THE MART/AZR PROJECT

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No. 7

HOUSEHOLD AGRICULTURAL PRODUCTION SYSTEMS SURVEY RESULTS

Assembled by

Joseph G. Nagy and G. Farid Sabir

1987

MART / AZR PROJECT RESEARCH REPORTS

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This institute has responsibility for undertaking dryland agricultural research in all provinces in Pakistan through its headquarters in Quetta, Baluchistan and its sub-stations at D.I. Khan (NWFP), Umerkot (Sind) and Bahawalpur (Punjab)

The principal objective of the MART/AZR Project is the Institutional support and development of AZRI in the period 1985-1989. This series of research reports outlines the joint research findings of the MART/AZR project and AZRI. They will encompass a broad range of subjects within the sphere of dryland agricultural research and are aimed at researchers, extension workers and agricultural policy-makers concerned with the development of the resource-poor, arid areas of West Asia and the Middle East.

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MART/AZRI

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Assembled by

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December, 1987

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Household Agricultural Production Systems Survey Results

Assembled by

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The thirty tables assembled in this report are from the data of a formal survey of 200 households, 40 households in each of five locations, that was conducted in June and July, 1987 in Baluchistan. The five survey locations are presented in Table A and in Fig 1.

Table A. Survey locations, altitude and rainfall.

Location	District	Altitude	Rainfall
		Meters	mm
Khuzdar[a]	Khuzdar	1200	200-250
Zarchi	Kalat	1800	200-250
Kovak	Kalat	2000	200-250
Dasht	Quetta	1600	200-250
Tomagh	Loralai	1700	250-300

[a] Ferozabad.

The above five locations were chosen for the survey because present MART/AZRI agronomy, livestock and farming systems research is being conducted in these areas.

The survey was coordinated by the socio-economics/farming systems section and assisted by the agronomy, livestock and extension sections of MART/AZRI. The survey was conducted under contract by Dr. Del Castillo, an Anthropologist from the USA, who was assisted by the Sociology Department, University of Baluchistan. The thirty tables were assembled by the socio-economics/farming systems section using the SPSS/PC+ package.

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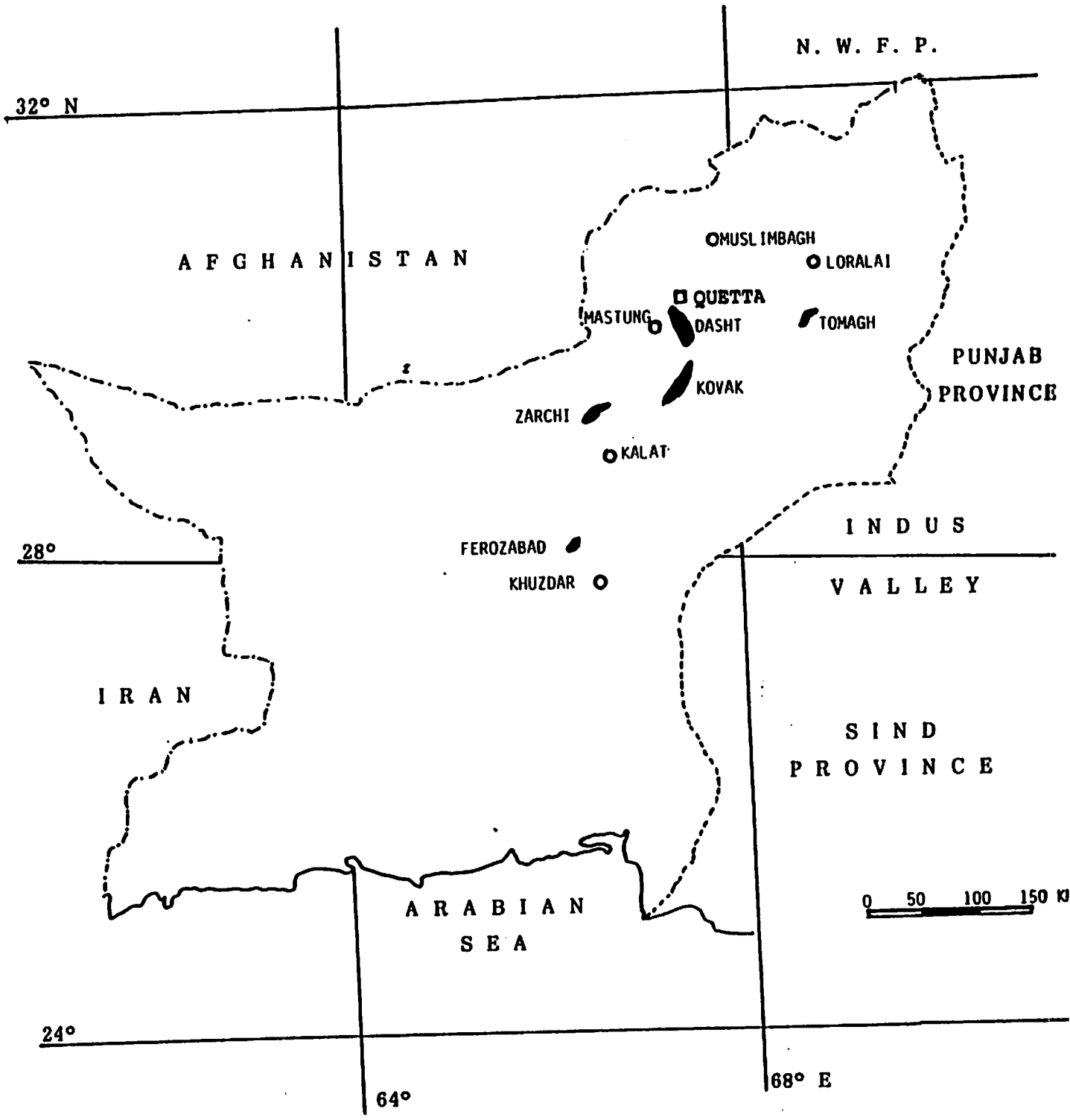
[2] International Center for Agricultural Research in the Dry Areas (ICARDA), on contract with the USAID, Management of Agricultural Research and Technology project (MART), at the Arid Zone Research Institute, Quetta, Pakistan (AZRI).

The tables portray the means, standard deviations, ranges, frequencies and percentages (in parenthesis) of the survey data. The purpose of assembling the tables in this publication without an accompanying text is to make the basic information from the survey available to MART/AZRI researchers and others as soon as possible. Further analysis, write up, and publication of the data and survey results is being undertaken. The survey questionnaire is presented in Appendix A.

There may remain some inconsistencies in the data and comments are welcome on them as are any other comments on the data. The results of the survey as presented in the tables should be treated as preliminary and should therefore not be quoted without the permission of MART/AZRI.

FIGURE 1. MART/AZR PROJECT EXPERIMENTAL SITES IN BALUCHISTAN PROVINCE, PAKISTAN



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Appendix A. Household agricultural production systems survey questionnaire.

Table 1. Respondent characteristics and community infrastructure, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Age of Respondent						
Average	45	48	51	44	41	46
Std.Dev.	13	14	16	13	13	14
Range	18-65	25-80	23-85	28-42	20-65	18-85
Leadership Role by Respondent	28%	28%	23%	30%	10%	24%
Electricity	45%	15%	0	28%	20%	22%
Access to Local School	40%	53%	38%	50%	65%	49%
Local Mosque	95%	95%	100%	100%	83%	95%
Access to Local Drinking Water	88%	100%	0	63%	93%	71%
Water Hauling Distance, Km						
Average	1.2	0	13	6	1.6	9
Std.Dev.	0.8	-	3	5	1.1	6
Range	1-2	-	5-16	0-14	1-4	0-16
# Farmers(%)	5(13)	-	40(100)	21(53)	7(18)	73(37)
Access to Local Dispensary	13%	13%	0	100%	3%	6%

Table 2. Rural migrant workers and remittances, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
	Numbers (Percentages)					
Members of Household Who Migrate	11(28)	9(23)	9(23)	4(10)	4(10)	37(19)
Migrants Who are Employed	11(28)	9(23)	9(23)	4(10)	2(5)	35(18)
Remittances Sent Home By Migrant Workers (Rs.)						
Average	2433	343	300	433	1033	1089
Std.Dev.	2692	127	262	115	838	1775
Range(000's Rs)	.2-6	.2-.5	.1-.8	.3-.5	.5-2	.1-6
# Workers	9(23)	7(18)	6(15)	3(8)	3(8)	28(14)
Length of time Migrants Away from Home						
One Month	-	5	1	1	3	10
2-6 Months	4	2	3	-	-	9
6-12 Months	1	1	1	-	-	3
> One Year	6	1	4	3	1	15
Period Over Which Migrants Have Migrated						
First Year	4	2	2	1	1	10
>2 Years	4	4	3	1	1	14
>5 Years	3	3	4	0	0	9
>10 Years	-	-	-	-	2	4

Table 3. Land resources of dryland farmers, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
	----------Hectares----------					
Khushkaba Hectares Owned[1]						
Average	12.6	27.1	17.4	27.1	2.8	16.2
Std.Dev.	21	68	17	45	3	33
Range	0.8-122	2.4-283	0.4-61	1.6-202	0.4-12	0.4-283
#Farmers(%)	40(100)	16(40)	35(88)	19(48)	23(58)	133(67)
Sailaba Hectares Owned						
Average	1.2	-	2.4	0.8	1.6	1.6
Std.Dev.	1	-	2	-	2	2
Range	0.4-2	-	0.8-4	1	0.4-4	0.4-4
#Farmers(%)	2(5)	0	2(5)	1(3)	5(13)	10(5)
Irrigated Hectares Owned						
Average	2.0	-	-	-	2.8	2.8
Std.Dev.	2	-	-	-	4	4
Range	0.8-3.2	-	-	-	0.4-24	0.4-24
#Farmers(%)	2(5)	-	-	-	29(73)	31(16)
Khushkaba Hectares Rented In[2]						
Average	3.2	36.8	13.0	25.9	-	23.1
Std.Dev.	3	79	14	28	-	48
Range	0.8-8	0.2-324	0.4-49	0.8-122		0.4-324
#Contracts	11(28)	32(80)	31(78)	28(70)	-	102(51)

(con't).

Table 3 (con't). Land resources of dryland farmers, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
	Hectares					
Irrigated Hectares Rented In						
Average	0.4	-	-	6.1	2.4	2.4
Std.Dev.	-	-	-	-	1	2
Range	0.4	-	-	6.1	1.2-12	0.4-6.1
#Contracts(%)	2(5)	-	-	1(3)	5(13)	8(4)
Khushkaba Hectares Rented Out						
Average	4.9	4.9	6.1	11.3	1.2	6.1
Std.Dev.	4	3	3	9	-	5
Range	0.8-11	2.4-8	4.0-8	2.0-20	-	0.8-20
#Contracts(%)	4(10)	3(8)	2(5)	3(8)	1(3)	13(7)
Khushkaba Hectares Purchased[3]						
Average	0.4	4.0	2.4	3.6	0.8	2.4
Std.Dev.	-	2	2	4	-	2
Range	0.4	2.0-6	0.8-6	0.8-6	0.8	0.8-6
#Farmers(%)	2(5)	3(8)	6(15)	2(5)	2(5)	15(8)

[1] Khushkaba land is rainfed land. Sailaba land is ephemeral stream fed land.
[2] No sailaba land rented in at any location within the past 12 months..
[3] No sailaba or irrigated land purchased at any of the locations within the past 12 months.

Table 4. Land tenure and land tenure relationships of dryland farmers, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
	Hectares					
Farmers Renting But Not Owning Any Land (Tenants)						
Average	-	42.9	5.3	26.7	1.6	30.0
St.Dev.	-	90	1	30	1	64
Range	-	2-324	3-6	2-121	0.4-2	.04-324
# Contracts	0	24	5	21	3	53
Farmers Who Own But Do Not Rent Land						
Average	15.8	51.4	25.5	32.4	2.8	19.4
St.Dev.	25	102	19	54	5	41
Range	1-121	6-283	8-61	10-202	0.4-25	0.4-283
# Farmers	29	7	9	12	27	84
Farmers Both Owning and Renting Land						
Average	3.2	7.7	15.0	17.8	0.8	11.7
St.Dev.	3	4	15	23	1	14
Range	0.8-8	2.5-13	0.4-45	1.6-59	0.8	0.8-59
# Contracts	11	8	26	7	2	54
#Farmers Owning Land Jointly	18(45%)	6(40%)	8(24%)	8(44%)	11(31%)	51(36%)

(con't)

Table 4 (con't). Land tenure and land tenure relationships of dryland farmers, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
	--# Farmers (Percent of Tenant Contracts)--					
# of Tenant Contracts	11	32	31	28	5	107
Tenancy Contract In Written Form	1(9)	25(78)	18(58)	19(68)	1(20)	64(60)
Can Transfer Tenant Contract	1(9)	29(91)	24(77)	17(61)	4(80)	75(65)
Contract Length						
One Year	8(73)	1(3)	1(3)	2(7)	2(40)	14(13)
> One Year	3(27)	31(97)	30(97)	26(93)	3(60)	93(87)
Hereditary Tenancy	4(36)	31(97)	25(81)	26(93)	0	86(80)
Who Makes Planting Decisions on Rented Land						
Landlord	1(9)	0	1(3)	1(3.5)	4(80)	7(7)
Tenant	9(82)	32(100)	29(94)	26(93)	0	96(89)
Jointly	1(9)	0	1(3)	1(3.5)	1(20)	4(4)
Who Provides Seed On Rented Land						
Landlord	2(18)	0	1(3)	0	4(80)	7(7)
Tenant	4(36)	32(100)	29(94)	27(96)	0	92(85)
Jointly	5(46)	0	1(3)	1(4)	1(20)	8(8)
Who Provides Labor On Rented Land						
Landlord	0	0	0	1(4)	3(60)	4(4)
Tenant	11(100)	32(100)	31(100)	27(96)	2(40)	103(96)

(con't)

Table 4 (con't). Land tenure and land tenure relationships of dryland farmers, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi Kovak		Dasht Tomagh		All
% Crop Share Given to Landlord for the Rental of Khushkaba Land						
Average	52%	17%	28%	26%	-	27%
St.Dev.	10	2	7	5	-	11
Range	40-80	16-25	25-50	25-50	-	16-80
#Contracts	11	31	31	28	-	101
FREQUENCY						
Crop Share(%)	-------# Contracts(Percentage)----------					
16.6	-	29(94)	-	-	-	29(29)
25	-	2(6)	22(71)	25(89)	-	49(49)
33	-	-	7(22)	2(7)	-	9(9)
40	1(4)	-	-	-	-	1(1)
50	9(82)	-	2(7)	1(4)	-	12(12)
80	1(4)	-	-	-	-	1(1)
% Crop Share Given to Landlord for the Rental of Irrigated Land						
Average	50%	-	-	25%	60%	54%
St.Dev.	-	-	-	-	14	17
Range	-	-	-	-	50-75	25-75
# Contracts	1	-	-	1	5	7
FREQUENCY						
Crop Share(%)	-------# Contracts(Percentage)----------					
25	-	-	-	1(100)	-	1(14)
50	1(100)	-	-	-	3(60)	4(57)
75	-	-	-	-	2(40)	2(29)

Table 5. Wheat production and marketing, dryland agriculture, Baluchistan, 1987.

	Mean	Std.Dev.	Min	Max	#Farmers
All Locations					
Plantings (Ha)					
Khushkaba	3.7(60)	3.8	0.4	20.2	175
Sailaba	1.1(17)	0.7	0.4	2.0	4
Irrigated	1.4(23)	0.6	0.8	2.4	8
Total	6.2				
Total Harvest (kg)	1715	1770	100	11000	182
Kept For Seed(kg)	343	2.8	80	2000	155
Total Sales in Rs.	7375	6996	2000	18000	6
Khuzdar					
Plantings (Ha)					
Khushkaba	4.7(63)	4.9	0.4	20.2	37
Sailaba	2.0(27)	-	-	-	1
Irrigated	0.8(10)	-	-	-	1
Total	7.5				
Total Harvest (kg)	1522	1139	300	6000	37
Kept For Seed(kg)	290	134	80	600	31
Total Sales in Rs.	2000	-	-	-	1
Zarchi					
Plantings (Ha)					
Khushkaba	1.9(100)	1.8	0.8	10.1	40
Sailaba	-	-	-	-	-
Irrigated	-	-	-	-	-
Total	1.9				
Total Harvest (kg)	9470	1536	100	10000	40
Kept For Seed(kg)	264	237	80	1200	25
Total Sales in Rs.	6200	-	-	-	1

(con't)

Table 5.(con't). Wheat production and marketing, dryland agriculture, Baluchistan, 1987.

	Mean	Std.Dev.	Min	Max	#Farmers
		Kovak			
Plantings (Ha)					
Khushkaba	3.4(100)	2.9	0.8	16.2	39
Sailaba	-	-	-	-	-
Irrigated	-	-	-	-	-
Total	3.4				
Total Harvest (kg)	1802	1388	300	8000	40
Kept For Seed(kg)	430	318	120	2000	37
Total Sales in Rs.	-				
		Dasht			
Plantings (Ha)					
Khushkaba	5.6(100)	4.3	0.8	20.2	40
Sailaba	-	-	-	-	-
Irrigated	-	-	-	-	-
Total	5.6				
Total Harvest (kg)	2238	2228	400	11000	40
Kept For Seed(kg)	415	349	80	2000	38
Total Sales in Rs.	18000	-	-	-	-
		Tomagh			
Plantings (Ha)					
Khushkaba	2.5(52)	2.8	0.4	12.1	19
Sailaba	0.8(17)	0.4	0.4	1.2	3
Irrigated	1.5(31)	0.6	0.8	2.4	7
Total	4.8				
Total Harvest (kg)	2232	2201	200	10000	25
Kept For Seed(kg)	248	230	40	1000	24
Total Sales in Rs.	6000	6928	2000	14000	3

Table 6. Barley production and marketing, dryland agriculture, Baluchistan, 1987.

	Mean	Std.Dev.	Min	Max	#Farmers
All Locations					
Plantings (Ha)					
Khushkaba	1.2(75)	1.9	0.4	12.1	40
Sailaba	-	-	-	-	-
Irrigated	0.4(25)	-	-	-	1
Total	1.6				
Total Harvest (kg)	413	446	100	2000	32
Kept For Seed(kg)	132	88	40	480	30
Total Sales in Rs.	1790	269	1600	1980	2
Khuzdar					
Plantings (Ha)					
Khushkaba	0.7(64)	0.5	0.4	1.6	7
Sailaba	-	-	-	-	-
Irrigated	0.4(36)	-	-	-	1
Total	1.1				
Total Harvest (kg)	288	113	200	500	8
Kept For Seed(kg)	97	32	40	120	7
Total Sales in Rs.	-				
Zarchi					
Plantings (Ha)					
Khushkaba	1.1(100)	1.6	0.8	6.1	12
Sailaba	-	-	-	-	-
Irrigated	-	-	-	-	-
Total	1.1				
Total Harvest (kg)	530	596	100	2000	10
Kept For Seed(kg)	138	35	120	200	9
Total Sales in Rs.	1600	-	-	-	-

(con't)

Table 6. (con't). Barley production and marketing, dryland agriculture, Baluchistan, 1987.

	Mean	Std.Dev.	Min	Max	#Farmers
		Kovak			
Plantings (Ha)					
Khushkaba	1.1(100)	0.5	0.8	2.0	10
Sailaba	-	-	-	-	-
Irrigated	-	-	-	-	-
Total	1.1				
Total Harvest (kg)	327	356	100	1500	15
Kept For Seed(kg)	120	-	1	1	2
Total Sales in Rs.	-				
		Dasht			
Plantings (Ha)					
Khushkaba	1.7(100)	3.2	0.8	12.1	13
Sailaba	-	-	-	-	-
Irrigated	-	-	-	-	-
Total	1.7				
Total Harvest (Kg)	409	507	100	1800	11
Kept For Seed(kg)	160	135	40	480	11
Total Sales in Rs.	1980	-	-	-	-
		Tomagh			
Plantings (Ha)					
Khushkaba	0.4(100)	-	-	-	1
Sailaba	-	-	-	-	-
Irrigated	-	-	-	-	-
Total	0.4				
Total Harvest	500	-	-	-	1
Kept For Seed(kg)	40	-	-	-	-
Total Sales in Rs.	-				

Table 7. Lentil production and marketing, dryland agriculture, Baluchistan, 1987.

	Mean	Std.Dev.	Min	Max	#Farmers
		Dasht			
Plantings (Ha)					
Khushkaba	1.2(100)	0.7	0.8	2.0	3
Sailaba	-	-	-	-	-
Irrigated	-	-	-	-	-
Total	1.2				
Total Harvest (kg)	700	520	100	1000	3
Kept For Seed(kg)	100	40	40	120	3
Total Sales in Rs.	-	-	-	-	-

Table 8. Cumin production and marketing, dryland agriculture, Baluchistan, 1987.

	Mean	Std.Dev.	Min	Max	#Farmers
		All Locations			
Plantings (Ha)					
Khushkaba	1.2(60)	1.4	0.4	7.3	49
Sailaba	-	-	-	-	-
Irrigated	0.8(40)	0.6	0.4	1.2	2
Total	2.0				
Total Harvest (kg)	359	466	100	2000	29
Kept For Seed(kg)	95	56	40	200	30
Total Sales in Rs.	6056	6163	1050	18000	8
		Zarchi			
Plantings (Ha)					
Khushkaba	1.1(100)	1.2	0.4	4.0	21
Sailaba	-	-	-	-	-
Irrigated	-	-	-	-	-
Total	1.1				
Total Harvest (kg)	191	181	100	700	11
Kept For Seed(kg)	84	52	40	200	11
Total Sales in Rs.	7000	-	-	-	1
		Kovak			
Plantings (Ha)					
Khushkaba	1.4(100)	1.6	0.4	7.3	24
Sailaba	-	-	-	-	-
Irrigated	-	-	-	-	-
Total					
Total Harvest (kg)	327	356	100	1500	15
Kept For Seed(kg)	107	54	40	200	5
Total Sales in Rs.	4290	4751	1050	12650	5

(con't)

Table 8. (con't). Cumin production and marketing, dryland agriculture, Baluchistan, 1987.

	Mean	Std.Dev.	Min	Max	#Farmers
		Dasht			
Plantings (Ha)					
Khushkaba	0.4(100)	1.6	0.4	7.3	24
Sailaba	-	-	-	-	-
Irrigated	-	-	-	-	-
Total	0.4				
Total Harvest (kg)	1133	961	100	2000	3
Kept For Seed(kg)	80	80	40	200	4
Total Sales in Rs.	10000	11313	2000	18000	2

Table 9. Sorghum production and marketing, dryland agriculture, Baluchistan, 1987.

	Mean	Std.Dev.	Min	Max	#Farmers
		All Locations			
Plantings (Ha)					
Khushkaba	1.8(100)	1.8	0.4	10.1	67
Sailaba	-	-	-	-	-
Irrigated	-	-	-	-	-
Total	1.8				
Total Harvest (kg)	380	321	100	1000	15
Kept For Seed(kg)	117	51	40	200	15
Total Sales in Rs.	445	346	200	690	2
		Khuzdar			
Plantings (Ha)					
Khushkaba	0.6(100)	0.2	0.4	0.8	4
Sailaba	-	-	-	-	-
Irrigated	-	-	-	-	-
Total	0.6				
Total Harvest (kg)	100	-	-	-	-
Kept For Seed(kg)	40	-	-	-	1
Total Sales in Rs.	-				
		Zarchi			
Plantings (Ha)					
Khushkaba	1.0(100)	1.1	0.8	3.2	7
Sailaba	-	-	-	-	-
Irrigated	-	-	-	-	-
Total	1.0				
Total Harvest (kg)	-				
Kept For Seed(kg)	-				
Total Sales in Rs.	-				

(con't)

Table 9. (con't). Sorghum production and marketing, dryland agriculture, Baluchistan, 1987.

	Mean	Std.Dev.	Min	Max	#Farmers
		Kovak			
Plantings (Ha)					
Khushkaba	2.1(100)	1.2	0.4	6.1	15
Sailaba	-	-	-	-	-
Irrigated	-	-	-	-	-
Total	2.1				
Total Harvest	233	231	100	500	3
Kept For Seed(kg)	133	0.6	80	200	3
Total Sales in Rs.	-				
		Dasht			
Plantings (Ha)					
Khushkaba	1.7(100)	2.1	0.4	10.1	22
Sailaba	-	-	-	-	-
Irrigated	-	-	-	-	-
Total	1.7				
Total Harvest (kg)	445	339	100	1000	11
Kept For Seed(kg)	120	47	40	200	11
Total Sales in Rs.	445	346	200	690	2

Table 10. Maize production and marketing, dryland agriculture, Baluchistan, 1987.

	Mean	Std.Dev.	Min	Max	#Farmers
		All Locations			
Plantings (Ha)					
Khushkaba	1.2(54)	1.0	0.4	4.0	12
Sailaba	0.4(18)	-	-	-	1
Irrigated	0.6(27)	0.4	0.4	1.1	9
Total	2.0				
Total Harvest (kg)	515	301	100	1200	20
Kept For Seed(kg)	104	48	40	200	18
Total Sales in Rs.	2902	4415	300	8000	3
		Zarchi			
Plantings (Ha)					
Khushkaba	0.4(100)	-	-	-	1
Sailaba					
Irrigated					
Total	0.4				
Total Harvest (kg)	-				
Kept For Seed(kg)	-				
Total Sales in Rs.	-				
		Dasht			
Plantings (Ha)					
Khushkaba	2.6(100)	2.0	1.2	4.0	2
Sailaba					
Irrigated					
Total	2.6				
Total Harvest (kg)	150	71	100	200	2
Kept For Seed(kg)	40	-	-	-	1
Total Sales in Rs.	353	74	300	405	2

(con't)

Table 10. (con't). Maize production and marketing, dryland agriculture, Baluchistan, 1987.

	Mean	Std.Dev.	Min	Max	#Farmers
		Tomagh			
Plantings (Ha)					
Khushkaba	1.0((50)	0.5	0.4	1.6	9
Sailaba	0.4(20)	-	-	-	1
Irrigated	0.6(30)	0.4	0.4	1.2	9
Total	2.0				
Total Harvest	556	289	100	1200	18
Kept For Seed(kg)	108	46	40	200	17
Total Sales in Rs.	8000	-	-	-	1

Table 11. Melon production and marketing, dryland agriculture, Baluchistan, 1987.

	Mean	Std.Dev.	Min	Max	#Farmers
		All Locations			
Plantings (Ha)					
Khushkaba	0.7(64)	0.4	0.4	2.0	17
Sailaba	-	-	-	-	-
Irrigated	0.4(36)	-	-	-	1
Total	1.1				
Total Harvest (kg)	1067	902	200	2000	3
Kept For Seed(kg)	-				
Total Sales in Rs.	200	-	-	-	1
		Zarchi			
Plantings (Ha)					
Khushkaba	0.8(100)	0.6	0.4	1.2	2
Sailaba	-				
Irrigated	-				
Total	0.8				
		Kovak			
Plantings (Ha)					
Khushkaba	0.7(100)	0.3	0.4	1.2	8
Sailaba	-				
Irrigated	-				
Total	0.7				
		Dasht			
Plantings (Ha)					
Khushkaba	0.4(100)	-	-	-	1
Sailaba	-				
Irrigated	-				
Total	0.4				

Table 12. Vegetable production and marketing, dryland agriculture, Baluchistan, 1987.

	Mean	Std.Dev.	Min	Max	#Farmers
		All Locations			
Plantings (Ha)					
Khushkaba	0.5(30)	0.2	0.4	0.8	6
Sailaba	0.4(23)	-	-	-	1
Irrigated	0.8(47)	0.5	0.4	2.0	23
Total	1.7				
Total Sales in Rs.	8405	6308	1000	20000	19
		Zarchi			
Plantings (Ha)					
Khushkaba	0.4(100)	-	-	-	1
Sailaba	-				
Irrigated	-				
Total	0.4				
		Dasht			
Plantings (Ha)					
Khushkaba	0.4(100)	-	-	-	1
Sailaba	-				
Irrigated	-				
Total	0.4				
Total Sales in Rs.	8000	-	-	-	1
		Tomagh			
Plantings (Ha)					
Khushkaba	0.5(30)	0.2	0.4	0.8	4
Sailaba	0.4(23)	-	-	-	1
Irrigated	0.8(47)	0.5	0.8	2.0	22
Total	1.7				
Total Sales in Rs.	8428	6491	1000	20000	18

Table 13. Fruit tree production and marketing, dryland agriculture, Baluchistan, 1987.

	Mean	Std.Dev.	Min	Max	#Farmers
		All Locations			
Plantings (Ha)					
Khushkaba	0.8(6)	0.6	0.4	1.2	2
Sailaba	0.5(3)	0.2	0.4	0.8	3
Irrigated	12.8(91)	58.2	0.4	340.0	33
Total	14.1				
Total Sales in Rs.	57520	113957	1100	600000	30
		Khuzdar			
Plantings (Ha)					
Khushkaba	-				
Sailaba	-				
Irrigated	0.4(100)	-	-	-	1
Total	0.4				
		Tomagh			
Plantings (Ha)					
Khushkaba	0.8(6)	0.6	0.4	1.2	2
Sailaba	0.5(3)	0.2	0.4	0.8	3
Irrigated	13.2(91)				
Total	14.5				
Total Sales in Rs.	57520	113957	1100	600000	30

Table 14. Crop and crop input decision making, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi Kovak	Dasht Tomagh			All
Who Decides on What Field to Grow Which Crops						
	#Farmers (Percent)					
Self	35(88)	31(78)	33(83)	37(93)	19(48)	155(78)
Landlord	0	0	0	0	4(10)	4(2)
Self & Sons	3(7)	8(20)	5(13)	1(2)	10(25)	27(13)
Self & Others	2(5)	1(2)	2(4)	2(5)	7(17)	14(7)
Total	40	40	40	40	40	200
Planting Decisions Are Based On:						
	#Farmers (Percent)					
Rainfall	34(85)	32(80)	40(100)	39(98)	29(81)	174(89)
Tractor/Cash Avail	6(15)	8(20)	0	1(2)	7(19)	22(11)
Labor Availability	0	0	0	0	0	0
Total	40	40	40	40	36	196
Planted Hectares Required for Food Security						
	#Farmers (Percent)					
Average	15	39	23	33	4	23
Std.Dev.	21	89	17	38	6	46
Range	1-121	1-405	3-69	4-202	1-40	1-405
Reasons For Planting Less Than Intended Hectares						
	#Farmers (Percent)					
No Rainfall	39(98)	40(100)	40(100)	40(100)	29(83)	188(96)
Lack Inputs	1(2)	0	0	0	5(14)	6(3)
Lack Labour	0	0	0	0	1(3)	1(1)
Total	40	40	40	40	35	195
Number of Farmers With Crop Land Not Totally Utilized						
	#Farmers (Percent)					
Yes	30(75)	40(100)	39(98)	39(98)	15(38)	163(82)
No	10(25)	0	1(2)	1(2)	25(62)	37(18)

(con't)

Table 14 (con't). Crop and crop input decision making, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Reasons For Cropland Not being Used This Year	#Farmers (Percent)					
1)Unusable	3(10)	0	0	0	4(27)	7(4)
2)Lack Rain	6(20)	17(43)	24(62)	5(13)	2(13)	54(33)
3)Lack Inputs	1(3)	1(2)	0	0	3(20)	5(3)
4)Lack Seed	2(7)	0	0	0	0	2(1)
5)Other Income	0	0	0	0	1(7)	1(1)
6) 1&2	0	0	2(5)	2(5)	2(13)	6(4)
7) 1&3	2(7)	0	0	0	1(7)	3(2)
8) 2&3	4(13)	7(18)	5(13)	8(21)	1(7)	25(16)
9) 2&4	9(30)	12(30)	8(20)	19(49)	0	48(29)
10) 3&4	1(3)	1(2)	0	2(5)	1(7)	5(3)
11) 2,3,4&5	2(7)	2(5)	0	3(7)	0	7(4)
Total	30	40	39	39	15	163
Reason For Land In Fallow	#Farmers (Percent)					
1) Traditional	5(12)	0	0	4(10)	1(3)	10(5)
2) No Rainfall	28(70)	32(80)	35(88)	33(83)	7(18)	135(68)
3) Not Afford	7(18)	8(20)	5(12)	3(7)	30(78)	53(27)
Total	40	40	40	40	38	198
Farmers Perceptions About Fallowing Land	#Farmers (Percent)					
1) Often	0	0	0	2(5)	1(3)	3(2)
2) Sometimes	6(15)	0	1(2)	0	5(13)	12(6)
3) Not Afford	26(67)	22(55)	13(33)	27(68)	16(40)	104(52)
4) When No Rain	1(3)	0	26(65)	3(7)	1(3)	31(16)
5) Does Not Help	6(15)	18(45)	0	8(20)	16(40)	48(24)
Total	39	40	40	40	39	198
Month Farmers Plow Fields For Fall/Winter Planted Crops	#Farmers (Percent)					
July	1(3)	0	0	0	0	1(1)
August	20(51)	11(48)	20(50)	16(40)	0	67(35)
Sept	2(5)	16(40)	13(32)	15(38)	0	46(24)
Oct	2(5)	0	0	2(5)	0	4(2)
Nov	0	0	0	0	10(33)	10(5)
Dec	0	0	0	0	18(60)	18(10)
July/Aug	6(15)	0	0	0	0	6(3)
Aug/Sept	7(18)	13(32)	7(18)	6(15)	2(7)	35(19)
Oct/Nov	1(3)	0	0	1(2)	0	2(1)
Total	39	40	40	40	30	189

(con't)

Table 14 (con't). Crop and crop input decision making, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Month Farmers Plow Fields For Spring/Summer Planted Crops						
	#Farmers (Percent)					
March	3(9)	3(7)	2(5)	29(74)	4(13)	4(22)
April	0	30(75)	35(88)	8(21)	5(16)	78(42)
May	18(52)	7(18)	3(7)	2(5)	0	3(16)
June	12(36)	0	0	0	10(32)	22(13)
July	1(3)	0	0	0	12(39)	13(7)
Total	34	40	40	39	31	184
Plow Before Summer Rains						
	#Farmers (Percent)					
Never	16(40)	37(93)	21(53)	10(25)	11(35)	95(50)
Sometimes	19(48)	3(7)	12(30)	17(43)	1(3)	52(27)
Always	4(10)	0	7(18)	13(32)	13(42)	37(19)
As Much as Possible	1(2)	0	0	0	6(19)	7(4)
Total	40	40	40	40	31	191
How Long Do Farmers Wait For Rain Before Plowing Dry Soil						
	#Farmers (Percent)					
Sept.	3(8)	1(2)	0	0	2(7)	6(3)
Oct.	2(5)	3(7)	1(2)	5(13)	0	11(6)
Nov.	13(34)	13(33)	10(25)	9(22)	4(13)	49(26)
Dec.	8(21)	14(35)	26(65)	4(10)	20(67)	72(38)
Sept/Oct	3(8)	0	0	5(13)	3(7)	10(5)
Oct/Nov	2(5)	2(5)	0	1(2)	0	5(3)
Nov/Dec	7(18)	7(18)	3(8)	16(40)	2(7)	35(19)
Total	38	40	40	40	30	188
Do Farmers Re-Plow Dry Plowed Land If It Rains Before The Land Has Been Planted						
	#Farmers (Percent)					
Yes	35(88)	38(95)	39(98)	33(88)	19(58)	164(85)
No	2(5)	0	1(2)	7(19)	1(3)	11(6)
On Best Land	0	0	0	0	1(3)	1(1)
As Much As Can	3(7)	2(5)	0	0	12(36)	17(8)
Total	40	40	40	40	33	193

Table 15. Agricultural inputs and technology use, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
# Farmers that Use A Tractor for Plowing						
Yes	10	20	5	11	25	71
Types of Land Plowed by Tractor			#Farmers(percent)			
Kushkaba	10(100)	19(100)	5(100)	11(100)	5(20)	50(71)
Sailaba	-	-	-	-	2(8)	2(3)
Irrigated	-	-	-	-	10(40)	10(14)
All Land	-	-	-	-	8(32)	8(11)
Total	10	19	5	11	25	70
Own or Rent a Tractor			#Farmers(percent)			
Own	-	-	-	1(9)	4(16)	5(7)
Rent	10(100)	19(100)	5(100)	10(91)	21(84)	65(93)
Total	10	19	5	11	25	70
Hire Tractor out to Others			#Farmers(percent)			
Yes	-	-	-	1(100)	3(100)	4(80
No	-	1(100)	-	-	-	1(20)
Charge to Hire Out Tractor (Rs./Hr.)						
Average	-	-	-	60	63	63
Std.Dev.	-	-	-	0	6	5
Range	-	-	-	60-60	60-70	60-70
#Farmers	-	-	-	1	3	4
Charge to hire in a Tractor (Rs./Hr.)						
Average	50	66	64	67	67	66
Std.Dev.	0	2	2	6	7	6
Range	50-50	60-70	60-65	60-70	60-80	50-80
#Farmers	1	19	5	3	23	51
Rent Tractor alone or Jointly			#Farmers(percent)			
Alone	1(100)	8(42)	2(40)	-	20(91)	31(63)
Jointly	-	11(58)	3(60)	2(100)	2(9)	18(37)
Total	1	19	5	2	22	49

(con't)

Table 15 (con't). Agricultural inputs and technology use, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Hectares that one tractor plows per day						
Average	1.0	2.0	2.0	1.8	2.0	1.8
Std.Dev.	0.5	0.6	0.3	0.8	2.5	1.6
Range	.4-2.0	1.2-3.2	1.6-2.4	.8-3.2	.8-13.8	.4-13.8
#Farmers	10	19	5	11	25	70
Type of Plow Used			#Farmers(percent)			
Springtyne	3(30)	19(100)	3(60)	4(36)	25(100)	54(77)
Moldboard	7(70)	-	2(40)	7(64)	-	16(23)
Total	10	19	5	11	25	70
Number of Passes made with a Plow			#Farmers(percent)			
One Pass	-	5(26)	1(20)	-	-	6(9)
Two Passes	9(90)	14(74)	4(80)	11(100)	17(68)	55(78)
Three Passes	1(10)	-	-	-	8(32)	9(13)
Total	10	19	5	11	25	70
Types of Land that Require More Than One Pass			#Farmers(percent)			
Kushkaba	10(100)	19(100)	5(100)	11(100)	16(64)	61(87)
Sailaba	-	-	-	-	-	-
Irrigated	-	-	-	-	9(36)	9(13)
Total	10	19	5	11	25	70
Preferred Land to Plow			#Farmers(percent)			
Kushkaba	9(100)	19(100)	6(100)	12(100)	8(33)	54(77)
Sailaba	-	-	-	-	1(4)	1(1)
Irrigated	-	-	-	-	11(46)	11(16)
All Kinds	-	-	-	-	4(17)	4(6)
Total	9	19	6	12	24	70
Use Animal Traction for Plowing			#Farmers(percent)			
Draft Camel	-	11(33)	38(95)	26(74)	-	75(49)
Bullock	34(97)	15(45)	-	5(14)	8(89)	62(41)
Both	1(37)	7(21)	2(5)	4(11)	1(11)	15(10)
Total	35	33	40	35	9	152

(con't)

Table 15 (con't). Agricultural inputs and technology use, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Types of Land Plowed with Animal Traction	#Farmers(percent)					
1)Kushkaba	30(88)	35(100)	38(100)	36(97)	2(22)	141(92)
2)Sailaba	1(3)	-	-	-	1(11)	2(1)
3)Irrigated	-	-	-	-	1(11)	1(1)
4)All Kinds	2(6)	-	-	-	1(11)	3(2)
5)1&3	1(3)	-	-	1(3)	3(33)	5(3)
6)1,2&3	-	-	-	-	1(11)	1(1)
Total	34	35	38	37	9	153
Own or Hire Draft Animals	#Farmers(percent)					
Own	29(88)	29(85)	37(97)	29(81)	4(44)	128(85)
Hire	4(12)	5(15)	1(3)	7(19)	5(56)	22(15)
Total	33	34	38	36	9	150
Cost of Hiring Draft Animals (Rs./Day)						
Average	29	44	40	63	70	50
Std.Dev.	44	5	0	26	35	33
Range	1-100	40-50	40-40	40-100	40-100	1-100
#Farmers	6	5	1	7	4	23
Hectares of Land that an Animal Plows/Day						
Average	0.4	0.4	0.4	0.4	0.7	0.4
Std. Dev.	-	-	-	-	0.8	1.2
Range	1	1	1	1	1-1.2	1-1.2
#Farmers	33	35	38	37	7	150
Number of Hours that An animal Can Plow						
Average	4	5	5	5	7	5
Std.Dev.	1	1	0	1	2	1
Range	1-9	4-6	1-1	3-8	4-9	1-9
#Farmers	34	35	38	37	9	153

Table 16. Crop storage practices of dryland farmers, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
	--------# Farmers (percent)----------					
Storage Practices						
# Farmers						
1) Always	34(85)	33(83)	40(100)	24(60)	30(88)	161(83)
2) Only on good years	2(5)	6(15)	-	9(23)	1(3)	18(19)
3) Harvest not sufficient	2(5)	-	-	-	1(3)	3(3)
4) Never	-	-	-	-	1(3)	1(1)
5) 1 & 2	2(5)	1(3)	-	7(18)	-	10(11)
6) 2 & 3	-	-	-	-	1(3)	1(1)
Total	40	40	40	40	34	194
Types of Crops Stored						
# Farmers						
1) Wheat	39(100)	39(100)	40(100)	38(95)	27(84)	183(96)
2) Barley	-	-	-	1(3)	-	1(1)
3) Sorghum	-	-	-	1(3)	-	1(1)
4) Millet	-	-	-	-	-	-
5) Maize	-	-	-	-	2(6)	2(1)
6) Others	-	-	-	-	3(9)	3(2)
Total	39	39	40	40	32	190
Duration of Crop Stored						
1) For two months	3(8)	5(13)	1(3)	2(5)	1(3)	11(6)
2) For 2 to 4 months	12(30)	17 (43)	5(13)	8(20)	22(69)	64(34)
3) For half a year	22(55)	15 (38)	24(62)	24(60)	7(22)	92(48)
4) For a year or more	3(8)	3 (8)	9(22)	6(15)	2(6)	23(12)
Total	40	40	39	40	32	190
Crop Storage for Fodder						
# Farmers						
1) Always	22(59)	32(89)	40(100)	27(69)	26(81)	147(80)
2) Only on good years	11(30)	4(11)	-	12(31)	-	27(15)
3) Never	4(11)	-	-	-	6(19)	10(5)
Total	37	36	40	39	32	184

(con't).

Table 16 (con't). Crop storage practices of dryland farmers, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
	--------# Farmers (Percent)----------					
Crops Commonly Stored for Fodder						
1) Barley,grain	8(23)	8(20)	4(10)	5(13)	4(12)	29(15)
2) Barley,straw	26(74)	30(75)	27(68)	25(63)	12(37)	120(64)
3) Sorghum,grain	-	-	3(8)	1(3)	1(3)	5(3)
4) Sorghum,straw	-	-	6(15)	1(3)	-	7(4)
5) Millet,grain	-	-	-	1(3)	-	1(1)
6) Millet,straw	-	-	-	-	-	-
7) Lucerne	-	-	-	-	1(3)	1(1)
8) Barseem	-	-	-	-	-	-
9) Wheat straw	1(3)	2(5)	-	7(18)	15(45)	25(13)
Total	35	40	40	40	33	188
Duration of Fodder Crop Storage						
# Farmers						
1) For 2 months	8(22)	5(13)	2(5)	3(8)	1(5)	19(11)
2) For 2 to 4 months	11(30)	16(40)	9(23)	14(36)	7(32)	57(32)
3) For half a year	15(41)	17(43)	20(50)	18(46)	11(50)	81(46)
3) for one year	3(8)	2(5)	9(23)	4(10)	3(14)	21(12)
Total	37	40	40	39	22	178
Type of Crop Storage Used						
1)Store houses	32(82)	40(100)	21(52)	40(100)	18(55)	151(79)
2) Containers	4(10)	-	-	-	12(36)	16(8)
3) Underground	3(8)	-	19(48)	-	3(9)	25(13)
Total	39	40	40	40	33	192
Crop Storage guardians, paid						
1) No	38(95)	39(98)	39(98)	38(95)	39(98)	194(97)
2) Yes	2(5)	1(2)	1(2)	2(5)	1(2)	6(3)
Total	40	40	40	40	40	200
Costs Related to Crop storage						
1)When big crop	-	-	-	-	-	-
2)When buy containers	-	-	-	-	1(50)	1(33)
3)Rarely any cost	-	-	-	1(100)	1(50)	2(67)
Total		0	0	1	2	3

Table 17. Hired and family agricultural labour, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Number of Farmers hiring outside Agricultural Labour						
	--------# Farmers (percent)----------					
1) Yes	5(13)	7(17)	2(5)	8(20)	7(17)	29(15)
2) No	35(87)	33(83)	38(95)	32(80)	33(83)	127(85)
Total	40	40	40	40	40	200
Total Rupee Amount Paid for Agricultural Labour						
Average	-	274	-	800	1	1313
Std Dev	-	484	-	607	0	1619
Range	-	30-1000	-	250-1800	1-1	30-5000
# Farmers	0	4	0	5	7	16
	--------# Farmers (percent)----------					
Frequencies(Rs.)						
251-500	-	3(75)	-	2(40)	1(14)	6(38)
501-750	-	-	-	1(20)	1(14)	2(13)
751-1000	-	1(25)	-	1(20)	-	2(13)
1001-1250	-	-	-	-	-	-
1251-1500	-	-	-	-	1(14)	1(6)
1501-1750	-	-	-	-	1(14)	1(6)
1751-2000	-	-	-	1(20)	1(14)	2(13)
2001 & above	-	-	-	-	2(29)	2(13)
Total	0	4	0	5	7	16
Number of Days Agricultural Labour Employed						
Average	190	7	13	22	54	41
Std Dev	240	3	4	19	45	75
Range	20-360	3-10	10-15	5-60	20-150	3-360
# Farmers	2	6	2	7	7	24
	--------# Farmers (percent)----------					
Frequencies(days)						
1-10	-	6(100)	1(50)	2(29)	-	9(38)
11-20	1(50)	-	1(50)	3(43)	1(14)	6(25)
21-30	-	-	-	1(14)	3(43)	4(17)
31-50	-	-	-	-	-	-
51-100	-	-	-	1(14)	2(29)	3(13)
101-200	1(50)	-	-	-	1(14)	2(8)
Total	2	6	2	7	7	24

(con't).

Table 17 (con't). Hired and family agricultural labour, dryland agriculture Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Percentage of Harvest Payment made in Kind to Agricultural Labour						
	# Farmers (percent)					
1) 5 percent	-	1(25)	-	-	-	1(13)
2) 8 percent	-	-	-	1(50)	-	1(13)
3) 10 percent	-	1(25)	-	1(50)	-	2(25)
5) 15 percent	-	-	1(50)	-	-	1(13)
6) 20 percent	-	2(50)	1(50)	-	-	3(38)
Total	0	4	2	2	0	8
Type of Crops Labour Used For						
	# Farmers					
1) Wheat	3	6	2	7	2	20
2) Barley	-	-	-	2	-	2
3) Sorghum	-	-	-	2	-	2
4) Maize	-	-	-	-	1	1
5) Cash Crops	-	-	-	-	8	8
Utilization of Hired Agricultural Labour						
	# Farmers					
1) Plot preparation	2	1	-	2	6	10
2) Planting	1	1	-	1	2	6
3) Harvesting	3	6	2	7	2	20
4) Threshing	2	4	-	1	2	8
5) Watering	1	-	-	-	-	1
6) Other work	-	-	-	-	4	4
Family Participation in Crop Production						
	# Farmers (percent)					
1) Yes	31(78)	37(93)	39(98)	38(95)	33(83)	178(89)
2) No	9(22)	3(7)	1(2)	2(5)	7(17)	22(11)
Total	40	40	40	40	40	200
Who Participated in Crop Production						
	# Farmers					
1) Adult Men	28	31	35	36	30	161
2) Adult Women	15	32	36	23	12	117
3) Children	17	29	35	32	9	115

(con't).

Table 17 (con't). Hired and family agricultural labour, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi Kovak	Dasht Tomagh		All	
Crop Production Activities Participated in by the Family						
	# Farmers					
1) Plot preparation	29	14	18	30	27	118
2) Planting	29	19	18	22	24	112
3) Harvesting	27	37	39	38	22	163
4) Threshing	21	36	35	30	8	130
5) Weeding	1	-	-	-	3	4
6) Other work	6	-	2	-	13	21
Participation in Labour Exchange						
	# Farmers (percent)					
1) Yes	29(73)	39(98)	40(100)	39(98)	34(85)	181(91)
2) No	11(27)	1(2)	-	1(2)	4(15)	19(9)
Total	40	40	40	40	40	200
Purpose of Labour Exchange						
	# Farmers					
1) Ploughing	18	20	26	18	16	98
2) Planting	14	4	5	2	17	42
3) Harvesting	26	39	38	37	18	158
4) Threshing	10	19	17	21	11	78
5) Other	9	11	10	-	16	46
Time Spent in Labour Exchange						
	# Farmers (percent)					
1) One day or less	6(21)	3(7)	1(2)	3(7)	-	13(7)
2) Two to 3 days	16(55)	27(69)	33(83)	33(85)	2(7)	111(64)
3) 3 to a week	2(7)	9(23)	6(15)	2(5)	9(33)	28(16)
3) More than a week	3(1)	-	-	1(3)	14(52)	18(10)
5) More than a month	2(7)	-	-	-	2(&)	4(2)
Total	29	39	40	39	27	174

(con't)

Table 17 (con't). Hired and family agricultural labours dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Who did Farmer Participate in Labour Exchange With						
	# Farmers					
1) Brothers' Family	13	17	18	18	23	71
2) Wives' family	6	10	4	8	16	44
3) Other relatives	23	22	31	26	20	122
4) Friends in village	17	29	23	16	18	103
5) Outside of village	3	-	2	1	2	8
Household members that are sharecroppers						
	# Sharecroppers (percent)					
1) Yes	2(5)	1(2)	4(10)	1(2)	9(23)	17(9)
2) No	38(95)	39(98)	36(90)	39(98)	31(77)	183(91)
Total	40	40	40	40	40	200
Sharecroppers, Hectares Cultivated						
Average	3	-	10	-	1	14
Std Dev	2	-	10	-	0	12
Range	2-4	-	2-20	-	1-2	1-20
# Sharecroppers	2	0	4	0	1	7
Frequencies (ha)						
	# Sharecroppers (percent)					
1-10	2(100)	-	2(50)	-	1(100)	5(71)
11-20	-	-	2(50)	-	-	2(29)
Total	2	0	4	-	1	7
Duration of Sharecroppers Contract						
	# Sharecroppers (percent)					
1) No contract	38(95)	-	39(98)	-	39(98)	196(98)
2) 6 months	-	-	-	-	-	4(2)
3) One year	2(5)	-	1(2)	-	19(2)	-
Total	40	0	40	0	40	200

(con't)

Table 17 (con't). Hired and family agricultural labours dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Number of Sharecroppers Living in Household						
Average	1	1	-	-	19	19
Std Dev	0	0	-	-	102	51
Range	1-1	1-1	-	-	1-145	1-145
# Sharecroppers	5	1	0	0	2	8
Live-in Sharecroppers, Hectares Cultivated						
Average	2	10	0	0	2	3
Std Dev	1	0	0	0	0	3
Range	1-2	10-10	0	0	2-2	1-10
# Live-in Sharecroppers	4	1	0	0	1	6
Duration of Contract						
	# Sharecroppers (percent)					
1) No contract	38(95)	39(98)	-	-	39(98)	116(97)
2) 6 months	1(2)	-	-	-	-	1(1)
3) One year	1(2)	1(2)	-	-	1(2)	3(2)
Total	40	40	-	-	40	120

Table 18. Sheep numbers, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Male Lambs						
Number	42	62	155	71	183	513
Average	3	3	6	4	7	5
Std.Dev.	2	2	7	4	6	5
Range	1-6	1-8	1-40	1-15	1-20	1-40
#Farmers	16	19	27	19	25	106
FREQUENCY	----------#Farmers(Percent)----------					
1-10	16(100)	19(100)	25(93)	18(95)	20(80)	98(92)
11-20	0	0	1(3)	1(5)	5(20)	7(7)
21-30	0	0	0	0	0	0
31-50	0	0	1(3)	0	0	1(1)
Total	16	19	27	19	25	106
Female Lambs						
Number	137	120	301	148	407	1113
Average	7	5	11	8	16	10
Std.Dev	6	5	11	11	21	13
Range	1-20	1-25	1-46	1-45	1-90	1-90
#Farmers	20	22	27	18	25	112
FREQUENCY	----------#Farmers(Percent)----------					
1-10	16(80)	21(95)	17(63)	14(78)	15(60)	83(74)
11-20	4(20)	0	6(22)	3(17)	5(20)	18(16)
21-30	0	1(5)	3(11)	0	2(8)	6(5)
31-50	0	0	1(4)	1(5)	1(4)	3(3)
51-10	0	0	0	0	2(18)	2(2)
101-200	0	0	0	0	0	0
Total	20	22	27	18	25	112
Rams/						
Number	84	59	90	113	75	421
Average	4	3	4	6	5	4
Std.Dev	4	2	4	7	4	4
Range	1-15	1-10	1-12	1-20	1-18	1-20
#Farmers	21	22	23	18	16	100
FREQUENCY	----------#Farmers(Percent)----------					
1-10	19(90)	22(100)	22(96)	14(78)	15(94)	92(92)
11-2	2(10)	-	1(4)	4(22)	1(6)	8(8)
Totol	21	22	23	18	16	100

(con't)

Table 18 (con't). Sheep numbers, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Ewes						
Number	273	316	844	388	349	2170
Average	8	12	29	16	22	18
Std.Dev	10	10	31	17	25	21
Range	1-50	1-48	1-120	1-80	1-80	1-120
#Farmers	28	27	29	24	16	124
FREQUENCY	#Farmers(Percent)					
1-10	22(79)	16(59)	11(38)	12(50)	6(38)	67(54)
11-20	4(14)	8(30)	5(17)	7(29)	5(31)	29(23)
21-30	1(4)	2(7)	4(14)	3(13)	1(6)	11(9)
31-50	1(4)	1(4)	5(17)	1(4)	2(12)	10(8)
51-100	0	0	3(10)	1(14)	2(12)	6(5)
101-200	0	0	1(4)	0	0	1(1)
Total	28	27	29	24	16	124

Table 19. Goat numbers, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Male Kids						
Number	35	43	148	72	71	369
Average	3	2	6	3	7	4
Std.Dev	2	2	8	2	8	5
Range	1-5	1-5	1-40	1-6	1-30	1-40
#Farmers	14	19	27	27	11	98
FREQUENCY	#Farmers(Percent)					
1-10	14(100)	19(100)	24(89)	27(100)	10(91)	94(96)
11-20	-	-	2(7)	-	-	2(2)
21-3	-	-	-	-	1(9)	1(1)
31-50	-	-	1(4)	-	-	1(1)
Total	14	19	27	27	11	98
Female Kids						
Number	80	74	382	99	197	832
Average	4	3	15	4	12	8
Std.Dev.	4	3	24	3	25	16
Range	1-15	1-15	1-120	1-16	1-100	1-120
#Farmers	19	22	25	26	16	108
FREQUENCY	#Farmers(Percent)					
1-10	18(95)	21(95)	16(64)	25(96)	13(81)	93(86)
11-20	1(5)	-	4(16)	1(4)	1(6)	8(7)
21-30	-	1(5)	3(12)	-	-	3(3)
31-50	-	-	1(4)	-	1(6)	2(2)
51-100	-	-	-	-	1(6)	1(1)
101-200	-	-	1(4)	-	-	1(1)
Total	19	22	25	26	16	108
Male Goats						
Number	47	16	110	55	12	240
Average	4	1	5	4	3	4
Std.Dev.	3	1	5	3	3	4
Range	1-10	1-3	1-20	1-10	1-8	1-20
#Farmers	13	13	22	15	4	67
FREQUENCY	#Farmers(Percent)					
1-10	13(100)	13(100)	20(910	15(100)	4(100)	65(97)
11-20	-	-	2	-	-	2(3)
Total	13	13	22	15	4	67

(con't)

Table 19 (con't). Goat numbers, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Female Goat						
Number	160	185	773	297	82	1470
Average	6	5	26	10	8	12
Std.Dev	6	4	34	11	5	20
Range	1-20	1-20	1-145	1-55	1-16	1-145
#Farmers	25	30	30	29	10	124
FREQUENCY	#Farmers(Percent)					
1-10	21(84)	27(90)	15(52)	21(72)	6(60)	90(73)
11-20	4(16)	3(10)	4(10)	3(10)	4(40)	17(14)
21-30	-	-	5(17)	4(14)	-	9(7)
31-50	-	-	2(7)	1(3)	-	2(2)
51-100	-	-	3(10)	-	-	4(3)
101-20	-	-	1(3)	-	-	2(2)
Total	25	30	30	29	10	124

Table 20. Cattle numbers, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Male Calves						
Number	0	1	7	0	2	10
Average	0	1	4	0	1	2
Std.Dev.	0	0	4	0	0	2
Range	0	1-1	1-6	0	1-1	1-6
#Farmers	0	1	2	0	2	5
FREQUENCY	----------#Farmers(Percent)----------					
1	0	1(100)	1(50)	0	2(100)	4(80)
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0
6-10	0	0	1(50)	0	0	1(20)
Total	0	1	2	0	2	5
Heifers						
Number	4	0	0	0	3	7
Average	2	0	0	0	1	1
Std.Dev.	0	0	0	0	0	0
Range	1-2	0	0	0	1-1	1-2
#Farmers	2	0	0	0	3	5
FREQUENCY	----------#Farmers(Percent)----------					
1	0	0	0	0	3(100)	3(60)
2	2(100)	0	0	0	0	2(40)
3	0	0	0	0	0	0
4	0	0	0	0	0	0
6-10	0	0	0	0	0	0
Total	2	0	0	0	3	5
Males						
Number	36	20	2	18	6	82
Average	2	1	1	2	2	2
Std.Dev.	1	1	0	0	0	1
Range	1-3	1-2	1-1	2-2	2-2	1-3
#Farmers	20	14	2	9	3	48
FREQUENCY	----------#Farmers(Percent)----------					
1	5(25)	8(57)	2(100)	9(100)	0	15(31)
2	14(70)	6(43)	0	0	3(100)	32(67)
3	1(5)	0	0	0	0	1(2)
Total	20	14	2	9	3	48

(con't)

Table 20 (con't). Cattle numbers, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Cows						
Number	4	8	1	1	6	20
Average	4	1	1	1	1	1
Std.Dev	0	0	0	0	0	1
Range	4-4	1-1	1-1	1-1	1-1	1-4
#Farmers	1	8	1	1	6	17
FREQUENCY	#Farmers(Percent)					
1	0	8(100)	1(100)	1(100)	6(100)	16(94)
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	1(100)	0	0	0	0	1(6)
Total	1	8	1	1	6	17

Table 21. Camel numbers, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Male Young						
Number	2	0	2	14	1	19
Average	1	0	1	3	1	2
Std.Dev	0	0	0	4	0	3
Range	1-1	0	1-1	1-10	1-1	1-10
#Farmers	2	0	2	5	1	10
FREQUENCY	#Farmers(Percent)					
1	2(100)	0	2(100)	4(80)	1(100)	9(50)
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	0	0	0	0	0	0
6-10	0	0	0	1(20)	0	1(50)
Total	2	0	2	5	1	10
Female Young						
Number	1	0	1	3	2	7
Average	1	0	1	1	2	1
Std.Dev	0	0	0	0	0	0
Range	1-1	0	1-1	1-1	2-2	1-2
#Farmers	1	0	1	3	1	6
FREQUENCY	#Farmers(Percent)					
1	1(100)	0	1(100)	3(100)	1(100)	5(83)
2	0	0	0	0	0	1(17)
Tot	1	0	1	3	1	6
Adult Males						
Number	6	19	36	24	2	87
Average	1	1	1	1	1	1
Std.Dev	1	0	1	0	0	1
Range	1-2	1-2	1-3	1-2	1-1	1-3
#Farmers	5	17	25	21	2	70
FREQUENCY	#Farmers(Percent)					
1	4(80)	15(88)	16(64)	18(86)	2(100)	55(79)
2	1(20)	2(12)	7(28)	3(14)	0	13(19)
3	0	0	2(8)	0	0	2(2)
Total	5	17	25	21	2	70

(con't)

Table 21 (con't). Camel numbers, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Adult Females						
Number	4	3	21	12	1	41
Average	1	3	2	1	1	2
Std.Dev	0	0	1	1	0	1
Range	1-1	3-3	1-5	1-3	1-1	1-5
#Farmers	4	1	10	10	1	26
FREQUENCY	#Farmers(Percent)					
1	4(100)	0	2(20)	9(90)	1(100)	16(62)
2	0	0	7(70)	0	0	7(26)
3	0	1(100)	0	1(10)	0	2(8)
4	0	0	0	0	0	0
5	0	0	1(10)	0	0	1(4)
Total	4	1	10	10	1	26

Table 22. Chicken and rabbit numbers, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Chickens						
Number	80	130	156	123	553	1042
Average	5	6	8	7	15	9
Std.Dev.	4	4	6	4	10	8
Range	1-14	2-22	1-22	1-12	1-43	1-43
#Farmers	16	23	19	17	37	112
FREQUENCY	#Farmers(Percent)					
1-10	14(88)	22(96)	11(58)	15(88)	14(38)	76(68)
11-20	1(6)	1(4)	7(37)	2(12)	11(30)	22(20)
21-30	1(6)	0	1(5)	0	11(30)	13(12)
31-50	0	0	0	0	1(2)	1(1)
Total	16	23	19	17	37	112
Rabbits						
Number	113	117	31	2	41	304
Average	6	7	8	2	21	7
Std.Dev.	6	4	3	0	2	6
Range	1-30	1-15	3-11	2-2	19-22	1-30
#Farmers	19	17	4	1	2	43
FREQUENCY	#Farmers(Percent)					
1-10	18(95)	13(76)	3(75)	1(50)	1(50)	35(81)
11-20	0	4(24)	1(25)	0	1(50)	6(14)
21-30	1(5)	0	0	0	0	2(5)
Total	19	17	4	1	2	43

Table 23. Animal purchases, sales and prices, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Lambs						
Purchases						
# Purchased	9	8	5	20	29	71
Average	3	8	5	5	10	6
Std.Dev.	3	0	0	1	9	5
Range	1-7	8-8	5-5	4-6	1-18	1-18
#Farmers	3	1	1	4	3	12
FREQUENCY	----------#Farmers(Percent)----------					
1-10	3(100)	1(100)	1(100)	4(100)	2(67)	11(92)
11-20	-	-	-	-	1(33)	1(8)
21-30	-	-	-	-	-	-
TOTAL	3	1	1	4	3	12
Price(Rs.)						
Average	62	313	160	120	759	398
Sales						
# Sold	18	15	59	9	14	115
Average	6	8	7	3	5	6
Std.Dev.	3	1	7	2	2	5
Range	2-8	7-8	2-20	2-5	3-6	2-20
#Farmers	3	2	8	3	3	19
FREQUENCY	----------#Farmers (Percent)----------					
1-10	3(100)	2(100)	6(75)	3(100)	3(100)	17(89)
11-20	-	-	2(25)	-	-	2(11)
21-30	-	-	-	-	-	-
Total	3	2	8	3	3	19
Price (Rs.)						
Average	56	716	315	356	329	332

(con't)

Table 23 (con't). Animal purchases, sales and prices, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Lambs						
Purchases						
# Purchased	17	48	39	24	63	191
Average	6	5	7	3	5	5
Std.Dev.	4	3	6	2	3	3
Range	3-10	1-12	1-16	1-6	2-10	1-16
#Farmers	3	9	6	8	12	38
FREQUENCY	#Farmers(Percent)					
1-10	3(100)	8(89)	5(83)	8(100)	12(100)	36(95)
11-20	-	1(11)	1(17)	-	-	2(15)
21-30	-	-	-	-	-	-
TOTAL	3	9	6	8	12	38
Price(Rs.)						
Average	347	619	649	963	498	604
Sales						
# Sold	112	29	62	35	34	272
Average	8	4	6	4	6	6
Std.Dev.	8	3	4	4	4	6
Range	1-30	1-10	1-15	1-10	2-12	1-30
#Farmers	15	7	10	8	6	46
FREQUENCY	#Farmers (Percent)					
1-10	13(88)	7(100)	8(80)	8(100)	5(83)	41(89)
11-20	1(6)	-	2(20)	-	1(17)	4(9)
21-30	1(6)	-	-	-	-	1(2)
Total	15	7	10	8	6	46
Price (Rs.)						
Average	164	476	560	560	571	389

(con't)

Table 23 (con't). Animal purchases, sales and prices, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Young Goats						
Purchases						
# Purchased	3	19	16	18	1	57
Average	2	4	8	4	1	4
Std.Dev.	1	2	0	3	0	3
Range	1-2	2-6	8-8	1-6	1-1	1-8
#Farmers	2	5	2	5	1	15
FREQUENCY	#Farmers(Percent)					
1-10	2(100)	5(100)	2(100)	5(100)	1(100)	15(100)
11-20	-	-	-	-	-	-
21-30	-	-	-	-	-	-
Total	2	5	2	5	1	15
Price (Rs.) Average	233	237	400	61	1000	240
Sales						
# Sold	13	4	32	15	29	93
Average	4	2	4	5	15	5
Std.Dev.	5	1	3	1	1	4
Range	1-10	1-3	1-10	4-6	14-15	1-15
#Farmers	3	2	8	3	2	18
FREQUENCY	#Farmers (Percent)					
1-10	3(100)	2(100)	8(100)	3(100)	2(100)	61(89)
11-20	-	-	-	-	-	2(11)
21-30	-	-	-	-	-	-
Tatal	3	2	8	3	2	18
Price (Rs.) Average	850 / 65	740 / 185	4700 / 147	3000 / 200	12000 / 414	25290 / 272

(con't)

Table 23 (con't). Animal purchases, sales and prices, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Mature Goats						
Purchases						
# Purchased	1	23	5	23	2	54
Average	1	3	1	3	2	3
Std.Dev.	0	2	1	2	0	2
Range	1-1	1-6	1-2	1-6	2-2	1-6
#Farmers	1	7	4	8	1	21
FREQUENCY	#Farmers(Percent)					
1-10	1(100)	7(100)	4(100)	8(100)	1(100)	21(100)
11-20	-	-	-	-	-	-
21-30	-	-	-	-	-	-
Total	1	7	4	8	1	21
Price (Rs.)						
Average	400	617	540	696	550	637
Sales						
# Sold	18	0	52	11	4	85
Average	4	-	7	2	2	5
Std.Dev.	4	-	5	1	0	4
Range	1-10	-	2-15	1-4	2-2	1-15
#Farmers	5	0	7	5	2	19
FREQUENCY	#Farmers (Percent)					
1-10	5(100)	0	5(71)	5(100)	2(100)	17(89)
11-20	-	-	2(29)	-	-	2(11)
21-30	-	-	-	-	-	-
Total	5	0	7	5	2	19
Price (Rs.)						
Average	217	0	447	414	500	397

(con't)

Table 23 (con't). Animal purchases, sales and prices, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Cattle						
Purchases#						
Purchased	7	10	0	3	0	20
Average	1	1	-	2	-	1
Std.Dev.	0	1	-	1	-	1
Range	1-2	1-2	-	1-2	-	1-2
#Farmers	6	7	0	2	0	15
FREQUENCY	#Farmers(Percent)					
1-10	6(100)	7(100)	0	2(100)	0	15(100)
11-20	-	-	-	-	-	-
21-30	-	-	-	-	-	-
Total	6	7	0	2	0	15
Price (Rs.)						
Average	3057	8250	0	1333	0	5395
Sales						
# Sold	0	0	0	2	0	2
Average	-	-	-	2	-	2
Std.Dev.	-	-	-	0	-	0
Range	-	-	-	1-2	-	1-2
#Farmers	0	0	0	1	0	1
FREQUENCY	#Farmers (Percent)					
1-10	0	0	0	1(100)	0	1(100)
11-20	-	-	-	-	-	-
21-30	-	-	-	-	-	-
Total	0	0	0	1	0	1
Price (Rs.)						
Average	0	0	0	3500	0	3500

(con't)

Table 23 (con't). Animal purchases, sales and prices, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Camels						
Purchases						
# Purchased	2	3	3	6	0	14
Average	1	1	1	2	-	1
Std.Dev.	0	0	0	1	-	1
Range	1-1	1-1	1-1	1-3	-	1-3
#Farmers	2	3	3	4	0	12
FREQUENCY	#Farmers(Percent)					
1-10	2(100)	3(100)	3(100)	4(100)	0	12(100)
11-20	-	-	-	-	-	-
21-30	-	-	-	-	-	-
Total	2	3	3	4	0	12
Price (Rs.)						
Average	2250	4167	1167	2983	0	3461
Sales						
# Sold	0	0	0	2	0	2
Average	-	-	-	2	-	2
Std.Dev.	-	-	-	0	-	0
Range	-	-	-	2-2	-	2-2
#Farmers	-	0	0	1	0	1
FREQUENCY	#Farmers (Percent)					
1-10	0	0	0	1(100)	0	1(100)
11-20	-	-	-	-	-	-
21-30	-	-	-	-	-	-
Total	0	0	0	1	0	1
Price (Rs.)						
Average	0	0	0	3000	0	3000

(con't)

Table 23 (con't). Animal purchases, sales and prices, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Chickens						
Purchases						
# Purchased	5	0	0	0	45	50
Average	3	-	-	-	5	5
Std.Dev.	1	-	-	-	2	2
Range	2-3	-	-	-	1-7	1-7
#Farmers	2	0	0	0	9	11
FREQUENCY	#Farmers(Percent)					
1-10	2(100)	0	0	0	9(100)	11(100)
11-20	-	-	-	-	-	-
21-30	-	-	-	-	-	-
Total	2	0	0	0	9	11
Price (Rs.)						
Average	42	0	0	0	39	40
Rabbits						
Purchases						
# Purchased	7	2	0	0	0	9
Average	4	2	-	-	-	3
Std.Dev.	1	-	-	-	-	1
Range	3-4	1-2	-	-	-	2-4
#Farmers	2	1	0	0	0	3

Table 24. Livestock owner relationships, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
# Farmers Owning Livestock Jointly	22	17	16	26	14	95
# Farmers with Livestock Borrowed	6	16	5	8	2	35
Type of Animal Borrowed						
#Sheep	3	41	22	17	10	93
Range	1-3	1-12	1-16	1-5	1-10	1-16
#Farmers	2	7	3	5	1	18
#Goats	2	23	1	17	0	43
Range	1	1-10	1	1-5	-	1-10
#Farmers	2	5	1	6	0	14
#Cattle	7	8	0	4	0	19
Range	1-2	1-2	-	1-2	-	1-2
#Farmers	6	7	0	2	0	15
#Camels	0	3	2	4	-	9
Range	-	1	1	1-2	-	1-2
#Farmers	0	3	2	3	0	8
#Farmers Who Lend Out Livestock	0	0	3	0	0	3
Type of Animal Lent Out						
#Sheep	0	0	10	0	0	10
Range	-	-	1-5	-	-	1-5
#Farmers	0	0	2	0	0	2

Table 25. Livestock mortality, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
#Farmers with Livestock deaths in Past 12 Months	25	29	32	30	19	135
Number of Animals that Died						
#Sheep	167	109	155	104	69	604
Average	7	5	7	6	4	6
Std.Dev.	6	4	6	7	5	5
Range	1-20	1-17	1-20	1-30	1-25	1-30
#Farmers	25	22	23	17	19	106
#Goats	83	56	101	142	21	403
Average	6	3	6	6	3	5
Std.Dev.	4	3	4	10	3	5
Range	1-15	1-11	1-15	1-50	1-10	1-50
#Farmers	15	18	18	25	7	83
#Cattle	12	4	0	1	3	20
Average	1	1	-	1	3	1.3
Std.Dev.	-	-	-	-	-	-
Range	1-2	1-2	-	1	3	1-3
#Farmers	10	3	0	1	1	15
#Camels	5	5	2	0	0	12
Average	1	5	1	-	-	1.5
Std.Dev.	-	-	-	-	-	-
Range	1	1-5	1	-	-	1-5
#Farmers	5	1	2	0	0	8
#Farmers Who Know Which Disease Animal Died From	20	24	25	24	18	111
Existence of Poisonous Plants in Grazing Areas						
Yes	31	37	10	37	31	146
What Months are the Plants Poisonous						
Months						
1,2&3	2	30	4	2	27	65
4,5&6	-	-	-	-	2	2
7,8&9	-	-	-	-	-	0
10,11&12	-	-	-	-	-	0
All 12	33	7	6	36	4	86

Table 26. Number of animals born, consumed, given as gifts, dowry and sacrificed, dryland agriculture, Baluchistan. 1987.

	Births	Consumed	Gifts	Dowry	Sacrificed
		All Locations			
Sheep					
#Sheep	1404	212	16	9	182
Average	11.6	2.9	2	1.8	1.9
Std.Dev.	14	3.2	1.3	0.5	1.2
Range	1-110	1-25	1-4	1-5	1-6
#Farmers	121	73	8	5	96
Goats					
#Goats	901	90	8	6	69
Average	7.9	2	2	1.5	1.4
Std.Dev.	10.8	1.5	2	1	0.7
Range	1-71	1-8	1-5	1-3	1-4
#Farmers	114	45	4	4	49
Cattle					
#Cattle	14	1	1	0	4
Average	2	1	1	0	1.3
Std.Dev.	1.9	-	-	-	-
Range	1-6	1	1	0	1-2
#Farmers	7	1	1	0	3
Chickens					
#Chickens	403	114	4	0	4
Average	7.9	3.8	1	0	1
Std.Dev.	5.1	5.3	-	-	-
Range	1-20	1-30	1	-	1
#Farmers	51	30	4	0	4

Table 27. Rangeland use and transhumance, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
	# Herd Owners(Percent)					
Control Over Rangeland used by Herd Owner						
1)State Owned	0	0	0	0	7(22)	7(4)
2)TribaL	20(54)	24(60)	28(72)	31(79)	6(19)	109(57)
3)Private	7(19)	1(2)	0	3(8)	6(19)	17(9)
4) 1&2	0	6(15)	7(18)	2(5)	2(6)	17(9)
5) 1&3	0	0	0	0	2(6)	2(1)
6) 2&3	10(27)	9(23)	4(10)	3(8)	8(25)	34(18)
7) 1,2&3	0	0	0	0	1(3)	1(1)
Total	37	40	39	39	32	187
Classification of Vegetation Quality of Pasture by Herd Owner						
1)Good Land/Veg.	0	0	0	2(5)	20(59)	22(12)
2)Uncultivable/ Poor Veg.	37(100)	38(95)	40(100)	37(93)	14(41)	166(87)
3) 1&2	0	2(5)	0	1(2)	0	3(1)
Total	37	40	40	40	34	191
Is Livestock Kept on Range All Year.						
No	17(44)	27(68)	14(35)	30(75)	6(16)	94(47)
Yes	22(56)	13(32)	26(65)	10 (25)	31(84)	102(53)
Total	39	40	40	40	37	196
Reasons for Moving Livestock off Range						
1)No Vegetation	10(59)	4(27)	10(71)	1(3)	1(50)	26(33)
2)Too Cold	2(12)	0	0	6(20)	0	8(10)
3)Follow Workers	0	0	0	0	0	0
4) 1&2	4(23)	7(47)	4(29)	23(77)	1(50)	39(50)
5) 1&3	1(6)	2(3)	0	0	0	3(4)
6) 2&3	0	1(7)	0	0	0	1(1)
7) 1,2&3	0	1(7)	0	0	0	1(1)
Total	17	15	14	30	2	78

(con't)

Table 27 (con't). Rangeland use and transhumance, dryland agriculture Baluchistan, 1986-87.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
	-------# Herd Owners(Percent) ----------					
People Who Migrate with Livestock						
1)The Owner	3(20)	2(14)	0	1(3)	0	6(8)
2)Owners Sons	0	0	1(7)	1(3)	0	2(3)
3)Shepherds	1(7)	1(7)	1(7)	0	0	3(4)
4)Family	3(20)	11(79)	10(71)	29(94)	1(100)	54(72)
5) 1&2	8(53)	0	0	0	0	8(11)
6) 1&3	0	0	1(7)	0	0	1(1)
7) 2&3	0	0	1(7)	0	0	1(1)
Total	15	14	14	31	1	75
Agricultural Employment at Migration Location						
Own Land	2(67)	1(50)	2(100)	2(50)	0	7(64)
Tenants	1(33)	0	0	1(25)	0	2(18)
Sharecroppers	0	1(50)	0	1(25)	0	2(18)
Total	3	2	2	4	0	11
# Herd Owners Who Buy Fodder at Migration Location	13	9	13	25	1	61
Would Keep Livestock Year Round if Sufficient Feed & Water						
Yes	36(92)	39(100)	38(97)	36(97)	32(97)	181(97)
No	3(8)	0	1(3)	1(3)	1(3)	5(3)
Total	39	39	39	37	33	186
If Yes, Breed at Different Times						
Yes	25(64)	37(95)	40(100)	30(81)	2(6)	134(71)
No	14(36)	2(5)	0	7(19)	31(94)	54(29)
Total	39	39	40	37	33	188
Would Cost more to Keep Livestock Year Round						
Yes	35(92)	37(97)	39(98)	37(97)	8(25)	156(84)
No	3(8)	1(3)	1(2)	1(3)	24(75)	30(16)
Total	38	38	40	38	32	186

Table 28. Herding and supplementary feed, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
	-------# Herd Owners(Percent) ----------					
Who is in Charge of Herding the Animals						
1)Children <11	8(22)	7(17)	4(10)	6(16)	18(58)	43(23)
2)Children >11	2(5)	2(5)	11(28)	7(18)	0	22(12)
3)The Elderly	0	0	0	0	0	0
4)Shepherds	8(22)	22(55)	11(28)	9(24)	6(19)	56(30)
5) Self	4(10)	2(5)	6(15)	8(21)	1(3)	21(11)
6) 1&2	1(3)	0	1(3)	0	2(6)	4(2)
7) 1&3	0	0	0	0	1(3)	1(1)
8) 1&4	2(5)	1(3)	1(3)	1(2)	2(6)	7(3)
9) 1&5	3(8)	4(10)	1(3)	1(2)	0	9(5)
10)2&4	1(3)	0	0	0	0	1(1)
11)2&5	6(16)	2(6)	5(12)	3(8)	0	16(8)
12)4&5	2(5)	0	0	3(8)	1(3)	6(3)
Total	37	40	40	38	31	186
Is There Communal Herding?						
1) Yes	20(54)	27(68)	8(20)	9(23)	31(82)	95(49)
2) No	14(38)	10(25)	32(80)	31(77)	7(18)	94(48)
3) In Past	1(3)	0	0	0	0	1(1)
4) 1&2	2(5)	3(7)	0	0	0	5(3)
Total	37	40	40	40	38	195
Length of Shepherd Contract						
1)One Year	36(100)	39(100)	40(100)	40(100)	17(52)	172(91)
2)> One Year	0	0	0	0	16(48)	16(9)
Total	36	39	40	40	33	188
Payment of Shepherds						
1)Lambs	2(6)	0	0	0	0	2(1)
2)Food	0	1(3)	0	0	2(7)	3(2)
3)Clothes	0	0	0	0	0	0
4)Cash	2(6)	0	2(5)	0	11(36)	15(8)
5) 2&4	0	9(22)	0	0	11(36)	20(11)
6) 3&4	0	1(3)	1(3)	0	2(7)	4(2)
7) 1,2&3	0	0	0	0	0	0
8) 2,3&4	0	2(5)	0	4(10)	2(7)	8(4)
9) 1,2,3&4	27(88)	27(67)	37(92)	36(90)	2(7)	129(71)
Total	31	40	40	40	30	181

(con't).

Table 28 (con't) . Herding and supplementary feed, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
	-------# Herd Owners(Percent) ----------					
Control the Breeding Season						
Yes	9(24)	28(72)	32(82)	27(68)	7(19)	103(54)
No	28(76)	11(28)	7(18)	13(32)	29(81)	88(46)
Total	37	39	39	40	36	191
Breeding Months						
1) 1,2,3	1(17)	4(14)	0	3(14)	-	8(9)
2) 4,5,6	1(17)	2(7)	0	10(45)	-	13(15)
3) 7,8,9	2(33)	12(41)	32(100)	0	-	46(52)
4) 10,11,12	2(33)	11(38)	0	9(41)	-	22(25)
Total	6	29	32	22		89
Do Animals Receive Feed Supplements						
Yes	4(11)	23(58)	19(50)	6(15)	18(50)	70(37)
No	32(89)	17(42)	19(50)	34(85)	18(50)	120(63)
Total	36	40	38	40	36	190
Type of Animal Receiving Food Supplies						
1)Pregnant	2(20)	9(15)	20(35)	3(33)	18(34)	52(28)
2)Newly Born	3(30)	1(2)	1(2)	0	9(17)	14(7)
3)The Sick	3(30)	14(24)	6(11)	5(56)	16(30)	44(24)
4)The Best	0	14(24)	13(23)	0	3(6)	30(25)
5)Sacrificed	2(20)	21(36)	17(30)	1(11)	7(13)	48(25)
Total	10	59	57	9	53	188
Origin of Food Supplements						
1)Grow Own	5(33)	0	1(5)	0	4(17)	10(11)
2)Grow & Buy	10(67)	17(65)	18(86)	4(50)	14(58)	64(68)
3)Buy Only	0	9(35)	2(9)	4(50)	6(25)	20(21)
Total	15	26	21	8	24	94

(con't)

Table 28 (con't) . Herding and supplementary feed, dryland agriculture, Baluchistan, 1987.

	Location					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
	-------# Herd Owners(Percent) ----------					
Would Grow More Fodder						
1)No, Grow Enough	1(5)	0	1(5)	0	12(29)	14(12)
2)No, Buy	0	0	0	0	6(19)	6(5)
3)Yes, But Insufficient Land	3(15)	0	0	0	7(23)	10(9)
4)Yes, But Insufficient Water	9(45)	26(84)	21(95)	7(64)	3(9)	66(57)
5)Yes, But Insufficient Labour	1(5)	0	0	1(9)	0	2(2)
6)Yes, But No Cash	6(30)	5(16)	0	3(27)	3(9)	17(15
Total	20	31	22	11	31	93

Table 29. Livestock supplements, dryland agriculture, Baluchistan, 1987.

	Type of Animal Receiving Supplements			Period of Year Supplements Fed			
Supplement	Sheep	Goats	Cattle	Winter	SM	Spring	Fall
	# Farmers (Percentage)						
All Locations							
Wheat Straw	16	15	9	15(54)	1(4)	0	12(42)
Barley Grain	36	35	14	38(86)	2(5)	1(2)	3(7)
Barley Straw	7	5	2	9(60)	2(13)	2(13)	2(13)
Sorghum Grain	13	13	3	17(77)	2(9)	2(9)	1(5)
Sorghum Straw	11	11	1	12(92)	0	0	1(8)
Millet Grain	1	1	0	1(100)	0	0	0
Millet Straw	0	0	0	0	0	0	0
Hay	37	35	3	37(86)	2(5)	1(2)	3(7)
Green Fodder	12	12	10	11(50)	1(5)	0	10(45)
Khuzdar							
Barley Grain	2	0	4	3(38)	2(25)	1(12)	2(25)
Barley Straw	4	2	2	6(50)	2(17)	2(17)	2(17)
Sorghum Grain	1	0	3	2(29)	2(29)	2(29)	1(13)
Zarchi							
Wheat Straw	1	1	1	1(100)	0	0	0
Barley Grain	19	17	10	18(95)	0	0	1(5)
Barley Straw	3	3	0	3(100)	0	0	0
Sorghum Grain	2	2	0	2(100)	0	0	0
Sorghum Straw	1	0	0	1(100)	0	0	0
Millet Grain	1	1	0	1(100)	0	0	0
Hay	19	18	0	19(95)	1(5)	0	0
Green Fodder	2	2	0	1(50)	1(50)	0	0
Kovak							
Barley Grain	9	11	0	9(100)	0	0	0
Sorghum Grain	7	6	0	7(100)	0	0	0
Sorghum Straw	1	1	0	1(100)	0	0	0
Hay	12	11	0	12(100)	0	0	0

(con't)

Table 29 (con't). Livestock supplements, dryland agriculture Baluchistan, 1987.

Supplement	Type of Animal Receiving Supplements			Period of Year Supplements Fed			
	Sheep	Goats	Cattle	Winter	SM	Spring	Fall
	# Farmers (Percentage)						
Dasht							
Wheat Straw	2	3	3	1(100)	0	0	0
Barley Grain	6	7	0	8(100)	0	0	0
Sorghum Grain	4	4	0	5(100)	0	0	0
Sorghum Straw	1	1	0	1(50)	0	0	1(50)
Hay	1	1	0	1(100)	0	0	0
Tomagh							
Wheat Straw	14	14	9	13(50)	1(4)	0	12(46)
Sorghum Grain	1	1	0	1(100)	0	0	0
Sorghum Straw	8	9	0	9(100)	0	0	0
Hay	5	5	3	5(45)	2(18)	1(9)	3(27)
Green Fodder	10	10	10	10(50)	0	0	10(50)

Table 30. Wool and hide production and marketing, dryland agriculture, Baluchistan, 1987.

	Location[1]					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
Wool Production						
# Fleeces						
Average	16	21	65	27	56	37
Std.Dev.	17	15	69	32	62	49
Range	1-80	1-60	4-250	1-120	2-200	1-250
#Farmers	30	32	39	32	18	151
FREQUENCY	---------# Herd Owners(Percent)----------					
1-10	16(53)	10(31)	11(28)	12(38)	5(28)	54(36)
11-20	9(30)	9(28)	3(8)	11(34)	1(6)	33(22)
21-30	1(3)	8(25)	4(10)	3(9)	2(11)	18(12)
31-50	3(10)	3(9)	5(13)	2(6)	4(22)	17(11)
51-100	1(3)	2(6)	8(21)	3(9)	3(17)	17(11)
101-200	0	0	6(15)	1(3)	3(17)	10(7)
201-250	0	0	2(5)	0	0	2(7)
# Maunds						
Average	15	21	54	25	13	28
Std.Dev.	12	16	63	31	13	39
Range	1-44	2-60	4-250	1-120	1-40	1-250
#Farmers	25	32	39	30	21	147
FREQUENCY	---------# Herd Owners(Percent)----------					
1-10	13(52)	11(34)	12(31)	11(37)	11(52)	58(39)
11-20	8(32)	8(25)	3(8)	8(27)	4(19)	31(21)
21-30	2(6)	8(25)	6(15)	5(17)	5(24)	26(18)
31-50	2(6)	3(9)	5(13)	2(7)	1(5)	13(9)
51-100	0	2(6)	8(21)	3(10)	0	13(9)
101-200	0	0	3(8)	1(3)	0	4(3)
201-250	0	0	2(5)	0	0	2(1)
Household Consumption Of Wool						
# Fleeces						
Average	9	20	33	13	18	20
Std.Dev.	8	15	29	11	14	21
Range	1-40	4-60	4-140	1-50	4-50	1-140
#Farmers	23	31	36	24	14	128
FREQUENCY	---------# Herd Owners(Percent)----------					
1-10	19(83)	11(35)	11(31)	14(35)	6(43)	61(48)
11-20	3(13)	10(32)	7(19)	7(29)	4(29)	31(24)
21-30	0	6(19)	3(8)	3(13)	2(14)	14(11)
31-50	1(4)	2(6)	8(22)	0	2(14)	13(10)
51-100	0	2(6)	6(17)	0	0	8(6)
101-200	0	0	1(6)	0	0	1(1)

(con't)

Table 30 (con't). Wool and hide production and marketing, dryland agriculture, Baluchistan, 1987.

	Location[1]					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
	#Herd Owners (Percent)					
Wool Marketing						
# Fleeces						
Average	20	18	87	46	32	46
Std.Dev.	20	3	68	40	28	49
Range	5-80	15-20	10-210	4-120	1-120	1-210
#Farmers	13	4	17	12	18	64
FREQUENCY	#Herd Owners(Percent)					
1-10	7(54)	2(50)	1(6)	2(17)	4(22)	16(25)
11-20	3(23)	2(50)	2(12)	5(42)	2(11)	14(22)
21-30	1(6)	0	2(12)	0	5(28)	8(13)
31-50	1(6)	0	4(24)	1(8)	4(22)	10(16)
51-100	1(6)	0	2(12)	3(25)	2(11)	8(13)
101-200	0	0	5(29)	1(8)	1(6)	7(11)
201-250	0	0	1(6)	0	0	1(2)
Amount Obtained from Wool Sales in Rupees						
Average	237	235	1510	475	552	716
Std.Dev.	260	94	1486	379	418	943
Range	.1-1	.1-.3	.15-4.8	.08-1.2	.1-1.5	.1-4.8
#Farmers	13	4	17	12	18	64
Breeding Practices to Improve Wool Quality						
Yes	9(23)	25(63)	29(73)	25(66)	6(19)	94
No	30(77)	15(37)	11(27)	13(34)	26(81)	95
Wool Buyers Indicating Quality Preference						
Yes	21(54)	36(90)	40(100)	31(84)	30(88)	158

(con't)

Table 30 (con;t). Wool and hide production and marketing, dryland agriculture, Baluchistan, 1987.

	Location[1]					
	Khuzdar	Zarchi	Kovak	Dasht	Tomagh	All
	# Herd Owners(Percent)					
Marketing of Hides						
# Hides						
Average	4	3	4	3	9	6
Std.Dev.	3	2	3	2	24	14
Range	1-10	1-5	1-10	1-7	1-100	1-100
#Farmers	9	6	8	8	15	46
FREQUENCY	# Herd Owners(Percent)					
1-10	9	6	8	8	14	45(98)
101-200	0	0	0	0	1	1(2)
Amount Obtained from Hide Sales in Rupees						
Average	133	158	142	115	227	164
Std.Dev.	76	126	92	100	151	120
Range	60-300	40-380	50-300	20-300	30-600	20-600
#Farmers	9	6	8	8	14	45

M A R T / A Z R I

HOUSEHOLD AGRICULTURAL PRODUCTION SYSTEMS SURVEY

INTERVIEW #.....

INTERVIEWER'S NAME:.....

Date of interview ¦.....¦...¦....¦
month day year

Place of interview, VILLAGE NAME .....

****

TIME INTERVIEW STARTED: _____

TIME INTERVIEW ENDED : _____

****

DO NOT WRITE BELOW THIS LINE

FOR OFFICE USE ONLY

Controlled by: .....

Date ¦.....¦...¦....¦
month day year

Completed YES NO

Information missing: Page Number

Second control:

Controlled by:.....

Date ¦.....¦...¦....¦
month day year

SECTION I HOUSEHOLD COMPOSITION AND DEMOGRAPHY

A. HEAD OF HOUSEHOLD INFORMATION

==========

INSTRUCTIONS; IF HEAD OF HOUSEHOLD IS NOT AVAILABLE FOR INTERVIEWING, YOU MAY INTERVIEW ANOTHER MALE IN THE HOUSEHOLD, OR WOMAN IF HEAD OF HOUSEHOLD. DEFINE IN LINE 1.a WHO THE INTERVIEWEE IS

==========

1. NAME OF HEAD OF HOUSEHOLD.....

1a. IF HEAD OF HOUSEHOLD IS NOT BEING INTERVIEWED, STATE RELATIONSHIP OF PERSON INTERVIEWED TO HEAD OF HOUSEHOLD:.....
.....

2. PLACE OF BIRTH.....

2a. AGE OR YEAR OF BIRTH .....

3. PLACE OF RESIDENCE (VILLAGE).....

4. POTWAR CIRCLE .....MAUZA.....

5. PREVIOUS PLACE OF RESIDENCE .....

6. TRIBAL GROUP TO WHICH HE BELONGS.....

7. SUB-TRIBAL GROUP OR LINEAGE .....

8.. DOES HOUSEHOLD HEAD HAVE ANY LEADERSHIP ROLE IN THE VILLAGE

Y = 1 N = 0 00._____

(state what his role or position is): .....
.....

9. DOES THIS VILLAGE HAVE ANY OF THE FOLLOWING:

- ELECTRICITY Y = 1 N = 0 1. _____
- SCHOOL Y = 1 N = 0 2. _____
- MOSQUE Y = 1 N = 0 3. _____
- WATER Y = 1 N = 0 4. _____

distance in Kms. to nearest water point 5. _____

- MEDICAL DISPENSARY Y = 1 N = 0 6. _____

B. HOUSEHOLD COMPOSITION

==========

Definition of household: A group of people usually related by blood, who occupy the whole or part of a housing unit and make joint provisions for food and other essentials of living.

Definition of DEPENDANTS: those people who are considered members of the household under the direction or jurisdiction of the head of household regardless of whether they reside in the house now or not.

==========

INSTRUCTIONS: ASK WHO THE PEOPLE ARE LIVING IN THE HOUSEHOLD AS WELL AS ANY DEPENDANTS OF THE HEAD OF HOUSEHOLD NOT NOW LIVING IN IT. ESTABLISH THE NUMBER OF SONS AND THEIR AGES, THE NUMBER OF WOMEN AND THEIR AGES, THE NUMBER OF CHILDREN AND THEIR AGES, AND THEIR MARITAL STATUS AND LITERACY. NAMES ARE NOT NECESSARY.

****

Column 1 = relationship to head of household (son, daughter, daughter in law, mother, wife, etc.)
" 2 = sex (M/F)
" 3 = age
" 4 = marital status (single, married, divorced)
" 5 = literacy: can read and write
" 6 = place of residence

COLUMN 1	2	3	4	5	6

(IF ADDITIONAL SPACE IS NEEDED USE SPACE BELOW ON THIS PAGE)

SECTION II HOUSEHOLD INCOME AND SOURCES OF REVENUE

==========

DEFINITION: Household income refers to any activity on the part of members of a household which generates money for the household, regardless of where that person or persons are living.

==========

INSTRUCTIONS: WE ARE INTERESTED IN FINDING OUT ABOUT PEOPLE IN THE HOUSEHOLD WORKING FOR WAGES. IF ANY HOUSEHOLD MEMBERS ARE AWAY ON **TRANSHUMANCE**, THAT INFORMATION WILL BE ASKED ABOUT LATER IN THE QUESTIONNAIRE IN THE LIVESTOCK SECTION.

****

1. Are any members of your household currently living in another place, or have they been away from the household in the last 12 months:

   Y = 1 N = 0 go to **SECTION III** 1. _____

   if yes, where: (state name of village, town or towns)
   .....

2. Are they employed at that location:

   Y = 1 N = 0 go to 4 2. _____

3. Do they send any money back to you for the household:

   Y = 1 N = 0 3. _____

   if yes: amount per month sent 4. _____

   (if amount cannot be stated by month indicate amount and time period: X/year)
   .....

4. How long have they been away from the household:

   One month or less = 1
   Two to six months = 2
   Six months to 1 year = 3
   Over one year = 4

   5. _/__/__/
   _/__/__/

5. How long have they been going outside the household for work:

   this is the first year = 1
   they have done it for more than two years = 2
   they have done it for more than five years= 3
   they have done it for more than ten years = 4 6. __/__/_
   __/__/_

SECTION III MODE OF PRODUCTION

A. LAND AND LAND TENURE

==========

I would like to ask you some questions about all the land that is used by your household.

==========

1. Do you have land in private ownership:

Y=1 N=0 go to 5. 1. _____

If Yes: how much land (in acres of:

- Kushkaba 2. _____
- Sailaba 3. _____
- Banjar 4. _____
- Irrigated 5. _____

2. Are you the only owner of this land or do you own it jointly with others:

- only owner = 1
- jointly with others = 2 6. _____

3. Did you sell any lands in the last 12 months
Y=1 N=0 go to 4 7. _____

if yes: how much land did you sell (acres) 8. _____

how much money did you receive for

- Kushkaba 9. _____
- Sailaba 10. _____
- Irrigated 11. _____

4. Have you purchased any lands in the last 12 months:

Y = 1 N = 0 go to 5 12. _____

if yes: how much land (acres)

- Kushkaba 13. _____
- Sailaba 14. _____
- Irrigated 15. _____

5. Are you a tenant on another's lands:

Y = 1 N = 0 go to 6 16. _____

If yes:

Do you have a written contract:
Y = 1 N = 0 17. _____

How many acres do you rent of:

- Kushkaba 18. _____
- Sailaba 19. _____
- Irrigated 20. _____

-can you transfer the contract
Y=1 N=0 21. _____

-how long is the tenancy contract for
1 year = 1
over 1 year = 2 22. _____

-is the contract hereditary
Y=1 N=0 23. _____

-who decides what is to be planted
landlord = 1
tenant = 2
jointly = 3 24. _____

-who provides the seed
landlord = 1
tenant = 2
jointly = 3 25. _____

-who provides the labor
landlord = 1
tenant = 2 26. _____

-on these lands do you give the landlord:

-rent for the land = 1

-part of the harvest = 2

-services for use of land = 3 27. _____

-if you give the landlord part of the harvest, how much of the harvest do you give him each year: 28. _____

6. Have you rented any lands to others in the last 12 months

Y=1 N=0 go to 7 29. _____

if yes: size of field or plot rented (acres) 30. _____

amount of money received for rent 31. _____

services received instead of rent
Y=1 N=0 32. _____

how much of the harvest did you receive from your tenants (amount in maunds) 33. _____

7. Have you received any lands as gift (hiba) or inheritance in the last 12 months:

Y=1 N=0 go to 8 34. _____

if yes: amount of land (acres) 35. _____

type of land: Kushkaba = 1
Sailaba = 2
Irrigated= 3 36. _____

8. Have you given any lands as gift (hiba) or inheritance in the last 12 months:

Y=1 N=0 go to section B 37. _____

If yes: amount of land (acres) 38. _____

type of land: Kushkaba = 1
Sailaba = 2
Irrigated= 3 39. _____

B. CROP PRODUCTION

I would like to ask you about the crops you have grown in the last 12 months

INSTRUCTIONS; ASK AND MARK ALL CROPS PLANTED, THEN GO TO OTHER QUESTIONS

Column number 1 = Acres of Kushkaba
" " 2 = Acres of Sailaba
" " 3 = Acres Irrigated
" " 4 = Amount of total harvest in bags or bories (specify size of bag in Kg.)
" " 5 = Sales of harvest in maunds
" " 6 = Sales of harvest in rupees
" " 7 = Amount of harvest reserved for seed

WINTER CROPS	PLANTED		1	2	3	4	5	6	7
	YES	NO							
WHEAT									
BARLEY									
LENTIL									
CUMIN									
CHICKPEA									
OTHERS									
SUMMER CROPS									
SORGHUM									
MILLET									
GUAR									
MAIZE									
MUNG									
MELON									
VEGETABLES									
OTHERS									

ORCHARDS / FRUIT TREES	PRODUCTIVE Y	PRODUCTIVE N	1	2	3	4	5	6	7
VEGETABLES									
SPICES									
TOBACCO									
LUCERNE									
BERSEEM									

INSTRUCTIONS: USE THIS SPACE IF NECESSARY TO ADD COMMENTS ON ANY ASPECT OF CROP PRODUCTION

****

.....
.....
.....

2. Who decides what fields should be used for which crops:

self = 1
landlord = 2
self and sons = 3
self and others = 4

40. _____

3. Are the decisions to plant dependent on:
   -whether there has been rain = 1

   -whether it is possible to rent a tractor and if cash is available = 2

   -whether there are more people to help in planting = 3

41. _ /_ /__

4. What is the minimum amount of land you think is necessary to plant for your family's and your livestock to survive
(enter amount in acres)

42. _____

5. When you plant less, is it due to:

- little or no rainfall = 1
- lack of cash for tractor or camels = 2
- no one to do the planting = 3
- got other sources of income = 4
- other reasons = 5

43. _/__/___

if other reasons are given, state what they are:.....

.....

6. Do you have any lands that are not being used:
Y = 1 N = 0 go to 7

44. _____

if yes, why are they not being used:

- they are unusable/Banjar lands = 1
- they are fallow this year "khali-rakhna" = 2
- they are not used because of lack of rain = 3
- not used because of lack of money for tractor = 4
- not used because there was no seed = 5
- not used because you did not want to plant = 6
- not used because you have other sources of income and don't have to plant = 7
- other reasons = 8

45. _____

if other reasons are given, state what they are :.....
.....

7. Do you allow land to be in fallow (khali-rakhna)
- once a year regardless of whether there is rainfall or not = 1
- let a field rest once a season regardless of whether there is rainfall or not = 2
- let fields rest only when there is no rainfall = 3
- have to use the fields all the time and they have no rest period = 4

46. _____

8. Do you think it is good to give lands a rest:
- often = 1
- sometimes = 2
- it is good but cannot afford to keep lands out of cultivation = 3
- only when there is no rain = 4
- it makes no difference to the land = 5
- never give the lands a rest = 6

47. _____

9. Describe for me what crops you have planted in a single field over a three year period each season, and include times when you have left the land fallow:

1.winter:.....summer:.....

2.winter:.....summer:.....

3.winter:.....summer:.....

10. When do you usually plow your fields for the winter crops (state month)..... 48. _____

11. When do you usually plow your fields for the summer crops (state month)..... 49. _____

12. Do you ever plow before the summer rains
- never = 1
- sometimes = 2
- always = 3
- on all land = 4
- on the best land only = 5
- as much land as possible = 6

50. _____

13. If there are no summer rains do you plow the dry soil to prepare the land for planting whenever the rain comes:
- never = 1
- sometimes = 2
- always = 3
- on all land = 4
- on the best land only = 5
- as much land as possible = 6

51. _____

14. How long do you wait for the rain before you decide to plow dry soil:
- September = 1
- October = 2
- November = 3
- December = 4

52. _____

15. If it rains after you have plowed but not yet planted, do you re-plow the land
- yes, always = 1
- no = 2
- only re-plow the best land = 3
- re-plow as much land as possible = 4

53. _____

C. AGRICULTURAL INPUTS AND TECHNOLOGY USE

Now I would like to ask you about how you plant and what tools you use

1. Do you use a tractor for plowing:
   Y = 1 N = 0 go to 9 — 54. _____

   if yes: on what kinds of lands do you use it:
   - kushkaba = 1
   - sailaba = 2
   - irrigated = 3
   - on all lands = 4 — 55. _____

2. Do you own the tractor or rent it from someone:
   - owned = 1 go to 3
   - rented = 2 go to 4 — 56. _____

3. Do you hire your tractor out to others:
   Y = 1 N = 0 — 57. _____

   if yes, what do you charge for hiring it out each day: indicate amount (and go to 5) — 58. _____

4. What is the cost of renting a tractor/ day
   indicate amount in rupees — 59. _____

   do you rent the tractor alone or together with other people:
   alone = 1
   with other people = 2 — 60. _____

5. What amount of land can a tractor usually do in a single day (give amount of lands in acres if possible) — 61. _____

6. What sort of plow do you use with the tractor:
   - a plow :"HAL" or "GARA HAL" (springtyne)= 1
   - a plow :"LANGAR" (moldboard plow) = 2 — 62. _____

7. When you plow with a tractor and "hal" or "gara hal" how many passes is it necessary to make:
   state number of passes: — 63. _____

   -on what types of lands is it necessary to make more than one pass:
   - on kushkaba lands = 1
   - on sailaba lands = 2
   - on irrigated lands = 3 — 64.__/__/__/

8. What kinds of lands do you prefer to plow with a tractor:
   - kushkaba = 1
   - sailaba = 2
   - irrigated = 3
   - all kinds = 4 — 65. _____

9. Do you use animals for plowing:
   Y = 1 N = 0 go to 15 — 66. _____

   if yes, which ones:
   - draft camel = 1
   - draft bullock = 2
   - both = 3 — 67. _____

10. What kinds of land do you plow with animals:
   - kushkaba = 1
   - sailaba = 2
   - irrigated = 3
   - on all lands = 4 — 68. _____

11. Do you own the animals or do you hire them for plowing:
   - owned = 1 go to 13
   - hired = 2 go to 12 — 69. _____

12. What is the cost of hiring the animals for plowing/ day indicate amount — 70. _____

13. What amount of land can an animal plow/ day — 71. _____

14. How long can an animal plow:
(state number of hours) — 72. _____

indicate here if farmer has no idea of number of hours : NO IDEA of NUMBER OF HOURS.....

15. How do you obtain your seed:
   - purchased = 1
   - kept from harvest = 2
   - landlord provides it = 3
   - other source = 4 — 73. _____

D. CROP STORAGE

1. Do you store any crops used by the household for food from season to season:
   - yes, always = 1
   - only on good years = 2
   - almost never because harvest is insufficient = 3
   - never store crops = 4 go to E.1 — 74. _____

2. What are the most common crops you store for the family to use:

- wheat = 1
- barley = 2
- sorghum = 3
- millet = 4
- maize = 5
- others = 6

75.__/__/__/

3. How long do the crops stored for food last:
- there is enough for about 2 months = 1
- there is enough for 2 to 4 months = 2
- there is enough for half a year = 3
- there is barely a year or more = 4

76. _____

4. Do you store any crops for animal fodder:
- yes, always = 1
- only on good years = 2
- almost never because there is not enough fodder grown = 3

77. _____

5. What are the most common crops you store for animal fodder:
- barley, grain = 1
- barley straw = 2
- sorghum, grain= 3
- sorghum straw= 4
- millet, grain = 5
- millet straw = 6
- lucerne = 7
- berseem = 8

78. __/__/__ __/__/__

6. How long does the stored fodder last:
- enough for about 2 months = 1
- enough for 2 to 4 months = 2
- enough for half a year = 3
- enough to last one year = 4

79. _____

7. What kinds of storage do you use:
- crops are stored in storehouses (Gudam, Anbar Khana) = 1
- crops are stored in containers in the household = 2
- crops are stored underground = 3

80. _____

8. Do you have to pay people to guard the stored crops:

Y = 1 N = 0 go to E. 1

81. _____

9. Do you have any other costs for storing your crops:
- only when there is a big crop = 1
- only when you have to buy containers= 2
- there are rarely any costs = 3

82. _____

E. RELATIONS OF AGRICULTURAL PRODUCTION

1. Did you have to pay any agricultural laborers in the last year
   Y = 1 N = 0 go to 2 83. _____

   if yes: - amount paid 84. _____

   - days employed 85. _____

   - paid in kind 86. _____

   - list the crops labor was used for:
     - wheat = 1
     - barley = 2
     - sorghum = 3
     - maize = 4
     - cash crops = 5 87. _____

   - did you employ them in:
     - plot preparation = 1
     - planting = 2
     - harvesting = 3
     - threshing = 4
     - watering = 5
     - other work = 6 88. _____

2. Did any member <u>of your family</u> participate in crop production last year
   Y = 1 N = 0 go to 3 89. _____

   if yes:
   - who participated in crop production:
     - adult men = 1
     - adult women = 2
     - children = 3 90. _/__/__/

   - what activities did they participate in:
     - plot preparation = 1
     - planting = 2
     - harvesting = 3
     - threshing = 4
     - weeding = 5
     - other work = 6 91. _/__/__/ __/__/__

3. Did you participate in <u>any</u> labor exchange with others
   Y = 1 N = 0 go to 5 92. _____

if yes: what was the purpose
- ploughing = 1
- planting = 2
- harvesting = 3
- threshing = 4
- other agricultural activities = 5

93. _____

4. How much time did you spend in labor exchanges last year:
- 1 day or less = 1
- 2 to 3 days = 2
- 3 days to a week = 3
- more than a week = 4
- more than a months = 5

94. _____

5. Did you participate in labor exchange with:
- brothers' families = 1
- wives' family = 2
- other relatives = 3
- friends in village = 4
- outside of village = 5

95. _____

6. Are any members of <u>your</u> household sharecroppers (Buzghar)

Y = 1 N = 0 go to 7

96. _____

if yes:
- amount of acres cultivated: 97. _____
- duration of contract: 98. _____
- amount of harvest given to landlord: 99. _____
- list crops cultivated by buzghar:
  - wheat = 1
  - barley = 2
  - sorghum = 3
  - maize = 4
  - cash crops = 5

100. _____

7. Do you have any sharecroppers living in your household

Y = 1 N = 0 go to F 101. _____

if yes: - amount of acres cultivated 102. _____

- duration of contract 103. _____

- amount of harvest given to you 104. _____

- crops cultivated by sharecropper:
  - wheat = 1
  - barley = 2
  - sorghum = 3
  - maize = 4
  - cash crops = 5 105. _____

F. LIVESTOCK PRODUCTION

==========

NOW I WOULD LIKE TO ASK YOU ABOUT LIVESTOCK AND HOW YOU USE THEM

==========

Instructions: First ask if they have any of the types of animals listed, then see if farmer can give the information for age groups and breed. If the farmer has no livestock now, go to question 2.

==========

1. How many of the following animals do you have now?

LIVESTOCK TYPE	YOUNG ANIMALS		OLD ANIMALS	
	male	female	male	female
SHEEP				
GOATS				
CATTLE				
CAMELS				
CHICKEN/POULTRY				
RABBITS				
OTHER				

Instructions: If the farmer does not have any livestock NOW, he may still have had some in the past 12 months and sold them, so ask questions about SALES in question 2 below.

2. Of the livestock you keep how many have you purchased and sold in the last 12 months:

LIVESTOCK TYPE	PURCHASES		S A L E S	
	NUMBER	PRICE	NUMBER	PRICE RECEIVED
YOUNG LAMBS				
OLDER SHEEP				
YOUNG GOATS				
OLDER GOATS				
CATTLE				
CAMELS				
CHICKEN/POULTRY				
RABBITS				
OTHER LIVESTOCK				

3. Is the livestock you have raised in the last 12 months owned jointly with other members of your family:
Y = 1 N = 0 go to 4 106. _____

4. .Is any of the livestock you have raised in the last 12 months on loan to you :
Y = 1 N = 0 go to 5 107. _____

if yes, state numbers for each type of livestock:

- sheep 108. _____
- goats 109. _____
- cattle 110. _____
- camels 111. _____
- others 112. _____

what are the conditions of repayment of this loan:
.....
.....
.....

5. Have you loaned any livestock to others in the last 12 months:

Y = 1 N = 0 go to 6 113. _____

if yes, state numbers for each type of livestock:

- sheep 114. _____
- goats 115. _____
- cattle 116. _____
- camels 117. _____
- others 118. _____

6. In the last 12 months have any animals died from disease:

Y = 1 N = 0 go to 8 119. _____

if yes, how many:

sheep (indicate number) 120. _____

goats (indicate number) 121. _____

cattle (indicate number) 122. _____

camels (indicate number) 123. _____

7. Do you know what diseases they have died from:

Y = 1 N = 0 go to 8 124. _____

8. Are there plants dangerous or poisonous to livestock in your area:

Y = 1 N = 0 go to 10 125. _____

if yes, what are they called (list below)

1..... 2.....

3..... 4.....

9. What months are these plants dangerous or poisonous

- January - February = 1
- March and April = 2
- May through August = 3
- September through December = 4 126. _____

10. I would like to ask you about some uses of livestock in the last 12 months:

Instructions: ask:"in the ast 12 months how many ...were: born, eaten, given as gifts, given as dowry, sacrificed"

LIVESTOCK	BORN	EATEN	GIVEN GIFTS	DOWRY	SACRIFICED
SHEEP					
GOATS					
CATTLE					
CHICKEN					
OTHERS					

G. RANGELAND USE AND MODE OF LIVESTOCK PRODUCTION

1. What kinds of land do you use for your livestock:

   - state owned land = 1
   - tribally controlled land = 2
   - private land = 3 127. _____

2. Are these lands good in vegetation or are they useless/uncultivable lands:

   - lands with good vegetation = 1
   - uncultivable/useless lands = 2 128. _____

3. Do YOU keep your livestock here on these rangelands all year:

   Y = 1 go to 9 N = 0 go to 4 129. _____

4. Why do you or the persons who care for the livestock move out of this area:

   - because there is no vegetation on the rangelands = 1
   - because it is too cold = 2
   - because people go to work in other areas and take their livestock = 3 130. _____

5. Where do you take your animals to graze when they are not using these grazing areas:
(please state the names of areas, or specific ranges and the seasons of use)

RANGE OR AREA SEASON: FROM -- TO---

.....

.....

.....

.....

6. When the livestock are moved from this area, who goes with them:

- you go with them = 1
- your sons go with them = 2
- the hired shepherds go with them = 3
- the whole family goes = 4 131._____

7. When they go away from this community do they have lands they work in another place:

Y = 1 N = 0 go to 8 132. _____

if yes: do they own the land = 1
do they work as tenants = 2
do they work as sharecroppers = 3 133 _____

8. When they go away from this community do they have to buy fodder for the livestock at the place they go to:

Y = 1 N = 0 go to 9 134._____

9. When the livestock is here, are parts of the lands used for grazing closed for a part of the grazing season:

Y = 1 N = 0 go to 10 135. _____

if yes, who decides on the closing and opening dates for these areas:

- the sardar or malik = 1
- the tribal council (jirga) = 2
- a specially designated individual = 3
- all members of the community = 4 136. _____

why is the decision made to close parts of the range lands for part of a season:

- it has always been done = 1
- it is better for the vegetation = 2
- it is done only when there is little rainfall = 3 137. _____

10. Who is in charge of taking care of your livestock:

- young children in the household = 1
- children 11 or older = 2
- the old people in the household = 3
- hired shepherds = 4
- self = 5
- exchange labor with other people = 6

138. __/__/_

11. Does the community have any system of communal herding:

- Yes, several herds belonging to different people are herded together = 1
- No, there is no communal herding, each owner takes care of his own livestock = 2
- There used to be communal herding in the past but it is not done now = 3

139. _____

12. When hired shepherds are contracted, how long is the contract for:

- usually only for the year = 1
- if the shepherd is good he is kept for longer than a year = 2
- we tend to keep shepherds for more than two years = 3

140. _____

13. How are the shepherds paid:

- with a number of the lambs born = 1
  how many lambs _____
- with food = 2
  how much food is given per month
  _____
- with clothes = 3
  how many suits are given
  _____
- with cash = 5
  how much cash is given
  _____
- with all of the above = 6

141. _____

14. Do you control the season of breeding for your livestock:

Y = 1 N = 0 142. _____

if yes, what is the breeding season

- state month or months ..... 143. _____

if NO, why don't you control it:
- state reasons.....

.....

15. Do some of the animals receive any special food supplements:

Y = 1 N = 0 go to 20 144. _____

16. Which animals receive special food supplements:

- pregnant animals = 1
- newly born animals = 2
- sick animals = 3
- the best animals = 4
- animals that are to be sacrificed = 5 145. __/__/__
__/__/__

17. What foods are given to these animals:

==========

INSTRUCTIONS: from the list of food supplements indicate what kinds of livestock receive which supplements and the seasons when they receive them.

==========

FOOD GIVEN	ANIMALS	SEASONS	
WHEAT STRAW			
BARLEY GRAIN			(Joe)
BARLEY STRAW			(Prore/Pug)
SORGHUM GRAIN			(Jowari/Zurat)
SORGHUM STRAW			(Moray)
MILLET GRAIN			(Bajra/Bajri)
MILLET STRAW			( )
HAY			(Moray)
GREEN PLANTS			( )

18. Do you grow this food or buy it when you need it:

- grow it = 1
- grow some and buy some = 2
- buy it = 3

146. _____

19. would you grow more of this food if you could:

- No, I grow enough for my livestock's needs = 1
- No, I would rather buy fodder and use the land for other crops..... = 2
- Yes, but I don't have enough land..... = 3
- Yes, but I don't have enough water for irrigation of fodder crops.....= 4
- Yes, but I don't have enough labor ..... = 5
- Yes, but there is no cash for seed ..... = 6
- Yes, but I don't know how to grow this food= 7

147. __/__/__/__/__/__/__/__

20. Would you keep your livestock here all year if you had extra feed and water for them:

Y = 1 N = 0

148. _____

21. If you kept your livestock here all year, would you breed them at a different time:

Y = 1 N = 0

149. _____

- what months would be the best for breeding the livestock then:.....
.....

22. Would it cost you more to have your livestock kept here all year:

Y = 1 N = 0

150. _____

H. USE OF ANIMAL PRODUCTS

1. How much wool did you produce last year:

- indicate amount in number of fleeces 151. _____

- indicate amount in number of maunds 152. _____

2. How much wool did you keep for your household use

- indicate amount in number of fleeces 153. _____

3. How much wool did you sell last year:

   - indicate amount in number of fleeces 154. _____

   - indicate price obtained (total rupees) 155. _____

4. Do you follow any breeding practices to improve the quality or quantity of the wool produced:
   Y = 1 N = 0 156. _____

5. Do the wool buyers tell you what kind to produce to fetch better prices for better qualities of wool: Y = 1 N = 0 157. _____

6. What kind of wool earns you the most money:

   - state details of type and color of wool:
     .....

     .....

7. Did you sell any animal skins last year

   Y = 1 N = 0 158. _____

   if yes:

   number of skins sold 159. _____

   price received (total rupees) 160. _____

==========

THIS CONCLUDES THIS INTERVIEW. AT ITS CONCLUSION PLEASE MAKE SURE YOU THANK THE PERSON INTERVIEWED FOR THEIR TIME AND PATIENCE AND ASSURE THEM THAT THEIR RESPONSES WILL BE CONFIDENTIAL AND WILL BE USED ONLY TO TRY TO INCREASE OUR KNOWLEDGE OF HOW PEOPLE IN THE RURAL AREAS LIVE SO THAT WE CAN HELP THEM IMPROVE THEIR LIVING STANDARD.

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INSTRUCTIONS; PLEASE DO NOT FORGET TO TURN BACK TO THE FIRST PAGE AND RECORD THE TIME THE INTERVIEW WAS COMPLETED, ALSO PLEASE NOTE ON THE BACK OF THIS PAGE IF YOU ENCOUNTERED ANY SPECIAL DIFFICULTIES IN CONDUCTING THIS INTERVIEW: LACK OF COOPERATION, UNDERSTANDING, ETC.

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