finalized by 20 May, 1994.
- Wheat Yield Validation survey results finalized by June 15, 1994.
- July ASF survey calendar prepared by 4 May, 1994.
- Hire employees to fill all sanctioned positions as per revised PC-1.
- Provinces must assume data entry and processing responsibility for all data collected.

- Provide appropriate/timely funding for ADC activities.
- Provide for maintenance/installation of all project funded equipment.
- Provide requested monthly progress report of ADC activities to the Project office.
- Provide space for establishing objective yield laboratories in each province by the dates specified in this document.
- FBS requested in house training provided in a timely manner.
- GOP requested consultation responded to in a timely manner.
- April - June, 1993 Quarterly Report presented by 31 July, 1993.

The above target dates were generally met except for three exceptions. All positions sanctioned for Balochistan as per the revised PC-1 had not been filled. They had all been filled in the other three provinces except for a few posts. NWFP was the only province that had found suitable objective yield laboratory space. The release of this report was delayed due to the involvement of the Team Leader in numerous ADC Project activities.

WHEAT OBJECTIVE YIELD SUMMARY 1992-93 (PLOT 1)

	AREA		YIELD		PRODUCTION	
	HECTARES (Adjusted)	C.V (%)	KG/HECT.	C.V (%)	M.TONNES	C.V (%)
Pakistan	1,493,455	2.4	2,826	2.8	4,220,296	3.7
Punjab	1,215,858	2.7	2,642	3.4	3,212,081	4.3
Faisalabad	252,451	3.9	2,662	8.5	672,088	9.4
Jhang	363,651	6.1	2,962	5.2	1,076,985	8.1
Multan	333,756	5.8	2,530	7.4	844,261	9.4
Sheikhupura	266,000	4.2	2,326	5.9	618,747	7.2
Sindh	277,597	5.5	3,632	4.3	1,008,215	7.0
Nawabshah	172,633	7.0	3,954	6.0	682,540	9.2
Larkana	18,554	20.0	2,107	6.2	39,094	21.0
Hyderabad	86,411	10.2	3,317	5.3	286,582	11.5

WHEAT OBJECTIVE YIELD SUMMARY 1992-93 (PLOT 2)

	AREA		YIELD		PRODUCTION	
	HECTARES (Adjusted)	C.V (%)	KG/HECT.	C.V (%)	M.TONNES	C.V (%)
Pakistan	1,493,455	2.4	2,801	2.6	4,182,813	3.6
Punjab	1,215,858	2.7	2,641	3.2	3,211,579	4.2
Faisalabad	252,451	3.9	2,692	7.3	679,568	8.2
Jhang	363,651	6.1	2,944	5.4	1,070,656	8.1
Multan	333,756	5.8	2,396	7.3	799,702	9.4
Sheikhupura	266,000	4.2	2,487	5.5	661,653	6.9
Sindh	277,597	5.5	3,499	4.2	971,233	7.0
Nawabshah	172,633	7.0	3,764	5.9	649,711	9.2
Larkana	18,554	20.0	1,756	6.4	32,574	21.1
Hyderabad	86,411	10.2	3,344	4.6	288,949	11.2

- (Continued) -

WHEAT OBJECTIVE YIELD SUMMARY 1992-93 (PLOT 1 & 2 Combined)

	AREA		YIELD		PRODUCTION	
	HECTARES (Adjusted)	C.V (%)	KG/HECT.	C.V (%)	M.TONNES	C.V (%)
Pakistan	1,493,455	2.4	2,813	2.4	4,201,554	3.5
Punjab	1,215,858	2.7	2,642	2.9	3,211,830	4.0
Faisalabad	252,451	3.9	2,677	7.4	675,828	8.3
Jhang	363,651	6.1	2,953	4.7	1,073,820	7.7
Multan	333,756	5.8	2,463	6.6	821,982	8.8
Sheikhupura	266,000	4.2	2,407	4.9	640,200	6.4
Sindh	277,597	5.5	3,565	3.9	989,724	6.8
Nawabshah	172,633	7.0	3,859	5.5	666,125	8.9
Larkana	18,554	20.0	1,931	5.7	35,834	20.9
Hyderabad	86,411	10.2	3,330	4.4	287,765	11.1

WHEAT POST HARVEST LOSS SUMMARY 1993 (PLOT 1)

	AREA		YIELD		PRODUCTION	
	HECTARES (Adjusted)	C.V (%)	KG/HECT.	C.V (%)	M.TONNES	C.V (%)
Pakistan	1,493,455	2.4	64	5.9	95,428	6.3
Punjab	1,215,858	2.7	73	6.3	88,510	6.9
Faisalabad	252,451	3.9	79	13.1	19,895	13.7
Jhang	363,651	6.1	65	13.6	23,627	14.9
Multan	333,756	5.8	87	10.1	29,122	11.7
Sheikhupura	266,000	4.2	60	14.2	15,866	14.9
Sindh	277,597	5.5	25	8.2	6,918	9.9
Nawabshah	172,633	7.0	20	11.3	3,485	13.3
Larkana	18,554	20.0	11	20.7	209	29.1
Hyderabad	86,411	10.2	37	12.5	3,223	16.2

WHEAT POST HARVEST LOSS SUMMARY 1993 (PLOT 2)

	AREA		YIELD		PRODUCTION	
	HECTARES (Adjusted)	C.V (%)	KG/HECT.	C.V (%)	M.TONNES	C.V (%)
Pakistan	1,493,455	2.4	59	6.3	87,747	6.7
Punjab	1,215,858	2.7	66	6.8	80,342	7.3
Faisalabad	252,451	3.9	68	15.0	17,131	15.5
Jhang	363,651	6.1	47	15.8	16,964	17.0
Multan	333,756	5.8	79	10.0	26,521	11.6
Sheikhupura	266,000	4.2	74	15.3	19,725	15.9
Sindh	277,597	5.5	27	8.3	7,405	10.0
Nawabshah	172,633	7.0	22	11.4	3,859	13.4
Larkana	18,554	20.0	19	18.8	346	27.8
Hyderabad	86,411	10.2	37	13.2	3,201	16.7

- (Continued) -

WHEAT POST HARVEST LOSS SUMMARY 1992-93 (PLOTS 1 & 2 COMBINED)

	AREA		YIELD		PRODUCTION	
	HECTARES (Adjusted)	C.V (%)	KG/HECT.	C.V (%)	M.TONNES	C.V (%)
Pakistan	1,493,455	2.4	61	4.9	91,729	5.5
Punjab	1,215,858	2.7	70	5.3	84,567	6.0
Faisalabad	252,451	3.9	73	11.9	18,513	12.5
Jhang	363,651	6.1	56	11.5	20,437	13.0
Multan	333,756	5.8	83	8.7	27,821	10.5
Sheikhupura	266,000	4.2	67	11.2	17,796	12.0
Sindh	277,597	5.5	26	6.9	7,162	8.8
Nawabshah	172,633	7.0	21	8.4	3,672	11.0
Larkana	18,554	20.0	15	15.3	278	25.4
Hyderabad	86,411	10.2	37	11.9	3,212	15.7

SUGARCANE OBJECTIVE YIELD SUMMARY 1992-93 (Parts 1-4)

	AREA		YIELD		PRODUCTION	
	HECTARES (Adjusted)	C.V (%)	KG/HECT.	C.V (%)	M.TONNES	C.V (%)
PAKISTAN	351,404	5.7	94,973	2.7	33,373,760	6.3
PUNJAB	178,050	8.1	60,533	5.2	10,777,831	9.6
FAISALABAD	84,114	10.0	61,618	8.1	5,182,999	12.9
JHANG	64,761	15.8	64,392	8.4	4,170,068	18.0
MULTAN	2,506	31.7	45,826	9.4	114,848	33.2
SHEIKHUPURA	26,669	20.4	49,117	8.2	1,309.914	22.1
SIND	173,354	8.0	130,346	3.2	22,595,930	8.6
NAWABSHAH	83,065	12.0	72,178	7.0	5,995,462	13.9
HYDERABAD	90,289	10.7	183,860	3.5	16,600,468	11.2

SUGARCANE OBJECTIVE YIELD SUMMARY 1992-93 (PART 1)

	AREA		YIELD		PRODUCTION	
	HECTARES (Adjusted)	C.V (%)	KG/HECT.	C.V (%)	M.TONNES	C.V (%)
PAKISTAN	351,404	5.7	94,973	2.7	33,373,760	6.3
PUNJAB	178,050	8.1	60,533	5.2	10,777,831	9.6
FAISALABAD	84,114	10.0	61,618	8.1	5,182,999	12.9
JHANG	64,761	15.8	64,392	8.4	4,170,068	18.0
MULTAN	2,506	31.7	45,826	9.4	114,848	33.2
SHEIKHUPURA	26,669	20.4	49,117	8.2	1,309,914	22.1
SIND	173,354	8.0	130,346	3.2	22,595,930	8.6
NAWABSHAH	83,065	12.0	72,178	7.0	5,995,462	13.9
HYDERABAD	90,289	10.7	183,860	3.5	16,600,468	11.2

SUGARCANE OBJECTIVE YIELD SUMMARY 1992-93 (PART 2)

	AREA		YIELD		PRODUCTION	
	HECTARES (Adjusted)	C.V (%)	KG/HECT.	C.V (%)	M.TONNES	C.V (%)
PAKISTAN	351,404	5.7	94,372	3.0	33,162,661	6.4
PUNJAB	178,050	8.1	58,729	5.9	10,456,718	10.0
FAISALABAD	84,114	10.0	53,992	9.3	4,541,508	13.7
JHANG	64,761	15.8	69,788	9.6	4,519,484	18.6
MULTAN	2,506	31.7	43,018	11.3	107,811	33.9
SHEIKHUPURA	26,669	20.4	48,292	9.8	1,287,915	22.7
SIND	173,354	8.0	130,980	3.4	22,705,943	8.7
NAWABSHAH	83,065	12.0	69,619	8.6	5,782,954	14.8
HYDERABAD	90,289	10.7	187,432	3.4	16,922,989	11.2

SUGARCANE OBJECTIVE YIELD SUMMARY 1992-93 (PART 3)

	AREA		YIELD		PRODUCTION	
	HECTARES (Adjusted)	C.V (%)	KG/HECT.	C.V (%)	M.TONNES	C.V (%)
PAKISTAN	351,404	5.7	95,262	3.2	33,475,448	6.5
PUNJAB	178,050	8.1	61,345	6.6	10,922,571	10.4
FAISALABAD	84,114	10.0	63,730	10.7	5,360,585	14.7
JHANG	64,761	15.8	63,724	10.0	4,126,822	18.8
MULTAN	2,506	31.7	50,961	12.8	127,718	34.5
SHEIKHUPURA	26,669	20.4	49,025	11.4	1,307,446	23.5
SIND	173,354	8.0	130,097	3.6	22,552,877	8.7
NAWABSHAH	83,065	12.0	65,794	7.4	5,465,205	14.1
HYDERABAD	90,289	10.7	189,256	4.1	17,087,672	11.4

- (Continued) -

SUGARCANE OBJECTIVE YIELD SUMMARY 1992-93 (PART 4)

	AREA		YIELD		PRODUCTION	
	HECTARES (Adjusted)	C.V (%)	KG/HECT.	C.V (%)	M.TONNES	C.V (%)
PAKISTAN	351,404	5.7	94,403	3.1	33,173,759	6.5
PUNJAB	178,050	8.1	60,572	6.2	10,784,947	10.2
FAISALABAD	84,114	10.0	66,299	10.0	5,576,737	14.2
JHANG	64,761	15.8	60,506	9.1	3,918,414	18.3
MULTAN	2,506	31.7	48,567	9.6	121,716	33.3
SHEIKHUPURA	26,669	20.4	43,799	9.9	1,168,081	22.8
SIND	173,354	8.0	129,151	3.5	22,388,812	8.7
NAWABSHAH	83,065	12.0	76,494	8.4	6,354,018	14.7
HYDERABAD	90,289	10.7	177,595	3.5	16,034,794	11.2

SUGARCANE OBJECTIVE YIELD SUMMARY 1992-93 (PART 1-2)

	AREA		YIELD		PRODUCTION	
	HECTARES (Adjusted)	C.V (%)	KG/HECT.	C.V (%)	M.TONNES	C.V (%)
PAKISTAN	351,404	5.7	94,778	2.8	33,305,231	6.3
PUNJAB	178,050	8.1	60,325	5.4	10,740,866	9.7
FAISALABAD	84,114	10.0	58,773	8.7	4,943,668	13.3
JHANG	64,761	15.8	66,323	8.6	4,295,110	18.1
MULTAN	2,506	31.7	44,522	11.1	111,580	33.8
SHEIKHUPURA	26,669	20.4	52,139	9.2	1,390,508	22.5
SIND	173,354	8.0	130,164	3.3	22,564,365	8.6
NAWABSHAH	83,065	12.0	71,237	7.0	5,917,309	13.9
HYDERABAD	90,289	10.7	184,376	3.7	16,647,056	11.2

SUGARCANE OBJECTIVE YIELD SUMMARY 1992-93 (PART 1-3)

	AREA		YIELD		PRODUCTION	
	HECTARES (Adjusted)	C.V (%)	KG/HECT.	C.V (%)	M.TONNES	C.V (%)
PAKISTAN	351,404	5.7	95,309	2.8	33,492,045	6.3
PUNJAB	178,050	8.1	60,506	5.2	10,773,160	9.6
FAISALABAD	84,114	10.0	60,284	8.2	5,070,763	12.9
JHANG	64,761	15.8	65,366	8.6	4,233,162	18.1
MULTAN	2,506	31.7	45,412	10.2	113,811	33.5
SHEIKHUPURA	26,669	20.4	50,824	8.7	1,355,424	22.3
SIND	173,354	8.0	131,055	3.3	22,718,885	8.6
NAWABSHAH	83,065	12.0	71,350	7.3	5,926,679	14.0
HYDERABAD	90,289	10.7	185,984	3.6	16,792,207	11.3

- (Continued) -

SUGARCANE OBJECTIVE YIELD SUMMARY 1992-93 (PART 1-4)

	AREA		YIELD		PRODUCTION	
	HECTARES (Adjusted)	C.V (%)	KG/HECT.	C.V (%)	M.TONNES	C.V (%)
PAKISTAN	351,404	5.7	94,973	2.7	33,373,760	6.3
PUNJAB	178,050	8.1	60,533	5.2	10,777,831	9.6
FAISALABAD	84,114	10.0	61,618	8.1	5,182,999	12.9
JHANG	64,761	15.8	64,392	8.4	4,170,068	18.0
MULTAN	2,506	31.7	45,826	9.4	114,848	33.2
SHEIKHUPURA	26,669	20.4	49,117	8.2	1,309.914	22.1
SIND	173,354	8.0	130,346	3.2	22,595,930	8.6
NAWABSHAH	83,065	12.0	72,178	7.0	5,995,462	13.9
HYDERABAD	90,289	10.7	183,860	3.5	16,600,468	11.2

1992-93 RICE YIELDS IN KILOGRAMS PER HECTARE

(for 3 districts in the Sindh and 3 districts in the Punjab)

Year	Village Master Sample		Rice Yield Validation	Objective Yield (Biological)	
	Yield	Percent B(100)/A -100	Yield	Yield	Percent B(100)/C -100
	(A)		(B)	(C)	
			Based on reported area		
1992-93	1751	+ 68.6	2,941 2/	3,420 1/	- 14.0
			Based on ~~reported~~ Measured area		
	1751	+ 69.8	2,962 3/	3,420 1/	- 13.4

1/ Net yield. Gross yield published in quarterly report minus post harvest losses published in quarterly report

2/ Based on 145 survey sample fields

3/ If measured area for a field differed from the reported area by more then 15 percent, the measured area was considered abnormal and replaced with reported area when computing the yield for that field.

Appendix 6

GOVERNMENT OF PAKISTAN
STATISTICS DIVISION
FEDERAL BUREAU OF STATISTICS
ISLAMABAD

THIRD MEETING OF THE STEERING COMMITTEE OF AGRICULTURAL DATA COLLECTION (ADC) PROJECT TO BE HELD AT QUETTA IN THE OFFICE OF THE SECRETARY, AGRICULTURE DEPARTMENT, BALOCHISTAN, ON 27-06-93 AT 10.00 A.M.

A G E N D A

Item-I **Progress of ADC Project**

Item-II **Future work plan**

a) Start of first province-wise acreage survey in Kharif 1993.

b) Development of forecasting models.

Item-III **Role of the Provincial Agriculture Statistics Coordination Boards after implementation of ASF Technology.**

Item-IV **Modus operandi for implementation for continuation of the scheme after the termination of the project in June, 1994 - Administrative/financial/technical matters.**

a) Provision of recurring expenditure

b) Continuation of project posts after the expiry of the project.

Item-V **Any other item.**

N.B. A presentation will be given, at 9.30 A.M. on ADC Project before the agenda items are taken for deliberation.

- (Continued) -

GOVERNMENT OF PAKISTAN
STATISTICS DIVISION
FEDERAL BUREAU OF STATISTICS
ISLAMABAD

THIRD MEETING OF THE STEERING COMMITTEE OF AGRICULTURAL DATA COLLECTION PROJECT.

AGENDA ITEM - I PROGRESS OF ADC PROJECT.

INTRODUCTION

ADC scheme is being implemented (in two phases) jointly by FBS and Provincial Departments of Agriculture with the technical and financial assistance of USAID since, 1985. Upto June, 1990 it was funded under Food Security Management (FSM) Project and since July,1990, it is being funded under Agricultural Sector Support Program (ASSP). The main objective of the project is to generate reliable, timely and cost effective estimates of area and production of five major crops i.e. Wheat, Cotton, Rice, Sugarcane and Maize. The implementation period of the project was initially 1985-86 to 1989-90 which was extended upto 1994 due to some unforeseen hurdles faced during phase-I & anticipated hurdles in phase-II (Annexure-I). Therefore, a revised PC-I of the scheme at a cost of Rs. 193.471 million as against the original cost of Rs. 118.421 million was approved by ECNEC in its meeting held on 31-12-1989. The revised period of implementation of the project is now 1985-86 to 1993-94 as against the original period 1985-1986 to 1989-90. According to this, new technology will be extended to entire area of the country using SPOT Satellite Imagery.

Phase-I of the ADC Scheme.

2. It involved construction of Area Sampling Frame (ASF) using Aerial photography and undertaking Acreage and Objective Yield Surveys in 7 pilot districts viz Faisalabad, Sheikhupura, Jhang, Multan in case of the Punjab Province and Larkana, Hyderabad and Nawabshah in case of Sindh. The selection of these districts was

- (Continued) -

done on the consideration of importance of crops and availability of 1976 aerial photography from Survey of Pakistan. This phase has been completed successfully in June, 1989. The surveys will however, continue to be conducted in these pilot districts till the area sampling frame construction using SPOT Satellite Imagery for the entire country is completed.

Phase-II of the scheme.

3. It aims at extending this new technology to the entire area of the country. Area Sampling Frame of the country is being constructed using SPOT Satellite Imagery. The frame construction work has been started from 1989-90 and it is expected to be completed by December, 1993.

PROGRESS OF NATIONAL AREA FRAME SAMPLING CONSTRUCTION.

4. Area Sampling Frame Construction work involves the following steps:-

i. Stratification and digitization of SPOT Scenes according to land-use categories.

ii. Sample Segment Selection.

iii. Preparation of:-

a) Photo Enlargements of the sample segments for which aerial photography is available.

b) Layouts of sample segments, if aerial photography is not available.

5. Stratification, digitization and selection of sample segments was completed for all the four provinces of the country in December, 1992. Province wise number of sample segments is as follow:-

- (Continued) -

PROVINCE	NO. OF SAMPLE SEGMENTS
Punjab	2028
Sindh	1096
NWFP	692
Balochistan	460
Total	4276

6. Since Balochistan province has no infrastructure/technical facilities for estimating crop data on objective methods, therefore, it was decided to implement Phase-II of the scheme

first in this province. As aerial photography of this province was not available, therefore, the field lay-out work in Balochistan province was started in the last week of September, 1991 and it was estimated that by March, 1992 this work would be completed. However it was completed with a delay of 6 months in

September, 1992 due to the following unforseen hurdles.

i) unsatisfactory law and order situation in Balochistan province;

ii) non-availability of vehicles;

iii) some of the sample segments in Nasirabad Division could not be located due to old topo maps. Hence to locate these segments, Global Positioning System (GPS) equipment was required to be used with the permission of Ministry of Defence. In this regard, the case was initiated with the Ministry of Defence in October, 91 and the permission was received in March, 1992, with the condition that, this equipment be got registered with Survey of Pakistan. The GPS equipments have been acquired and got registered with the Survey of Pakistan in

- (Continued) -

the third week of June, 1992. After necessary training this equipment has been used in Balochistan in September instead of July / August, as the required staff was not recruited by provincial project offices, for locating the sample segments of Nasirabad Division.

7. The field layout work in the province of Punjab for about 722 sample segments for which aerial photography was not available was started in October, 1992. This work for 612 segments has since been completed.

8. The layout work has to be started in Sindh and NWF Provinces from July/August, 1993 for which the above problems need to be addressed by the concerned provincial authorities.

PROGRESS OF ACREAGE AND OBJECTIVE YIELD SURVEY IN PILOT DISTRICTS

9. The first crops acreage survey was conducted in April, 1987 in Sheikhupura district. Later on, surveys were started in six other pilots districts on completion of their area sampling frames. The first Objective Yield Survey for wheat crop was conducted in Rabi, 1989 in Sheikhupura and Nawabshah districts. In addition to these surveys, a few special surveys/studies have also been conducted. The progress with regard to the conduct of Acreage and Objective Yield Surveys and special surveys/studies is given as Annexure-II.

10. The committee may kindly see the above report for information and directions for further improvement if any particularly in the context of problems mentioned in paras 1 & 6.

AGENDA ITEM - II: FUTURE WORK PLAN

A. START OF FIRST PROVINCE-WISE ACREAGE SURVEY IN KHARIF, 1993.

The first province-wise acreage and objective yield survey in Balochistan Province was planned to be conducted in Rabi, 1993 but the same was not conducted due to non-filling up of the required

- (Continued) -

number of project posts sanctioned by Ministry of Finance for the year 1992-93. In this regard, the details are discussed under Agenda Item-IV. The acreage survey in Kharif, 1993 has now been planned to be conducted from July 12, 1993. The provincial authorities may take necessary steps to fill-up the project posts without delay so that survey may be conducted as planned.

2. The first Province-wise acreage survey for Kharif, 1993 in the Punjab has been planned from July 12,1993. Preparatory work like establishing objective yield sample processing laboratories and installation of necessary computer equipment is under way. Partial recruitment to the project posts sanctioned for the year 1992-93, as reported by the provinces has been completed. The provinces have been requested to fill up the vacant posts if any on priority. However, the work regarding preparation of photo - enlargements to be used for conducting the survey could not be completed due to non-availability of chemicals with Survey of Pakistan. They informed that at least 6 months period would be required to procure the chemicals and suggested that if FBS could purchase & supply the chemicals then photo enlargements can be prepared. The matter was taken up with USAID who have agreed to supply the chemicals to Survey of Pakistan. The chemicals are being now supplied and it is expected that at least photographs of rice and cotton growing areas will be completed by the time kharif survey starts in the Punjab. This unforeseen constraint has affected the schedule.

3. The sample segments selected for Sindh & NWFP have been referred to Survey of Pakistan to ascertain the availability of aerial photography. Photo enlargements of the sample segments for which aerial photography is available, will be got prepared from Survey of Pakistan whereas field lay outs will be prepared for those segments for which photography is not available. The field layout work in Sindh and NWFP will be started in July/August, 93 and is expected to be completed before the start of Jan., 94 Rabi Survey.

4. The surveys in the seven pilot districts i.e. Sheikhupura, Faisalabad, Multan, Jhang, Hyderabad, Nawabshah and Larkana of Punjab and Sindh provinces will, however, continue to be conducted

- (Continued) -

till launching of nation wide surveys.

B. DEVELOPMENT OF FORECASTING MODELS.

5. One of the objectives of ADC Project is to develop advance forecasting models for wheat and cotton crops. The development of these models require data for at least four years. In this regard, data for wheat and cotton crops on the basis of seven pilot districts, has been collected for two years. Initial work for forecasting models is in progress. However, these models are expected to be ready for advance forecasting by June, 1994 for wheat and late 1994 for cotton.

6. The Committee may kindly see the report for information and suggestions, if any, for future work.

AGENDA ITEM - III: Role of the Provincial Agriculture Statistics Coordination Boards After Implementation of ASF Technology.

Timely availability of crop estimates with the desired reliability is a pre-requisite for policy formulation, decision making and plan development process. Presently according to system in vogue, the provincial Deptts. of Agriculture / Crop Reporting Services are responsible for the collection and compilation of crop statistics in their respective provinces. The crop estimates are then received by the Federal Bureau of Statistics for review and consolidation at the Federal level. The estimates are passed on to Ministry of Food & Agriculture for final release.

2. Although, there is a general improvement in the timeliness of crop estimates, but in some cases and in some provinces, the estimates are not received by the Federal Bureau of Statistics on time, according to crop calendar, which ultimately delays the release of final estimates. List placed at Annexure-I will show the extent of delay observed in the past.

3. The role of the present Provincial Agriculture Statistics Coordination Boards is to approve the final crop estimates prepared

- (Continued) -

by the Provincial Agriculture Departments. The Boards included members from various Provincial Departments such as Revenue, Irrigation, Bureau of Statistics etc. Experience shows that the final acreage and production estimates for major crops are cleared by the Boards in some provinces with in-ordinate time lag thereby delay the release of national estimates. Although, ADC project is being implemented independent of revenue system, but there is likelihood that their results may also be cleared by such Boards.

4. The Committee may wish to deliberate on the issue of reduction in the present time lag in the approval of the final estimates by the respective Boards.

AGENDA ITEM - IV: Modus Operandi For Implementation of the Scheme After the Termination Of The Project in June, 1994.

The implementation of ADC project under USAID technical assistance is going to expire on June 30, 1994. A detailed presentation was given to National Statistical Council (NSC) in its meeting held on 26.2.1992. The NSC has decided as follows:-

i. The ADC Project and the traditional method would continue parallel to each other for five years.

ii. An inter-provincial committee comprising Statistics Division / FBS, Food & Agriculture Division and Provincial Bureaus of Statistics and Agriculture Departments be set up to be coordinated by the food & Agriculture Division for developing a frame work for comparability of data generated through the traditional method and the ADC project and for formulating policy decisions in this regard.

2. NSC also decided that an Inter Provincial committee will be set up to review the crop estimates prepared under the two systems i.e. Area Sampling Frame (ASF) under ADC scheme and the existing system for a period of five years for making final

- (Continued) -

decision for adoption of one of the above two systems. In pursuance of the decision of NSC, an Inter Provincial Committee comprising members from FBS, MINFA, Provincial Agriculture Departments & Provincial Bureau of Statistics has been set up. The coordinating role has been assigned to MINFA. The first meeting of the Committee was held in Jan.,1993 to formulate the terms of reference and periodicity of holding the meetings.

3. For provision of funds beyond June, 1994 the respective Federal/Provincial Governments are required to prepare a new PC-I for the period July, 1994 to June, 1998 for continuation of the ADC Project activities for their respective part and get it approved from the concerned Federal/Provincial competent authority.

4. During the period from July 1994 to June, 1998, the FBS will be responsible for coordinating and monitoring the project activities and providing technical assistance to the provincial counterpart agencies. The provincial Agriculture Authorities will be responsible for conduct of the acreage/objective yield surveys, processing of data and preparation of estimates. After approval from the Provincial Agriculture Statistics Coordination Boards, the estimates will be supplied for FBS for preparation of estimates at the national level.

5. The Committee may approve the modus operandi as proposed in paras 2 to 4 for the compilation and release of crop estimates.

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AGENDA ITEM-I ANNEXURE-I.

PROBLEMS FACED BY ADC PROJECT PHASE-I

1) Late start of project activities in November, 1985 rather than July, 185.

2) Three months on the job training of the staff in Area Frame Construction was not included in the target for completion of pilot project in two years.

3) Originally building of photomosaics was not included in the ASF Construction by the SOP mosaics were not acceptable to the project advisor, hence total work load to this extent increased.

4) Late and incomplete release of aerial photography.

5) Late permission of Ministry of Defence for filed use of photography and formation of segments in the field took much time.

6) Initially Sanghar & Sialkot were included in Phase-1 for the project. MOD objected to its inclusion and proposed that Jhang & Nawabshah may be included.

7) Authorities took a longtime to consider the PC-1 for the project named New Aerial Photography Project (NAPP) and ultimately was disapproved.

8) Shortage of staff.

9) Late opening of PLAs for 1986-87 and non-availability of funds for 1987-88.

10) Late release of funds.

- (Continued) -

STEPS TAKEN TO RESOLVE THE PROBLEMS IN PHASE-I.

1) In order to avoid delay the photography of Larkana and Faisalabad was requested and acquired much ahead of its requirements and necessary permission form Ministry of Defence for its field use. Photography of all the remaining districts was also obtained and permission sought from Ministry of Defence.

2) After long persuasion Ministry of Defence agreed to inclusion of Jhnag & Nawabshah in the pilot phase in place of Sialkot and Sanghar.

3) Funds for 1987-88 were acquired through re-appropriation.

4) A lot of efforts were made to get the project staff sanctioned according to the provision of PC-1.

5) Efforts made every year proved to be fruitless and the funds were got released late with the result the staff could not always be paid their salaries in time.

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STEPS TAKEN TO RESOLVE THE PROBLEMS IN PHASE-II.

1) Lot of efforts were made to get early permission for use of SPOT Satellite Imagery. Number of meetings at the level of DG were held with SUPARCO & MOD and ultimately were got permission to use SPOT Satellite Imagery after laps of one year.

2) Due to non-availability of vehicles for field work in Balochistan, USAID and FBS, Field offices were requested to provide vehicles. The field staff of FBS was also deployed. The assignment of field layouts in Balochistan was thus completed in one year.

3) The case of GPS use was initiated with Ministry of Defence in October, 1991 and it took eight months to get final permission to use the equipment in the field.

4) For sanctioning the project positions a number of meeting were held with the officials of MOF and after long persuasion the project position were sanctioned for 1991-92 in March, 1992. Inspite of all efforts during 1992-93, 19 posts of FBS could not be got continued due to the fact that these posts remained vacant for more than 6 months.

5) The ADP budget allocations are made under the foreign exchange and local rupee components. The foreign exchange, and a major part of the local rupee component, are begin spent by USAID directly on technical assistance, foreign training, purchase of durable goods an on commodities & services etc; while a portion of the local rupee component of the ADC allocation is credited into personal ledger accounts for financing the activities of project established in Federal Bureau of Statistics and the Provincial Departments of Agriculture Punjab, Sindh, NWFP and Balochistan. The expenditure incurred directly by USAID could not be got booked in the books of AGPR which would ultimately be shown as saving. While examination the Annual Budget of Statistics Division for the year 1985-86, the Public Accounts Committee has taken a serious view.

- (Continued) -

i) The item-wise expenditure in Pak. Rupee and in foreign exchange is not indicated separately for ADC Project.

ii) Project level contact (combined for all components) with Academy for Educational Development by USAID for foreign training for all the three component under FSM project unto June, 1989 and onward for all projects under ASSP is provided and is not bifurcated for each component separately.

To resolve these issues a number of meetings in the past were held in FBS and EAD in which the requirements of Government of Pakistan were brought into the notice of USAID. The representative of USAID always informed that a more detailed statement will be supplied by USAID but so for not such statement has been provided. A proforma was developed by Statistics Division for collection of expenditure figures from all the foreign aided project beige implemented by FBS. It was sent to USAID but they showed their inability to supply the requisite information.

6) Survey of Pakistan intimated this office that Chemicals required for preparation of photo enlargements and contact prints have been exhausted of supply with them and they were not expecting to receive the same within next six/seven months. However, they suggested that of chemicals can be arranged by the FBS, then they will prepared the photo enlargements. The matter was taken up with USAID who agreed to supply the chemicals to Survey of Pakistan. The chemicals are now being supplied to Survey of Pakistan.

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AGENDA ITEM - I

ANNEXURE - II.

GOVERNMENT OF PAKISTAN
STATISTICS DIVISION
FEDERAL BUREAU OF STATISTICS

ACREAGE SURVEYS

NAME OF DISTRICT	NO. OF SURVEY
Sheikhupura	16 (Starting from April, 1987)
Nawabshah	13 (Starting from January,1988)
Larkana	11 (Starting from August, 1988)
Faisalabad	11 (Starting from August, 1988)
Jhang, Multan & Hyderabad	10 (Starting from January,1989)
In all (7) seven district	10 (Starting from June, 1989)

OBJECTIVE YIELD SURVEYS

Rabi (Wheat Crop).

Nawabshah & Sheikhupura	5 (Starting from 88 to 93)
In all 7 districts	4 (Starting from 89 to 93)

Kharif Crops, Cotton, Maize, Rice and Sugarcane.

N.shah, Sheikhupura, Larkana, Faisalabad districts.	6 (Starting from 1988 to date)
In all 7 districts	5 (Starting from 1989 to date)

SPECIAL STUDIES.

1. Wheat optimal plot size research study, 1990.
ii. Rice optimal plot size research study, 1991.
iii. Sugarcane optimal plot size study 1989-90 through 1991-92.

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iv. Post harvest losses survey of Rice Crop 1990, 1991 and 1992.
v. Post harvest losses survey of wheat crop, 1991, 1992 and 1993.
vi. Plot size study of wheat crop, 1991.
vii. Wheat validation study, 1992, 1993.
viii. Rice validation study, 1992.

Appendix 7

GOVERNMENT OF PAKISTAN
FEDERAL BUREAU OF STATISTICS
AGRICULTURAL DATA COLLECTION CELL
ISLAMABAD.

NO.FBS. SP&E.M(1)/90- DATED: 11-07-93

SUBJECT:- MINUTES OF THE 3RD MEETING OF THE STEERING COMMITTEE ON AGRICULTURAL DATA COLLECTION (ADC) PROJECT HELD ON 27.6.93 AT QUETTA.

The 3rd meeting of the Steering Committee on Agricultural Data Collection (ADC) Project was held on 27th June, 1993 at 10.00 a.m. in the Civil Secretariat, Quetta under the chairmanship of Secretary, Statistics Division to discuss the agenda items already circulated to all concerned. The list of participants is at Annexure-A.

2. Secretary, Statistics Division, as chairman of the Steering Committee, welcomed the participants and emphasized the importance of crop statistics particularly estimates of wheat and cotton production in the country. He also emphasized the role to be played by the Provincial Governments for improvement of agricultural statistics and successful implementation of Area Sampling Frame technology being adopted by FBS through ADC Project. The chairman then invited Mr. Robert L. Addison, Team Leader of the ADC Project representing USAID, to brief the participants about the methodology of the Project. Mr. Addison made the presentation on the subject and briefed the participants about the various steps involved in the implementation of the project.

3. After briefing, Director General, Federal Bureau of Statistics, gave the historical background of the project. He informed the Committee that the current system of country's. Agricultural Statistics does not fully meet the requirements of the planners and policy makers as crop estimates are not made available on timely basis and further their reliability is not known. In order to replace the existing system of estimation of yield of crops, FBS

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prepared an integrated master sample for 18 important crops for all the four provinces couple of years back. However, because of initiation of ADC Project at that time, the PC-1 prepared for the purpose had to be withdrawn from Planning Division as availability of requisite funds and manpower, would have been difficult particularly in the context at ADC Project.

4. The Government of Pakistan asked USAID to provide technical assistance for improving the existing system of Agricultural Statistics. USAID recommended implementation of the Area Sampling Frame methodology for the entire country for compilation of acreage and production estimates for selected major crops. The Government of Pakistan however, decided to test this methodology initially in the seven pilot districts of the Punjab and Sindh (Sheikhupura, Jhang, Multan, Faisalabad, Hyderabad, Nawabshah and Larkana) Provinces and extend it to the entire area of the country if found successful in the pilot districts. The pilot phase of the Project has since been completed and results show the utility of this project in terms of reliability and timeliness.

5. The Director General informed the meeting that:-

i) Phase-II of the scheme has been started from July, 1989 and by now Area Sampling Frame of the entire country has been completed.

ii) Overlay construction work for Balochistan and the Punjab has nearly been completed and

iii) The overlay construction in Sindh and NWFP will be under-taken from July- August, 1993. The overlays are constructed for those areas for which aerial photography is not available.

6. The participants were also informed that the ADC component was originally approved as one of the three components of Food Security

- (Continued) -

Management (FSM) Project of USAID. The other two components i.e. Economic and Policy Analysis (EPA) and Post Harvest Management (PHM) were implemented by the Ministry of Food & Agriculture. The ADC component is being implemented by FBS. The implementation of the components of the Project under Ministry of Food & Agriculture has since been completed. The ADC component remained under Food Security Management (FSM) Project till June, 1990 and from July 1990, it is being implemented under Agriculture Sector Support Programme (ASSP).

7. Since Agriculture is a Provincial subject therefore, the responsibility of collection and compilation of Agricultural Statistics rests with the Provincial Governments. At the Federal level, Statistics Division (FBS) collects crop statistics from Provincial Agriculture Departments, consolidates and supply the same to the Ministry of Food & Agriculture for release at national level.

8. Under the present system, three estimates for major crops are issued. The Ist estimate relates to estimation of acreage under crop, 2nd estimate relates to acreage including late sowing and production, whereas 3rd estimate relates to production.

9. After presentation of the background of the project by Director General, FBS, Dr. Noor Muhammad Larik, DDG presented the main issues, which are responsible for hampering the pace of progress of the Project activities. DDG presented the agenda items with particular reference to the following main issues before the meeting for deliberations:-

I. <u>FUNDING AFTER JUNE, 1994 WHEN PROJECT TERMINATES UNDER USAID TECHNICAL ASSISTANCE PROGRAMME.</u>

10. The meeting was informed that Area Sampling Frame of Balochistan Province was completed before Kharif, 1992 and it was planned to conduct the Ist survey in Balochistan Province from

- (Continued) -

Kharif, 1992, but due to non filling up of the required number of staff positions, this survey was restricted to only a few sample areas. It was then planned to conduct the survey in Rabi, 1993. But again this survey could not be conducted due to non recruitment of the required number of staff. The Balochistan Government, however, asked for written assurance with regard to financing of the Project activities after June, 1994 when the Project terminates under USAID financial assistance. The meeting was further informed that in order to have policy decision in this regard, the matter was referred to Statistics Division who advised that Balochistan Government should be asked to bear all the expenditure on the staff and operational activities related to the ADC Project after termination of assistance from the USAID in June, 1994. The Federal Government can finance that part of the expenditure relating to ADC which will be incurred by FBS on its own staff and related activities. This decision was communicated to the Balochistan Government. The meeting was further informed that the other three provinces have not raised any such query and activities in their provinces are not being hampered for want of this requirement.

11. Secretary, Agriculture Balochistan opined that this being a Federal Government project, that Government should bear all expenditure beyond June, 1994. After long deliberations, the Chairman observed that the responsibility of arranging funds after termination of project cannot be entirely passed on to the provinces. The following decisions were taken:-

DECISIONS:

I) The new technology of ADC Project gives ample scope to improve our crop statistics and therefore, should receive maximum support from the provinces. The Provincial Agriculture Departments will refer the case to their respective Planning and Development and Finance Departments for exploring the possibility of funds for meeting the expenditure beyond June, 1994. The Federal Government will

- (Continued) -

also try and work out the possibility of funding the Project beyond June, 1994.

II) PC-1 will be prepared by the respective Provincial Governments for their part of activities and send the same to FBS for consolidation on priority basis.

III) Secretary, Statistics Division will write to call a meeting of Chairmen, Planning & Development Board / Additional Chief Secretaries (Development) of the Provinces regarding provision of funds for running the project activities beyond June, 1994. He will also take up the matter with the Federal Government in this regard.

II.RECRUITMENT OF PROJECT STAFF.

12. Deputy Director General (Dr. Noor Muhammad Larik) informed that out of 30 posts of Statistical Assistants (BPS-11), only 11 posts have been filled in so far in Balochistan. 19 posts still remain to be filled-in. Secretary, Agriculture, Balochistan, informed that the matter has been discussed with the Planning & Development and Finance Departments and they were of the view that till the time a written assurance with regard to funding of the project after 1994, is given, it may not be possible to fill-up the posts. He further informed that crop reporters working in the Agriculture Extension Department are Matriculates and they are in BPS-9. The qualification laid down for the post of Statistical Assistants (BPS-11) is Graduate. It may not, therefore, be possible to give grade-11 to the crop reporters. He, however, proposed that he could consider deploying these crop reporters in BPS-9, for carrying out survey activities of the project and grant them some honorarium for the extra job which they would perform for the Project. The Chairman welcomed the proposal by the Secretary Agriculture, Government of Balochistan, as it would avoid impeding the project work. The Director General, FBS stated that this proposal will be examined and an appropriate response will be sent to the Balochistan

- (Continued) -

Government shortly.

13. The Secretary, Agriculture, Balochistan emphasized that necessary training may be imparted to their staff by FBS for starting work of Kharif, 1993 which was agreed to.

DECISIONS

IV) FBS will examine the possibility of granting honorarium to the Field Assistants (BPS-9) to be deployed against the vacant posts of Statistical Assistants (BPS-11) in Balochistan.

V) Secretary, Agriculture Balochistan will deploy immediately Field Assistants against the vacant posts of 19 Statistical Assistants in order to launch surveys from Kharif, 1993.

VI) FBS will impart necessary training to the field staff.

III. PROVISION OF SPACE FOR SETTING UP OF OBJECTIVE YIELD AND DATA PROCESSING LABORATORIES.

13. The meeting was informed that NWFP Government has only provided the space for setting-up Objective Yield and Data Processing Laboratories. The representatives of the rest of the Provincial Departments were requested to make available the space for the propose at the earliest. After deliberations, the representative of Sindh Government stated that the space will be made available in July, 1993. Balochistan representative promised to provide the space within 2-3 months. The Punjab Government representative informed that the space will be provided by August, 1993.

DECISIONS

VII) Space for setting up Objective Yield and Data Processing

- (Continued) -

Laboratories will be provided in the Punjab by August, 1993, in Sindh during July, 1993 and in Balochistan within 2-3 months as indicated by the respective representatives.

IV. SECURITY OF THE STAFF TO BE DEPLOYED FOR FIELD LAYOUT WORK IN SINDH & NWFP.

14. Field layout work in Sindh & NWFP will be started from July-August, 1993. It was proposed that necessary security arrangements may be made for the staff to be deployed for the purpose. Concerned Provincial representatives stated that necessary arrangements will be made in this regard.

DECISIONS

VIII) FBS may undertake their field layout work in Sindh & NWFP in consultation with concerned Provincial Departments for taking advance security measures where needed.

V. ROLE OF PROVINCIAL AGRICULTURE STATISTICS COORDINATION BOARDS.

15. Provincial Agriculture Statistics Coordination Boards are responsible for finalizing the estimates at the Provincial level. The estimates are generally delayed. After deliberations it was decided that the Boards should be provided data collected through ASF methodology for cross check etc. from now onwards.

DECISIONS

IX) The Provincial Agriculture Statistics Coordination Boards, may now be intimated to cross check the estimates with those emerging from ADC Project.

VI. RECRUITMENT OF STAFF IN PUNJAB.

16. Director General, FBS informed the meeting that the Government of Punjab has advertised the project posts. These posts include even those posts against which officers from crop reporting service are working on deputation for the last number of years and have gained sufficient experience regarding ASF methodology. There replacement at this stage when the project is in full swing and is going to be terminated in June, 1994, will cause unbearable loss to the successful implementation of the project. He proposed that all such officers who are associated with the Project for a number of years, may be retained and only those posts which are still lying vacant may be got filled-in.

DECISIONS

X. It was, decided that the posts against which the officers have been working for a number of years on deputation, may be allowed to continue and only vacant posts may be filled in all the provinces.

VII. CONVENING OF THE 4TH MEETING OF THE STEERING COMMITTEE.

18. Director General, FBS informed that the 3rd meeting of the Steering Committee has been held after a long time giving rise to many problems which remained unresolved over time. He proposed that the next meeting may be convened during the later part of this year.

DECISIONS

XI. The 4th meeting of the Steering Committee will be convened at Hyderabad in December, 1993.

(Dr. Noor Muhammad Larik)
Deputy Director General

- (Continued) -

Annexure-A

LIST OF PARTICIPANTS

1. **Mr. Abdul Karim Lodhi,**
   Secretary,
   Statistics Division,
   Islamabad.

2. **Syed Aftab Ahmad,**
   Director General,
   Federal Bureau of Statistics,
   Islamabad.

3. **Dr. Noor Mohammad Larik,**
   DDG-ADC, FBS,
   Islamabad.

4. **Mr. Nasir-ud-Din Ahmad,**
   Secretary Agriculture,
   Government of Balochistan,
   Quetta.

5. **Mr. A. Salim Durrani,**
   Secretary,
   Planning & Development Department
   (Implementation),
   Government of Balochistan,
   Quetta.

6. **Mr. M. F Durrani,**
   Secretary Finance,
   Government of Balochistan,
   Quetta.

7. **Mr. Liaquat Ali Arain,**
   Additional Secretary Agriculture,
   Government of Punjab,
   Lahore.

- (Continued) -

8. **Mr. Javaid Akhtar,**
Deputy Secretary,
(Development) Finance Department,
Government of Balochistan,
Quetta.

9. **Ch. Zulfiqar Ali Khan,**
Director General (Extension),
Agriculture Department,
Government of Balochistan,
Quetta.

10. **Mr. Abdus Samad Ghilzai,**
Director ADC,
Balochistan,
Quetta.

11. **Dr. Badar-ud-Din Soomro,**
Director General, Agriculture (Extension),
Sindh, Hyderabad.

12. **Mr. Ghulam Murtaza Balouch,**
Director ADC Project, Punjab, Lahore.

13. **Mr. Ghulam Hussain Memon,**
Director ADC, Sindh,
Hyderabad.

14. **Mr. M. Younis Khan,**
Director ADC, NWFP,
Peshawar.

15. **Mr. Sharif Ahmad Khan,**
Director-ADC, FBS,
Islamabad.

SCOPE OF WORK

For

Further Development of Wheat & Cotton Forecasting Models
Documenting and Transferring Model Technologies to FBS
Analyzing Wheat and Rice Yield Validation data

(Three Week TDY)

Mr. Tom Birkett developed the wheat and cotton yield forecasting models currently being used on a pilot basis in Pakistan. The wheat model was used to forecast the yield on March, April and May 15, 1992 for the first time. The cotton model was supposed to be used to forecast the yield of the 1992 crop beginning in September 1992. However, due to prolonged extensive flooding in the Sindh Province in August 1992, enumerators were not able to visit some of the OY plots until 30 days or more late - - therefore, the model was not used due to the sporatic availability of the data.

At this point in time, we also need to prepare model documentation and transfer the model technologies to Mr. Noor Muhammad of the Survey Planning and Estimation Section of FBS. He was the person primarily responsible for Dr. Baker's FAO model in the Economic Wing of the Ministry of Food and Agricultural here, and should have the computer background for understanding Mr. Birkett's wheat and cotton models.

Also in the spring of 1992, a full-scale Wheat Yield Validation survey was conducted. In the fall of 1992, a full-scale Rice Yield Validation survey was conducted. Both of these surveys were designed by Mr. Birkett to determine how much the yields from the objective measurement surveys must be reduced to arrive at "farmer utilized yields". Results from the Wheat Yield Validation survey are tied directly to the wheat forecast model. Data from both of these surveys need to be analyzed.

- (Continued) -

Results of the Wheat Yield Validation survey will be send to Mr. Birkett within the next week in order for him to analyze these data before coming to Pakistan if possible.

This is a multi-facet TDY as you can see from the above, however, in the view of the fact that my Birkett has worked with most of the above on previous TDY's, it is felt that he can accomplish the work in a period of three weeks.

In summary, this TDY will be expected to:

a) Update both the wheat and cotton yield forecasting models through the 1992 crops, and forecast the March 15 yield of the 1993 wheat crop.

b) Document the two models and transfer the technologies to the Survey Planning and Estimation Section of FBS.

c) Analyze the 1992 Wheat Yield Validation data

d) Analyze the 1992 Rice Yield Validation data

e) Document his accomplishments in a Trip Report

I request that Mr. Birkett of the National Agricultural Statistics Service (NASS) arrive Pakistan on April 10, 1993 for a three week period.

. SCOPE OF WORK

For

Segment Layouts

(Three Week TDY)

When sample segments are selected in Pakistan from the Area Sampling Frame, the first stage is to place a point, representing the center of the selected segment on a topographical map. Next, an aerial photo is ordered from the Survey of Pakistan (SOP). If a photo is available the segment is drawn on the photo and given to the enumerator for his field visit. If a photo is not available (and they aren't more than 1/3 of the time), we visit the field and find the center of the segment on the ground. We have to date used two methods of field locating the centers of the segment: 1) measuring from boundaries shown on the topo map (roads, railroads, etc.) and 2) using Global Positioning Systems (GPS). Once we find the center of the segment on the ground, we sketch it on a sheet of grid paper. We do this by putting a steel peg in the ground at the center of the segment and attaching a string to this peg which is on a handle operated reel. The string is then pulled North (using a compass) for a specified number of meters - - often times for 500 meters or more depending on the predetermined size of the segment. Fields are then measured and sketched on the grid paper along both sides of the string starting at the steel peg and working to the northern perimeter of the segment. The string is then run from the center to the East, West and North and fields are measured and sketched along both sides of the string in each of these directions. When this operation is over, we have field boundaries sketched on the grid sheet in four directions and the field team fills in the remaining fields on the grid sheet using these as guides.

- (Continued) -

In addition to sketching the fields on the sheet, the name of the crop is written in each field, tube wells, houses, irrigation ditches, etc. are also sketched and/or written on the grid sheet (pages included show a field sketched segment). If the segment is close to a village, the name of the village and the name of a person that lives in the village familiar with the location of the segment is also written on the sketch sheet. All of the field boundaries, etc. are sketched in this operation and the proper sketching of one segment takes a three man team one full day. These segments are called field located segments.

For a considerable number of the sample segments, both photo and field located, there are few if any definite boundaries. As a result, when we give a photo or grid sheet to an enumerator, its sometimes questionable as to whether or not he can find the segment and, if he does, whether or not he has found the center of the segment.

There is another major problem which follows: In some areas of the Punjab and especially the NWFP, the ground is not level. This ranges from a 5 to 10 foot drop or increase, etc. in elevation in the Punjab to steep canyons in the NWFP (maybe 500 meters deep, with terraced farming on both sides). How do we layout and enumerate segments in these areas? I think conventional methods can't be used.

In summary, this TDY will be expected to:

1) Recommend the best method for determining the center of a segment on the ground (in the field) when there are few <u>if any</u> permanent boundaries in level, semi-level and terraced areas.

2) Recommend a workable method for laying-out and enumerating segments which fall in semi-level and terraced areas (will it be possible to pull a string up a steep slope - - I think not).

- (Continued) -

3) Recommend a procedure that will enable the field workers to find the segment and locate its center once the photo or grid sheet containing the segment sketch is given to him for enumeration.

4) Document his recommendations in a Trip Report.

This TDY should be familiar with ASF procedures that have been used in developing countries where sample segments have fallen in areas with no permanent boundaries and also where segments have fallen in terraced areas.

Mr. Ed Lippert of the National Agricultural Statistics Service (NASS) has been selected for this TDY and has been requested to arrive Islamabad on March 30, 1993 for a three week period.

TRIP REPORT
PAKISTAN
May 18-28, 1993
Larry A. Sivers

Activities:

Meeting with USAID/ARD Islamabad
Meeting with FBS/ADC Islamabad
Meeting with USDA/ADC Project Office, Islamabad
Meeting with Director General, FBS, Islamabad
Meeting with US Agricultural Attache, Islamabad
Meeting with Punjab Crop Reporting Service ADC Staff, Lahore
Field trip-Abbottabad, NWFP for steep slope segment location
Field trip-Sheikhupura, Punjab; Wheat Validation Harvest Plot

General: A general review of ADC Project status plans was accomplished. A draft of the 9th Year Workplan (July 1, 1993 to June 30, 1994) was reviewed and discussed. This workplan is the basis for establishing accomplishments to be expected during the next year, along with identifying needed training, equipment procurement and short term technical assistance.

The project is at the stage where full scale Province level area sampling frame surveys can be implemented in January 1994 for a t least three for the four provinces. The Sindh province could be ready for a province level survey in July 1994. It is critical that the current delay in the construction of the area sampling frame, because of the inability of the Survey of Pakistan to provide aerial photography, be solved quickly. If not, it will be very difficult to complete the Punjab area frame in time to do a full scale province wide survey in January 1994. I feel it is important that this survey be done in the Punjab by no later that January 1994, because this province has the major percentage of the major crop production in the country. This would allow for three surveys, January 1994, July 1994, and January 1995 to be conducted while the project long term advisor is in country

The explanation of the project benefits to the potential users of the data needs to be emphasized during the next year. I was

- (Continued) -

encouraged by the interest and planning of this effort already being considered by both USAID and Director General, FBS. The GOP will be developing a new PC-1 for approval during the next year. This document will be the basis for continuation of the project with the GOP picking up the total costs of data collection beginning July 1, 1994. The valid strengths and benefits of this program for earlier and reliable estimates of production of major crops at the province and national levels needs to be emphasized will be important for success of the PC-1 approval process. The scheduled meeting of the Steering Committee June 21 in Quetta will be a good opportunity to begin this effort.

Recommendations:

--Involve higher level GOP officials to assist in breaking the deadlock on getting aerial photography from Survey of Pakistan to complete the area sampling frame construction.

--Implement the transfer of data processing responsibility from the ADC Project office to the FBS soon. To do this, it is critical that FBS have data processing staff on board that can work together with the ADC data processing staff to learn the systems and procedures and assume this responsibility.

--Develop early in the project year Scope of Work and range of dates for each expected technical assistance TDY.

Apr - Jun, 1993 COMMODITY UTILIZATION VEHICLE

VEHICLE TYPE	NUMBER	LOCATION	**** KILOMETERS ******* BEGINNING QUARTER	ENDING QUARTER	QUARTER USAGE	ASSESS-MENT OF USAGE	COMMENTS
PAJERO JEEP	7276	FBS/ISLAMABAD	N/A				FULLY USED
PAJERO JEEP	400205	FBS/ISLAMABAD	N/A				FULLY USED
PAJERO STAWGN	400766	FBS/LAHORE	126,065				FULLY USED
PAJERO STAWGN	400832	FBS/LAHORE	21,731				FULLY USED
LAND CRUISER	16326	AG DEPT/HYD	N/A				FULLY USED
PAJERO JEEP	400548	AG DEPT/HYD	N/A				FULLY USED
PAJERO STAWGN	400834	AG DEPT/HYD	N/A				FULLY USED
LAND CRUISER	16577	AG DEPT/LHR	N/A				FULLY USED
PAJERO JEEP	400345	AG DEPT/LHR	N/A				FULLY USED
PAJERO STAWGN	400833	AG DEPT/LHR	N/A				FULLY USED
PAJERO JEEP	401097	AG DEPT/LHR	N/A				FULLY USED
PAJERO JEEP	400318	AG DEPT/PESH	152,955				FULLY USED
PAJERO JEEP	40033	AG DEPT/QUE	89,400				FULLY USED
PAJERO STAWGN	400835	AG DEPT/QUE	72,400				FULLY USED
HI ACE	2995	ADC OFFICE	70,620				AD 64 405
PAJERO JEEP	401013	ADC OFFICE	2,118				AD 64 556
PAJERO JEEP	401094	ADC OFFICE	25,245				AD 64 651
PAJERO STAWGN	400204	ADC OFFICE	107,576				AD 64 486

Apr - Jun, 1993 COMMODITY UTILIZATION
(MOTOR CYCLES)

LOCATION	QUANTITY
AG DEPT/LAHORE	23
AG DEPT/HYDERABAD	20
AG DEPT/QUETTA	0
AG DEPT/PESHAWAR	6
FBS/ISLAMABAD	1
Total	50

- (Continued) -

Apr - Jun, 1993 COMMODITY UTILIZATION
(COMPUTERS)

EQUIPMENT	QUANTITY	USER	LOCATION	USAGE
PC-AT & MONITOR	6	STATISTICS DIVISION	ISLAMABAD	FULLY USED
PRINTER	6			
PC-AT & MONITOR	12	ADC/FBS	ISLAMABAD	FULLY USED
PRINTER	12			
PC-AT & MONITOR	2	AG DEPT	HYDERABAD	FULLY USED
PRINTER	2			
EVERX-386 & MOINTOR	1	AG DEPT	HYDERABAD	FULLY USED
PC-AT & MONITOR	3	AG DEPT	PESHAWAR	FULLY USED
PRINTER	3			
PC-AT & MONITOR	2	AG DEPT	QUETTA	FULLY USED
PRINTER	2			
AST-386 SX & MONITOR	1	AG DEPT	QUETTA	FULLY USED
DESKJET 500 PRINTER	1	AG DEPT	QUETTA	FULLY USED
UPS	1	AG DEPT	QUETTA	FULLY USED
PC-AT & MONITOR	4	FBS	KARACHI	FULLY USED
PRINTER	4			
PC-AT & MONITOR	12	PISTAR	LAHORE	FULLY USED
PRINTER	12			
PC-AT & MONITOR	3	CRS	LAHORE	FULLY USED
PRINTER	3			
DESKJET 500	1	CRS	LAHORE	FULLY USED
UPS	1	CRS	LAHORE	FULLY USED
HP VECTRA QS-16S/PC & MONITOR	2	ADC/FBS	ISLAMABAD	FULLY USED
PRINTERS FX-286 DESKJET EPSON	2	ADC/FBS	ISLAMABAD	FULLY USED
TOTAL COMPUTER SYSTEMS	:	48		
TOTAL MONITORS: COLOR	:	24		
MONOCHROME	:	24		
TOTAL PRINTERS	:	50		

- (Continued) -

Apr - Jun, 1993 COMMODITY UTILIZATION
(PRINTING PRESSES)

EQUIPMENT	QUANTITY	DISTRIBUTION	LOCATION	USAGE
SOLNA OFFSET PRINTING PRESS	1	1	FBS/KARACHI	FULLY USED
DAVIDSON PRESS MODEL 901	2 1	1	PUNJAB SINDH	INSTALLED 1/
AGFA REPROMASTER 2100 CAMERA	3	1 1 1	FBS/KARACHI PUNJAB SINDH	FULLY USED INSTALLED 1/
MICROPROCESSOR PAPER CUTTER	2	1 1	PUNJAB FBS/KARACHI	INSTALLED FULLY USED
NUARC EXPOSURE UNIT	3	1 1 1	FBS/KARACHI PUNJAB SINDH	FULLY USED INSTALLED 1/
INTERLAKE STITCHER	2	1 1	PUNJAB SINDH	INSTALLED 1/

1/ In process of installation.

- (Continued) -

Apr - Jun, 1993 COMMODITY UTILIZATION
(OFFICE, LAB & FIELD EQUIPMENT)

EQUIPMENT	QUANTITY	USER	LOCATION	USAGE
DIGITIZER - ALTEK	4	FBS	ISLAMABAD	FULLY USED
ZOOM - TRANSFERSCOPES	2	FBS	ISLAMABAD	FULLY USED
IBM TYPEWRITERS	1	FBS	ISLAMABAD	FULLY USED
	1	PISTAR	LAHORE	FULLY USED
BINDING MACHINE	1	PISTAR	LAHORE	FULLY USED
AUDIO-VIDEO EQUIP				
T.V. 26" NATIONAL (COLOR)	1	PISTAR	LAHORE	FULLY USED
V.C.R. MODEL L-15	1	PISTAR	LAHORE	FULLY USED
DISPLAY SCREEN	3	PISTAR	LAHORE	FULLY USED
OVER-HEAD PROJECTORS	2	PISTAR	LAHORE	FULLY USED
SLIDE PROJECTOR	1	PISTAR	LAHORE	FULLY USED
OVERHEAD PROJECTOR	1	ADC	HYDERABAD	FULLY USED
OVERHEAD PROJECTOR WITH SCREEN	1	ADC	LAHORE	FULLY USED
PORTABLE WHEAT THRESHERS	4	ADC PUNJAB	LAHORE	NOT IN USE
WHEAT THRESHERS	1	ADC LAB	ISLAMABAD	FULLY USED
OVEN	4	ADC LAB	ISLAMABAD	FULLY USED
WEIGHING SCALES	2	ADC LAB	ISLAMABAD	FULLY USED
AIR CONDITIONERS	8	FBS		FULLY USED
	1	NWFP		FULLY USED
	1	BALOCHISTAN		FULLY USED
	1	LAHORE		FULLY USED
	1	HYDERABAD		FULLY USED

ADC FINANCIAL STATEMENT (IN DOLLARS) 1/ 2/

Budget Element	Budget Jul92-Jun93	Jul-Sep 1992	Oct-Dec 1992	Jan-Mar 1993	Apr-Jun 1993	Cumulative	Percent of Budget
TECHNICAL ASSISTANCE							
Long term	168,300	36,000	36,100	38,406	37,200	147,706	
Short Term	135,675	0	35,500	0	46,500	76,000	
Backstoping	37,002	6,055	6,540	6,542	6,500	25,637	
Study Tour	14,323	0	0	0	0	0	
Equip., Supplies & Commodities	42,572	500	500	8,580	4,600	14,180	
SUB-TOTAL	397,872	42,555	78,640	53,528	88,800	263,523	66.2 %
FEDERAL BUREAU OF STATISTICS							
Pay and allowances of Staff	22,654						
Travelling allowances	23,077						
ASF operating cost	40,231						
Commodities and services	10,923						
Local training	0						
Purchase, repair and maintenance of D/Goods	12,500						
SUB-TOTAL	109,385 3/	4/	4/	4/	4/	4/	4/
PROVINCIAL GOVERNMENTS							
Pay and allowances of Staff	236,962						
Travelling allowances	28,269						
ASF operating cost	0						
Commodities and services	33,615						
Local training	0						
Purchase of durable goods	13,731						
Repair and maintenance of D/Goods	14,192						
SUB-TOTAL	326,769 3/	4/	4/	4/	4/	4/	4/
LOGISTIC SUPPORT SERVICES							
ADC Office Staff	64,981	14,332	15,520	14,453	17,708	62,013	
Telephone	4,356	1,108	1,825	1,301	1,696	5,930	
Office supplies	2,904	473	2,392	2,337	2,190	7,392	
Travel and Transportation	28,619	3,518	4,987	4,966	7,784	21,255	
Vehicles Operating Expenses	36,950	157	414	433	1,877	2,881	
Computer Maintenance	0	0	0	24,327	8,042	32,369	
Other cost	0	6,282	9,732	2,646	252	18,912	
SUB-TOTAL	137,810	25,870	34,870	50,463	39,549	150,752	109.4 %
GRAND TOTAL	971,836						5/

1/ All values include appropriate overhead.

2/ Recent quarterly figures are preliminary and may be changed as data become final.

3/ Actual allocation.

4/ Quarterly and Cumulative figures can't be accurately computed because of differences in USAID and GOP accounting procedures.

5/ Not available.

AGRICULTURAL DATA COLLECTION PROJECT LONG TERM CONSULTANTS

Name	Arrival	Departure	Days	Person Months	Person Category
T. J. Byram	28-08-86	28-08-88	731	24	Team Leader
G. Eric Waldhaus	10-02-86	25-10-89	1353	45	Survey Statistician
Dwaine Nelson	23-07-88	30-06-90	707	24	Team Leader
Robert L. Addison	18-06-90				Team Leader

- (Continued) -

AGRICULTURAL DATA COLLECTION PROJECT - SHORT TERM CONSULTANTS 1/

Name	Arrival	Departure	Person Days	Catagory	Subject	Number of man Month
Larry A. Sivers	20-Jul-85	01-Aug-85	13	Initiate Project		0.43
Odell Larson	20-Jul-85	01-Aug-85	13	Initiate Project		0.43
T. J. Byrum	20-Jul-85	01-Aug-85	13	Initiate Project		0.43
Charles H. Cook	01-Nov-85	10-Nov-85	10	Admin-OICD	PASA Funding Mechanism	0.33
G. Eric Waldhaus	04-Nov-85	19-Nov-85	16	Training	ASF Construction	0.53
Larry A. Sivers	04-Nov-85	12-Dec-85	39	Training	ASF Construction	1.30
Josephine S. Wallace	11-Nov-85	15-Dec-85	34	Training	ASF Construction	1.13
Roger D. Latham	16-Jan-86	30-Jan-86	14	Consulting	Assembling Microcomputers	0.47
Josephine S. Wallace	17-Mar-86	07-Apr-86	21	Training	ASF Construction	0.70
Kriss S. Oswalt	06-Apr-86	24-Apr-86	18	Training	Intro. Microcomputer Workshop	0.60
FY 85-86 TOTAL			191			6.37
Fredrick D. Baker	12-Jun-86	15-Jul-86	33	Training	Statistics Short Course	1.10
Charles R. Perry	15-Jun-86	12-Jul-86	27	Training	Statistics Short Course	0.90
Bill Kelly	23-Jun-86	03-Jul-86	10	Admin-OICD	AID/ADC/OICD Business	0.33
Ronald Fecso	23-Jun-86	04-Jul-86	11	Training	Statistics Short Course	0.37
Jewell T. Barr	14-Sep-86	01-Oct-86	17	Training	Mainframe SAS	0.57
James E. Stepanich	15-Sep-86	01-Oct-86	16	Training	Mainframe SAS	0.53
Ronald A. Sadler	08-Jan-87	26-Jan-87	18	Training	Intro. Microcomputer Workshop	0.60
Mark Harris	19-Jan-87	01-Feb-87	13	Consulting	Select ASF Sample	0.43
Charles R. Perry	31-Jan-87	04-Mar-87	32	Training	Statistics Short Course	1.07
Paul Blackwood	31-Jan-87	04-Mar-87	32	Training	Statistics Short Course	1.07
Carroll Rock	23-Mar-87	30-Apr-87	38	Consulting	Ag. Prices Study	1.27
James E. Stepanich	26-Mar-87	18-Apr-87	23	Training	PC SAS	0.77
Larry A. Sivers	01-Jun-87	09-Jun-87	8	Admin-NASS	Support for Resident Advisors	0.27
Ralph Otto	01-Jun-87	09-Jun-87	8	Admin-OICD	AID/ADC/OICD Business	0.27
FY 86-87 TOTAL			286			9.53
Jewell T. Barr	14-Sep-87	29-Sep-87	15	Consulting	ACO Methodology Review	0.50
Mark Harris	14-Sep-87	07-Oct-87	23	Consulting	ACO Methodology Review	0.77
Montie Wallace	14-Sep-87	08-Oct-87	24	Consulting	ACO Methodology Review	0.80
Richard Allen	14-Sep-87	02-Oct-87	18	Consulting	ACO Methodology Review	0.60
James E. Stepanich	17-Sep-87	08-Oct-87	21	Consulting	Computer programing for ADC	0.70
Bob Hale	28-Sep-87	16-Oct-87	18	Consulting	ACO Methodology Review	0.60
David Pawel	28-Sep-87	16-Oct-87	18	Consulting	ACO Methodology Review	0.60
Robert Rovinski	09-Nov-87	22-Nov-87	13	Consulting	Computer Mod. and Exp. Study	0.43
Dwaine Nelson	01-Feb-88	27-Feb-88	26	Consulting	SD Crop Estimates Improvement	0.87
Paul Blackwood	11-Feb-88	17-Mar-88	35	Training	Statistics Short Course	1.17
Charles R.Perry	13-Feb-88	16-Mar-88	32	Training	Statistics Short Course	1.07
James E. Stepanich	31-Mar-88	23-Apr-88	23	Training	PC SAS	0.77
FY 87-88 TOTAL			266			8.87

- (Continued) -

AGRICULTURAL DATA COLLECTION PROJECT - SHORT TERM CONSULTANTS 1/

Name	Arrival	Departure	Person Days	Catagory	Subject	Number of man Month
Paul Blackwood	30-Oct-88	19-Nov-88	20	Training	Primary Data Collection Methods	0.67
Theresa Holland	30-Oct-88	19-Nov-88	20	Training	Primary Data Collection Methods	0.67
Benjamin F. Klugh, J	07-Jan-89	26-Jan-89	19	Training	Primary Data Collection Methods	0.63
Paul W. Cook	07-Jan-89	26-Jan-89	19	Training	Primary Data Collection Methods	0.63
Larry A. Sivers	30-Jan-89	13-Feb-89	14	Admin-NASS	Support for Resident Advisors	0.47
James Mark Harris	12-May-89	26-May-89	14	Training	Digitization	0.47
Martin Ozga	12-May-89	26-May-89	14	Training	Digitization	0.47
FY 88-89 TOTAL			120			4.00
Larry A. Sivers	30-Jul-89	19-Aug-89	20	Admin-NASS	Prel. Work for New Agreement	0.67
T. J. Byram	30-Jul-89	19-Aug-89	20	Admin-NASS	Prel. Work for New Agreement	0.67
Larry A. Sivers	03-Nov-89	24-Nov-89	21	Admin-NASS	Prel. Work for New Agreement	0.70
James Mark Harris	13-Nov-89	08-Dec-89	25	Training	SPOT Stratification Training	0.83
Robert L. Addison	27-Nov-89	15-Dec-89	18	Consulting	Objective Yield Review	0.60
James Mark Harris	19-Jan-90	07-Feb-90	19	Training	SPOT Stratification Training	0.63
Robert L. Addison	09-Mar-90	28-Mar-90	19	Consulting	Wheat Obj Yield Research	0.63
Steve Kellogg	09-Mar-90	30-Mar-90	21	Training	Primary Data Collection Methods	0.70
Gary Keough	09-Mar-90	28-Mar-90	19	Training	Primary Data Collection Methods	0.63
Martin Ozga	16-Mar-90	29-Mar-90	13	Training	Digitization	0.43
Tom Birkett	11-Jun-90	22-Jun-90	11	Consulting	Wheat Obj Yield Research	0.37
FY 89-90 TOTAL			206			6.87
Paul W. Cook	31-May-91	20-Jun-91	20	Consulting	Balochistan Sample Selection	0.67
FY 90-91 TOTAL			20			0.67
Tom Birkett	12-Jul-91	26-Jul-91	14	Consulting	Wheat Plot Size Study	0.47
Ray Halley	08-Jul-91	26-Jul-91	18	Consulting	OY Program for Wheat, Rice, Cotto	0.60
Fred Warren	02-Aug-91	16-Aug-91	14	Consulting	Livestock and Poultry	0.47
Larry Sivers	25-Oct-91	08-Nov-91	14	Admin-NASS	Support for Resident Advisor	0.47
Tom Birkett	29-Dec-91	16-Jan-92	18	Consulting	Wheat Yield Forcaste Model	0.60
Terry O'Connor	21-Feb-92	13-Mar-92	21	Consulting	ASF Questionnaire Design	0.70
Tom Birkett	20-Apr-92	12-May-92	22	Consulting	Wheat & Cotton OY Model	0.73
Charles R. Perry	05-Jun-92	25-Jun-92	20	Consulting	Sample Allocation	0.67
FY 91-92 TOTAL			141			4.70
Charles R. Perry	09-Nov-92	04-Dec-92	25	Consulting	Sample Allocation	0.83
Gary Keough	09-Nov-92	04-Dec-92	25	Consulting	Summary Programs	0.83
Ed Lippert	30-Mar-93	29-Apr-93	29	Consulting	Layingout Segments	
Tom Birkett	11-Apr-93	28-Apr-93	18	Consulting	Forecasting Models	
Larry A. Sivers	18-May-93	28-May-93	11	Admin-NASS	Support for Resident advisor	
			97	Admin-NASS		
			28	Admin-OICD		
			486	Consulting		
			39	Initiate Project		
			630	Training		

TOTAL PERSON DAYS 1280
TOTAL MAN MONTHS 42.67