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ACCELERATING SUSTAINABLE AGRICULTURE PROGRAM



Herat Province Agricultural Profile 2008



Prepared by the National Agriculture Information System (NAIS)/AgNet
for the Afghan Ministry of Agriculture, Irrigation and Livestock (MAIL)

Indexes

Pages

➤ Agriculture Profile and Data	3
➤ Crop Production by Chart	4
➤ Grain Production	5
➤ Fruit Production	6
➤ Vegetable Production	7
➤ Fodder and Industrial Crops	8
➤ Household Livestock	9

Annexes

• Annex 1:- Crop Surveyed by Hectares , Production and Value	10
• Annex 2:- Ranking of Production by Tons Surveyed Annually	11
• Annex 3:- Harvest Season of Agriculture Crops Surveyed	12
• Annex 4:- District Profile Summary	13
• Annex 5:- Number of Household Animals and Poultry	14
• Annex 6:- Land Use Status	15
• Annex 7:- Crop Calendar	16

Maps

❖ Herat Province Standard Map.....	17
❖ Herat Province Agriculture Map	18
❖ Herat Province Wheat Production Map	19
❖ Herat Province Alfalfa Production Map	20
❖ Herat Province Onion Planting Date Map	21
❖ Herat Province Onion Harvesting Date Map	22
❖ Herat Province Livestock Map	23
❖ Herat Province Livestock (Sheep) Map	24
❖ Herat Province (Hen) Map	25

Herat Province

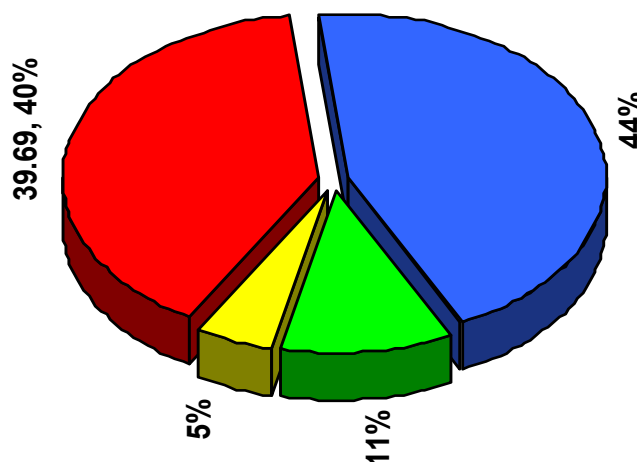


In 2008, farmers in Herat grew 40 different agricultural products on approximately 128,933 hectares of land (2.15 percent of total area). The cultivated land is concentrated mostly in the north and central districts of the province because of the fertile soil of the Harirod River watershed. Seventy percent of the cultivated land is concentrated in 9 northern and central districts of Herat. Farmers living in the 3 northern and 5 eastern and southern districts raise livestock because of the higher elevations and mountainous terrain in the area.

Herat provincial districts are:

- | | | |
|----------------------|--------------------|----------------------|
| 1. Karukh | 6. Zendajan | 11. Gulran |
| 2. Kushk Rubat Shngi | 7. Ghouryan | 12. Fersee |
| 3. Kushk Kohna | 8. Enjil | 13. Pashtun Zarghoon |
| 4. Guzra | 9. Obey | 14. Shendand |
| 5. Adraskan | 10. Chishti Sharif | 15. Herat Center |

Herat's total 2008 crop production was estimated at 723,589 metric tons (MT), mostly consisting of fruit (44.81 percent) and grains (39.60 percent), and of a significantly smaller amount of vegetables (10.75 percent) and industrial crops and animal fodder (4.74 percent). The total market value of Herat's 2008 agricultural output was estimated at \$455.8 million, with no relevant value-added processing.



Of the 15 districts, Kushk Rabat Sangi was the most productive in Herat, contributing 18.23 percent of the Herat's agriculture production. Pashtun Zarghoon followed with 10.64 percent. Obey district come first in terms of fruit production (2 thousand MT). Farmers in Kushk/Rabat Sangi grew the highest volume of grain (49,000 MT) and Gusara and Karukh jointly produced the most vegetables (1,000 MT each) in 2008.

Research Methodology

This report was prepared based on information provided by AgNet/NAIS system. In 2007 and 2008 AgNet Conducted two separate surveys (1) district profile survey and (2) agricultural statistic survey in 19 provinces of Afghanistan with the support of ASAP and MAIL at district level. During a period of 4 months each, more than 50 surveyors collected information related to the number of hectares land cultivated types of products produced number of livestock, crop calendar, sources of water and much more agricultural information. The information presented in this report is based exclusively in the area surveyed, not in the total farm land of the provinces. The AgNet/NAIS data base for Herat is the most accurate database available in the country in spite there is not estimation rewarding the level of exactitude of the information. All data related to harvest amounts was checked in July 2008 by ASAP personnel (Prof. A. Ghani Taj Agricultural Information Specialist and former professor of Kabul University and Ahmad Jawid Abid Survey and Data Assistant) by comparing the national average productivity level of each products. Crop value information was determined on wholesale price in Herat and collected by Herat AgNet officer Mr. Osman and approved by the director of Herat Provincial Agriculture department Mr. Esmail Haidar zada in November 2008.

Grains

In 2008, annual grain production surveyed in Herat was approximately 281,195 MT and valued at \$169 million. Major food staples wheat and rice made up almost all (94 percent) of grains (worth \$159 million). The remaining 6 percent comprised crops such as peas, mung bean and barely that valued \$10 million.

Grain	Tons	Value USD \$
Rice	1,334	\$ 1,601,280
Wheat	263,285	\$ 157,941,000
Barely	4,433	\$ 1,773,360
Maize	706	\$ 211,830
Mung bean	1,246	\$ 373,710
Pea	8,998	\$ 6,352,160
Red Bean	403	\$ 483,120
Milletts	790	\$ 316,000
Total	281,195	\$ 169,052,460

Farmers grew wheat, barley, mung bean and peas in all districts of Herat province in 2008. Kushk/Rubat Sangi district produced the highest amount of wheat (43.5 percent) and the largest quantity of peas during 2008. Figures presented in the below table are in kg.

	Rice	Wheat	Barely	Maize	Mung bean	Pea	Red bean	Milletts
Karukh	38,000	17,219,000	308,000	-	350,000	1,374,000	100,000	117,000
Kushk rubat Sangi	-	122,462,400	271,200	18,000	35,000	2,125,000	7,500	-
Kushk Kohna	-	8,932,300	458,000	9,600	7,500	2,067,000	-	-
Guzra	600,000	18,044,000	195,500	120,000	180,900	234,000	48,300	135,000
Zendajan	-	1,552,500	476,000	-	22,500	99,000	1,600	50,000
Ghouryan	-	2,166,000	381,000	-	33,000	96,000	-	80,000
Enjil	340,000	8,398,000	90,000	30,000	84,000	132,000	75,000	36,000
Obey	356,400	17,195,000	554,000	87,500	30,000	112,500	25,200	-
Gulran	-	10,625,000	655,000	42,000	37,500	1,150,000	8,500	44,000
Kohsan	-	6,230,800	378,000	75,000	72,000	373,200	21,600	150,000
Fersee	-	6,436,000	78,000	15,000	27,000	108,000	1,400	24,000
Pashtun Zarghoon	-	32,431,000	291,200	84,000	195,500	354,000	64,000	154,000
Shendand	-	2,505,500	131,000	90,000	30,000	189,000	19,500	-
Adraskan	-	3,780,000	157,500	135,000	112,000	500,000	18,000	-
Chishti Sharif	-	5,307,500	9,000	-	28,800	84,000	12,000	-
Total	1,334,400	263,285,000	4,433,400	706,100	1,245,700	8,997,700	402,600	790,000

Fruits

Fruits	Tons	Value USD \$
Grape	100,368	\$ 160,300,800
Apple	7,005	\$ 5,568,080
Mulberries	5,238	\$ 2,619,000
Almond	5,411	\$ 16,231,500
Plum	9,841	\$ 4,920,250
Apricot	5,892	\$ 2,945,825
Pomegranate	2,541	\$ 1,524,720
Peach	4,818	\$ 2,399,150
Melon	92,131	\$ 29,021,374
Water melon	93,018	\$ 18,663,520
Other Fruits	2,476	\$ 5,778,296
Total	328,739	\$ 249,972,515

Herat fruit production surveyed in 2008 was estimated at 328,739 MT and valued at over \$249 million. Grapes represented one-third of all fruits by volume, and melons and watermelons accounted for 56 percent of fruit production and generated \$47.6 million.

The level of fruit production varies from district to district. However, farmers grew melons, watermelons, grapes, apricots and peaches in all 15 districts of Herat. Guzra and Shendand produced the highest amount of grapes (about 36.87 percent). While Gulran held the top position (25.6 percent) in terms of melon and watermelon production in 2008, Shendand district produced half of all Herat almonds. Figures presented in the below table are in kg.

	Grape	Apple	Mulberries	Almond	Plum	Apricot	Pomegranate	Peach	Melon	W. Melon	Other. F
Karukh	3,055,000	400,000	279,000	350,000	392,000	308,000	170,000	360,000	6,935,000	6,540,000	92,000
Kushk rubat Sangi	975,000	16,000	225,000	10,000	-	330,000	-	180,000	2,100,000	-	153,000
Kushk Kohna	1,512,000	22,500	437,500	-	-	147,000	-	181,500	11,200,000	8,610,000	270,500
Guzra	22,100,000	272,000	342,000	320,000	672,000	440,000	380,000	540,000	4,025,000	4,840,000	148,500
Zendajan	1,300,000	48,000	-	20,000	56,000	66,000	10,000	48,000	6,660,000	10,000,000	-
Ghouryan	6,500,000	64,000	-	30,000	56,000	66,000	-	42,000	7,200,000	12,000,000	-
Enjil	15,000,000	675,000	-	-	3,150,000	111,500	399,000	480,000	2,400,000	1,050,000	1,108,500
Obey	15,600,000	4,000,000	1,800,000	2,700,000	2,128,000	495,000	-	432,000	1,029,000	1,260,000	129,000
Gulran	1,105,000	128,000	153,000	100,000	112,000	165,000	-	144,000	24,696,000	22,710,000	2,000
Kohsan	2,275,000	168,000	270,000	330,000	500,000	315,000	16,200	250,000	2,420,000	2,616,000	10,200
Fersee	2,125,000	171,600	176,000	180,000	96,000	141,750	18,600	32,400	2,400,000	1,140,000	-
Pashtun Zarghoon	10,582,500	592,000	180,000	180,000	795,000	880,000	182,000	476,000	10,880,000	8,000,000	163,860

Vegetables

Vegetable production surveyed in Herat province during 2008 was estimated at 78,855 MT and valued at almost \$23.5 million. Herat farmers produced more than 10 different types of vegetables, with tomatoes making up the largest volume (36,000 MT) and generating the highest profits (\$11 million). Potatoes, onions, cucumbers and eggplant represent 37 percent of all vegetables produced, bringing \$8.9 million in direct revenue to Herat province.

Vegetable	Tons	Value USD \$
Potato	7,285	\$ 1,748,410
Onion	9,954	\$ 1,990,740
Tomato	35,982	\$ 11,037,720
Eggplant	5,304	\$ 1,591,320
Okra	4,062	\$ 1,208,910
Cucumber	6,867	\$ 4,119,660
Carrot	3,619	\$ 361,850
Cauliflower	2,249	\$ 899,800
Turnip	2,827	\$ 282,620
Other Vegetable	706	\$ 300,456
Total	78,855	\$ 23,541,486

Tomatoes, onions, potatoes, eggplant, okra, carrots and turnips are produced in all 15 districts of Herat province. Karukh district is a largest producer of tomatoes (69 percent) followed by Kohsan district, which produced 5 million MT of tomato in 2008.

	Potato	Onion	Tomato	Eggplant	Okra	Cucumber	Carrot	Cauliflower	Turnip	Other veg.
Karukh	2,240,000	1,700,000	24,840,000	1,105,000	990,000	1,225,000	378,000	240,000	272,000	34,200
Kushk rubat Sangi	595,000	639,000	195,000	80,600	75,200	-	96,000	-	75,000	-
Kushk Kohna	958,850	324,000	108,000	30,000	20,000	-	30,000	-	21,000	-
Guzra	244,800	1,211,000	969,000	725,000	612,000	1,309,000	1,120,000	567,000	975,000	58,000
Zendajan	21,600	310,500	720,000	330,000	200,000	781,000	120,000	-	68,000	65,000
Ghouryan	42,000	402,000	780,000	371,200	205,000	1,372,000	117,000	-	70,000	-
Enjil	275,000	1,662,500	1,375,000	1,147,500	724,000	875,000	533,000	595,000	360,000	42,000
Obey	1,200,000	525,000	338,400	150,000	90,000	-	195,500	165,000	180,000	78,000
Gulran	70,000	279,000	150,000	126,000	61,500	-	58,500	-	36,000	-
Kohsan	54,400	300,000	5,000,000	188,000	140,000	60,000	70,000	-	45,500	-
Fersee	68,000	140,700	90,000	60,500	35,000	-	52,500	-	42,000	-
Pashtun Zarghoon	595,000	720,000	770,500	493,000	550,000	1,050,000	624,000	637,500	544,000	375,000
Shendand	86,400	375,000	150,000	145,000	100,000	81,600	128,000	-	75,000	22,240
Adraskan	210,000	840,000	292,500	210,000	165,000	112,500	56,000	45,000	37,200	32,000
Chishti Sharif	624,000	525,000	204,000	142,600	93,500	-	40,000	-	25,500	-
Total	7,285,050	9,953,700	35,982,400	5,304,400	4,061,200	6,866,100	3,618,500	2,249,500	2,826,200	706,440

Fodder & Industrial Crops

The amount of alfalfa is directly related to the number of livestock raised in the districts. Meanwhile, clover has an indirect relationship with the number of dairy cows and is also consumed in the human diet. Sesame and zafaran are important industrial crops and generated \$6 million for Herat farmers in 2008.

Fodder and Industrial	Tons	Value USD \$
Alfalfa	19,970	\$
Clover	10,240	\$
Cotton	684	\$
Sugar beet	120	\$
Sesame	3,784	\$
Zafaran	2	\$
Total	34,800	\$ 13

Guzra, Enjil, Obey and Shendand districts produced more than 63 percent of all Heart's alfalfa. Farmers Zarghoon grew the most sesame (28 percent) and 60 percent of all zafaran was produced in Ghouryan district.

	Alfalfa	Clover	Cotton	Sugar beet	Sesame
Karukh	445,000	208,800	34,200	-	82,400
Kushk rubat Sangi	630,000	72,000	-	7,200	502,100
Kushk Kohna	-	-	-	-	552,000
Guzra	3,600,000	770,000	105,000	-	112,000
Zendajan	500,000	1,400,000	11,000	-	62,500
Ghouryan	624,000	2,400,000	9,500	-	77,500
Enjil	3,000,000	403,000	60,000	-	87,500
Obey	2,160,000	880,000	-	-	120,000
Gulran	500,000	337,500	-	-	565,000
Kohsan	520,000	1,170,000	14,400	-	134,000
Fersee	562,500	237,000	-	-	100,000
Pashtun Zarghoon	1,680,000	918,000	360,000	93,500	1,080,000
Shendand	3,735,000	955,000	40,000	-	112,500
Adraskan	1,190,000	190,000	50,000	-	168,000
Chishti Sharif	823,600	299,000	-	19,000	28,800
Total	19,970,100	10,240,300	684,100	119,700	3,784,300

Livestock

Herat is an industrial and agricultural based province of Afghanistan, which economically benefits from its proximity to the Islamic Republic of Iran. Based on the 2008 statistic survey, farmers raise 9 types of household livestock in Herat (See annex –VI).

Province	District	Total livestock	Total Poultry
Herat	Zendajan	28,475	-
	Enjil	10,104	-
	Obey	109,263	118,260
	Ghouryan	140,245	84,360
	Guzra	108,969	-
	Kushk-e- Kohsan	165,403	-
	Kushk-e- rubat Sangi	204,600	-
	Karukh	105,951	-
	Chishti-e- Sharif	33,448	36,490
	Adraskan	113,238	3,599
	Shendand	32,548	9,525
	Kohsan	80,153	20,300
	Gulran	924,349	99,350
	Pashtun Zarghoon	40,642	5,078
	Fersee	8,290	54,200
Total		2,105,678	431,162

In 2008, household livestock kept in Herat numbered 2,105,678, not including 431,162 chickens, ducks and turkeys. Gulran and Rubat Sangi districts raised over half (53.61 percent) of Herat's livestock and the remaining 46.39 percent were found in all other 13 districts of Herat province. Sheep and goats are the dominant household livestock in Heart.

Animals	Cow	Sheep	Goat	Horse	Donkey	Camel	Mule	Total	Cock	Hen	Turkey	Duck	Total
Heads	81,745	1,177,740	738,823	3,470	79,000	24,823	77	2,105,678	108,250	216,682	79,470	26,760	431,162
Percentage	3.88	55.93	35.09	0.16	3.75	1.18	0.004	100%	25.11	50.26	18.43	6.21	100%

Cattle in Heart include oxen and dairy cows. The number of donkeys could be a good indicator for the development of transportation. Farmers in Obey district raised most of the province's poultry (27.4 percent) in 2008.

Annex 1

Herat province crop surveyed by Hec, Tons and USD

	Crops	Hectares	Metric Tons	Value USD \$
1	Rice	559	1,334	\$ 1,601,280
2	Weath	92,490	263,285	\$ 157,941,000
3	Barely	1969	4,433	\$ 1,773,360
4	Maiz	236	706	\$ 211,830
5	Mung bean	625	1,246	\$ 373,710
6	Pea	3,419	8,998	\$ 6,352,160
7	Red Bean	206	403	\$ 483,120
8	Millet	361	790	\$ 316,000
9	Potato	983	7,285	\$ 1,748,410
10	Onion	1286	9,954	\$ 1,990,740
11	Tomato	1345	35,982	\$ 11,037,720
12	Eggplant	1,039	5,304	\$ 1,591,320
13	Okra	719	4,062	\$ 1,208,910
14	Cucumber	957	6,867	\$ 4,119,660
15	Garlic	23	89	\$ 53,640
16	Round Red Redish	7	42	\$ 16,800
17	Carrot	482	3,619	\$ 361,850
18	Cauliflower and Cabbage	265	2,249	\$ 899,800
19	Squash	48	575	\$ 230,016
20	Turnip	406	2,827	\$ 282,620
21	Grape	7,515	100,368	\$ 160,300,800
22	Pear	85	971	\$ 1,456,950
23	Apple	448	7,005	\$ 5,568,080
24	Mullberries	568	5,238	\$ 2,619,000
25	Almond	538	5,411	\$ 16,231,500
26	Plum	161	9,841	\$ 4,920,250
27	Apricot	545	5,892	\$ 2,945,825
28	Pomegranate	321	2,541	\$ 1,524,720
29	Peach	405	4,818	\$ 2,399,150
30	Sour Cherry	126	969	\$ 484,250
31	Walnut	128	156	\$ 417,096
32	Pistachio	76	380	\$ 3,420,000
33	Melon	3,052	92,131	\$ 29,021,374
34	Water melon	2,555	93,018	\$ 18,663,520
35	Alfalfa	1,775	19,970	\$ 3,994,020
36	Clover	1324	10,240	\$ 2,048,060
37	Cotton	341	684	\$ 957,740
38	Sugar beet	14	120	\$ 23,940
39	Sesame	1,262	3,784	\$ 3,405,870
40	Zafaran	269	2	\$ 2,833,500
	Total	128,933	723,589	\$ 455,829,591

ANNEX 2

Ranking of Herat Province districts by tons surveyed annually

No.	District	Tons	Hectares	Value USD \$	% total tons
1	karukh	72,182	8,303	32,829,820	9.98%
2	Kushk rubat sangi	131,875	50,636	80,308,990	18.23%
3	Kushk Kohna	35,899	5,944	18,529,934	4.96%
4	Guzra	66,015	9,385	55,616,180	9.12%
5	Zendajan	24,999	1,889	9,434,404	3.45%
6	Ghoryan	35,185	3,027	18,553,290	4.86%
7	Enjil	44,699	5,132	37,854,800	6.18%
8	Obae	54,016	8,843	52,030,000	7.47%
9	Gulran	64,061	7,159	23,083,990	8.85%
10	Kohsan	24,167	3,753	13,433,126	3.34%
11	Farsee	14,559	2,592	9,993,605	2.01%
12	Pashtun Zarghon	76,976	12,790	49,196,444	10.64%
13	Shendand	41,777	3,878	35,183,724	5.77%
14	Adraskan	22,984	2,447	8,523,110	3.18%
15	Chishti Sharif	14,193	3,155	11,258,174	1.96%

Annex 3 Harvest seasons for Herat

Agricultural crops surveyed

Crops	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rice												
Weath												
Barely												
Maiz												
Mung bean												
Pea												
Red Bean												
Millet												
Potato												
Onion												
Tomato												
Eggplant												
Okra												
Cucumber												
Garlic												
Round Red Redish												
Carrot												
Cauliflower & Cabbage												
Squash												
Turnip												
Grape												
Pear												
Apple												
Mullberries												
Almond												
Plum												
Apricot												
Pomegranate												
Peach												
Sour Cherry												
Walnut												
Pistachio												
Millon												
Water melon												
Alfalfa												
Clover												
Cotton												
Sugar beet												
Sesame												
Zafaran												

Annex 4

DISTRICT PROFILE:		Engil/ Hirat			
1	DEMOGRAPHICS		7	Water	
	Region:	western		Rain fed	20
	Province:	Hirat		Kariz	10%
	District:	Engil		Canals	50%
	Villages:	325		Other sources	5%
	Households:	51,291		Bored wells, #	15
	Estimated population:	256,458		Access/irrigated water	50%
2	Land		8	Infrastructure	
	Sharecroppers, %	22%		Access/drinking water	40%
	Arable land, jeribs	89,125		Schools	80
	Arable land, hectares (/5)	17,825		Electricity costs, Afs/KWH	2
	Grazing land, jeribs	2825		Cell phone access	yes
	Geographic area, Km2	1166.747		Health clinic, #	1
	Landowner, %	20		VFUs, #	1
	Irrigated land area, hectares	17,825	9	Major Income Sources	
	Rainfed land in use,hectars	0		Agro-horticulture sector, %	52
3	Primary Crops			Livestock sub-sector, %	20
	Spring Wheat, hectares	300		Bussiness and Trade %	2
	Fall wheat, hectares	2,112		Government and NGO %	12
	Alfa alfa& clover, hectares	312		Daily Labor %	14
	Mellon&water mellon, hec	110	10	Enterprises	
	Graps, hectares	1000		General shops, #	
	Cucumber, hectares	100		Food service,#	1000
	Other industrial crops, hec	95		Flour mills,#	80
	Other grains, hectares	265		Shoe repair,#	20
	Other vegetables, hectares	567		Blacksmith,#	60
	Fruit orchards,hectares	273		Oil extraction,#	4
4	Livestock			Butcher shops, #	100
	Livestock owners, %	30		Carpet weaving, #	
	beef cattles & oxen, #	2190	11	Agricultural Initiatives	
	Dairy cow, #	2,840		Artificial Insimulation	yes
	Sheep & Goats, #	4,150		Rentable Ag Machinery	yes
	Donkey, #	700		Improved wheat seed	yes
	Horses, #	155		Fruit Nurseries, #	1
	Checkens #	0		Credit facility	yes
	Camels, #	55		Poultry farm, #	1
	Kuchi, (seasonal families),#			Pest control	yes
	Camels, #			Comodity storage, #	1
	Kuchi sheep, #			Green houses, #	0
	Kuchi goats, #		12	Household (HH) Indices	
	Kuchi other, #			Arable land/HH, jeribs	1.737
5	Transportation			Grazing land/HH, jeribs	0.055
	Distance to center, km	10		Irrigated land/HH, jeribs	1.737
	Time to center, minutes	20		Rainfed land/HH, jeribs	0
	Cost to center, Afs	13		Total livestock/HH, #	0.115
	Truck cost to center, Afs	7,000		Sheep&goats/HH, #	0.08
	District roads	unpaved		Poultry/HH, #	0
	Provincial roads	paved	13	Check	
	Accessibility	all year		Households/village:	157.818
6	Markets			Population/household:	5
	Provincial	All year		Schools/village:	0.246
	District, General, day	all days		Number of bored wells/village:	0.046
	District, livestock, day	Sat/wed.		Number of enterprise/village:	3.889
	Traders/assemblers	yes.			

Annex 5

Household Animals and Poultry in (Herat)Province

S.#	Province	District	Animals									Birds				
			Oxen	Milk Cow	Sheep	Goat	Horse	Donkey	Camel	Mule	Total	Cock	Hen	Duck	Turkey	Total
1	Herat	Zendajan	960	3,527	10,175	8,311	50	5,252	200	-	28,475	-	-	-	-	-
2		Enjil	2,190	2,840	2,350	1,800	155	700	55	14	10,104	-	-	-	-	-
3		Obae	3,294	4,672	27,360	67,470	544	5,386	521	16	109,263	85,600		12,260	20,400	118,260
4		Ghouryan	406	3,527	121,000	13,210	42	1,922	138	-	140,245	-	63,000	360	21,000	84,360
5		Guzara	15,800	4,385	23,000	63,200	110	658	1,810	6	108,969	-	-	-	-	-
6		Kushk-e- kohnan	2,800	5,600	72,000	45,000	250	30,750	9,000	3	165,403	-	-	-	-	-
7		Kushk-e- rubat sangi	514	3,200	158,350	20,125	150	20,955	1,300	6	204,600	-	-	-	-	-
8		Karrukh	6,765	6,065	38,222	53,535	201	1,024	135	4	105,951	-	-	-	-	-
9		Chusht-e- sharif	600	1,500	7,075	21,350	135	2,450	334	4	33,448	21,700	-	3,040	11,750	36,490
10		Adraskan	500	1,200	50,000	55,000	35	1,500	5,000	3	113,238	200	49	350	3,000	3,599
11		Sheendand	620	1,700	12,000	14,000	320	1,200	2,700	8	32,548	700	105	3,400	5,320	9,525
12		Kohsan	2,321	2,642	44,908	25,222	80	4,928	50	2	80,153	-	18,000	300	2,000	20,300
13		Gulran	416	1,900	597,900	320,100	1,300	1,225	1,500	8	924,349	-	87,000	350	12,000	99,350
14		Pashtun Zarghoon	262	1,109	9,400	27,000	68	800	2,000	3	40,642	50	528	2,500	2,000	5,078

Annex 6

Province: Herat Arable land survey (irrigated and rain fed), forest and pasture land in Hectare

SN	District	No of villages	Arable land in Hact			Orchards &viens	Vegetabl e and	Cereal Crops	Forage crops	Forest land	Pastur e land	Non-areble	Moun tains	Total Land
			rainfed	Irrigated	Total									
1	Zendajan	106	8,447	10,752	19,199	110	210	560	278	2,000	1,500	-	-	22,699
2	Enjil	325	-	17,825	17,825	1,397	1,040	16,012	312	75	565	35,475	-	53,940
3	Obae	216	31,930	15,975	47,905	3,860	465	5,870	325	80,000	28,830	57,660	-	214,395
4	Ghouryan	120	40,200	25,200	65,400	844	393	690	352	2,280	2,600		-	70,280
5	Guzara	360	9,000	16,000	25,000	2,000	115	22,475	410	160	6,000	42,700	-	73,860
6	Kushk-e- kohnan	140	67,556	9,734	77,290	125	540	76,561	64	15,000	55,000	115,000	-	262,290
7	Kushk-e- rubat sangi	167	98,290	8,278	106,568	90	760	105,632	86	3,000	160,611	32,122	-	302,301
8	Karrukh	186	6,000	13,000	19,000	420	170	18,145	265	10,000	56,779	2,000	-	87,779
9	Chusht-e- sharif	62	9,000	5,240	14,240	620	212	3,275	157	720	15,720	7,860	-	38,540
10	Adraskan	205	6,000	25,000	31,000	500	370	1,120	112	80	14,000	1,200	-	46,280
11	Sheendand	302	1,300	4,200	5,500	1,700	365	2,500	480	870	4,460	2,200	-	13,030
12	Kohsan	45	15,000	11,000	26,000	340	250	4,200	185	4,030	25,000	30,000	-	85,030
13	Gulran	366	30,160	4,100	34,260	120	410	5,124	85	2,500	66,000	20,000	-	122,760
14	Pashtun Zarghoon	151	7,500	21,600	29,100	1,100	670	12,000	210	75	20,000	216,664	-	265,839
15	Fersi	162	1,250	1,500	2,750	244	112	2,000	75	40	10,000	2,500	-	15,290
Total		2,913	331,633	189,404	521,037	13,470	16 6,082	276,164	3,396	120,830	467,065	565,381	-	1,674,313

Annex 4

Crop Calendar

NAIS/AgNet

Activities		District: Obeay		Province Hirat		Date: 20/ 6/2008		GPS HQ		Elev.HQ					
No	P = Planting , H = Harvesting	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Fruits and Nuts															
1	Apples														
2	Grapes														
3	Pomegranates														
4	Apricots														
5	Peaches														
6	Citrus														
7	Lukot														
8	Figs														
9	Almonds														
10	Walnuts														
11	Pistachio														
12	Pine nuts														
13	Mulberries														
Vegetable Crops															
14	Tomatoes														
15	Potatoes														
16	Watermelon														
17	Melon														
18	Carrots														
19	Okra														
20	Eggplant														
21	Greenbean														
22	Onion														
23	Cauliflower														
24	Spinach														
Cash/ Industrial Crops															
25	Cotton														
26	Peanuts														
27	Rice														
28	Wheat														
29	Corn														
30	Mungbean														
31	Mastured														
32	Flax														
33	Cumin														
34	Sunflower														
35	Canola														
36	Safran														
37	Peas														

Planting:

Harvesting:

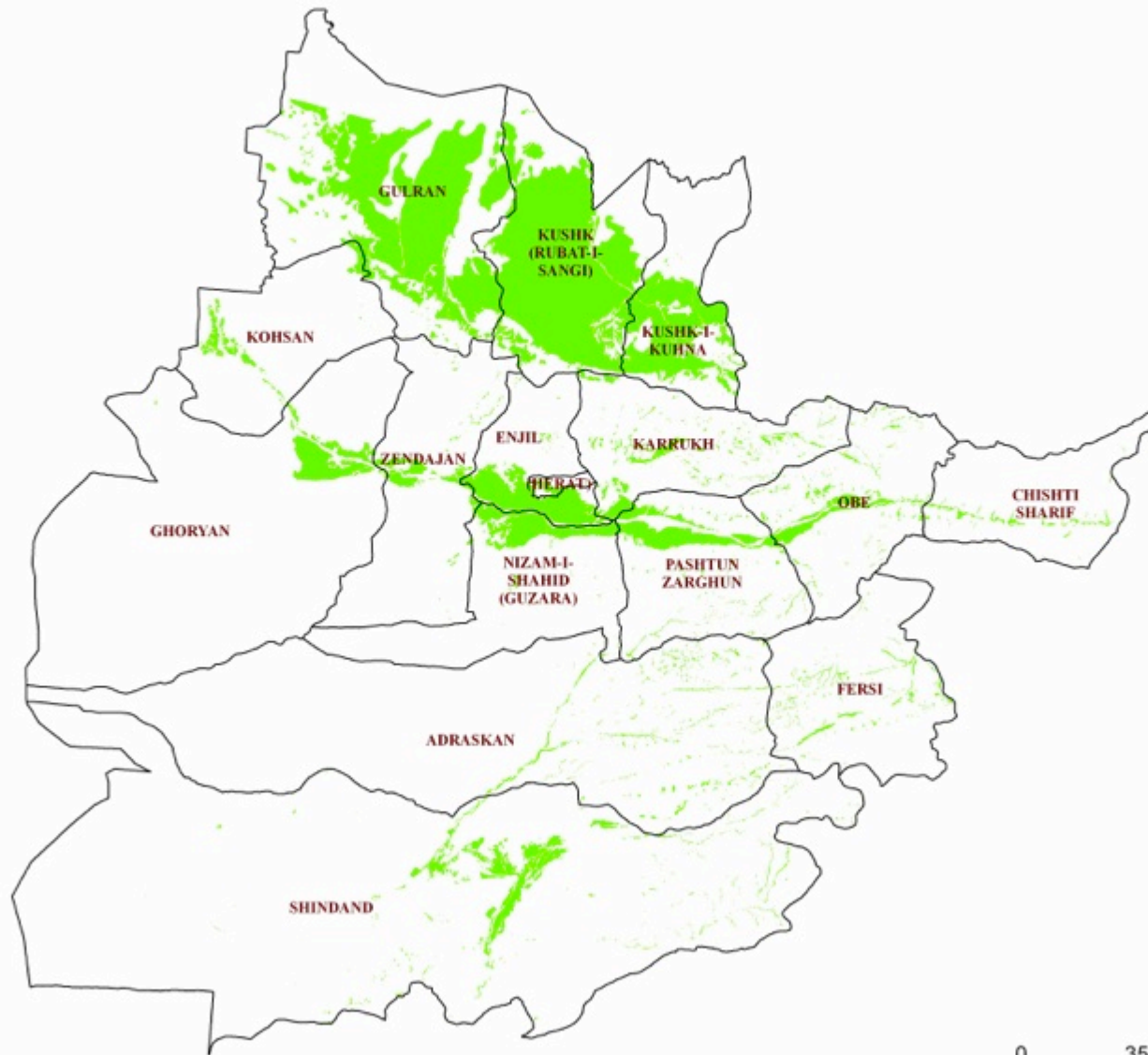
HERAT PROVINCE DISTRICTS MAP



0 35 70 Km

HERAT DISTRICTS
(HERAT)
ADRASKAN
CHISHTI SHARIF
ENJIL
FARSI
GHORYAN
GULRAN
KARRUKH
KISHK-I-KUHNA
KISHK-I-RUBAT-I-SANGI
KISHK-I-SANGI
NIZAM-I-SHAHID (GUZARA)
OBE
PASHTUN ZARGHUN
SHINDAND
ZENDAJAN

HERAT PROVINCE AGRICULTURE MAP



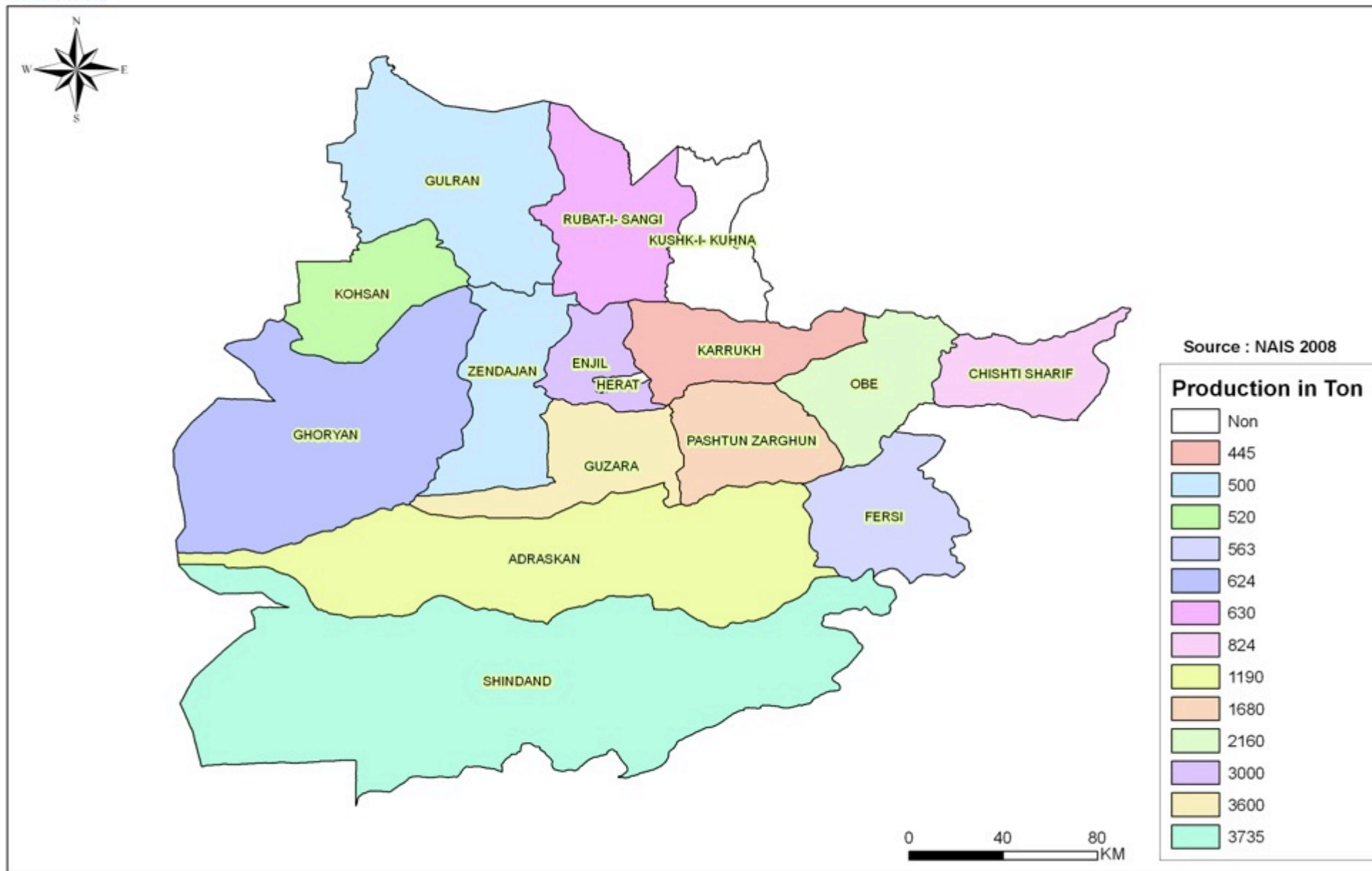
0 35 70 Km



Herat Province (Wheat Production)



Herat Province (Alfalfa Production)



Herat Province Crop Calendar (Onion)



Source: NAIS 2008

Planting Date

White box	Non
Light green box	1 Feb - 28 Feb
Yellow box	1 Mar - 31 Mar
Blue box	15 Feb - 15 Mar
Orange box	15 Mar - 31 Mar
Light blue box	23 Apr - 30 Apr
Purple box	8 Feb - 23 Mar

0 50 100
KM

Herat Province Crop Calendar (Onion)



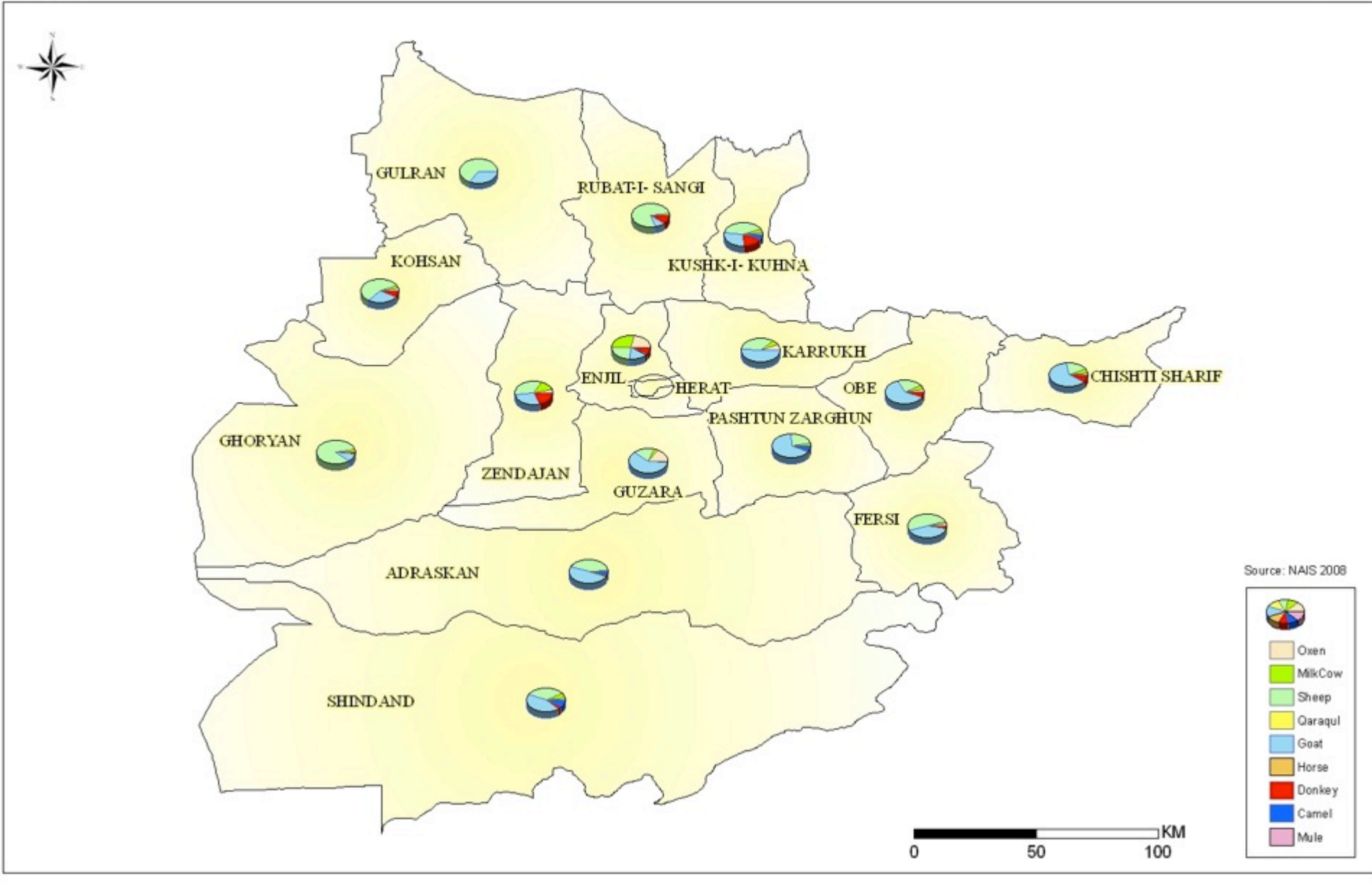
Source: NAIS 2008

Harvesting Date

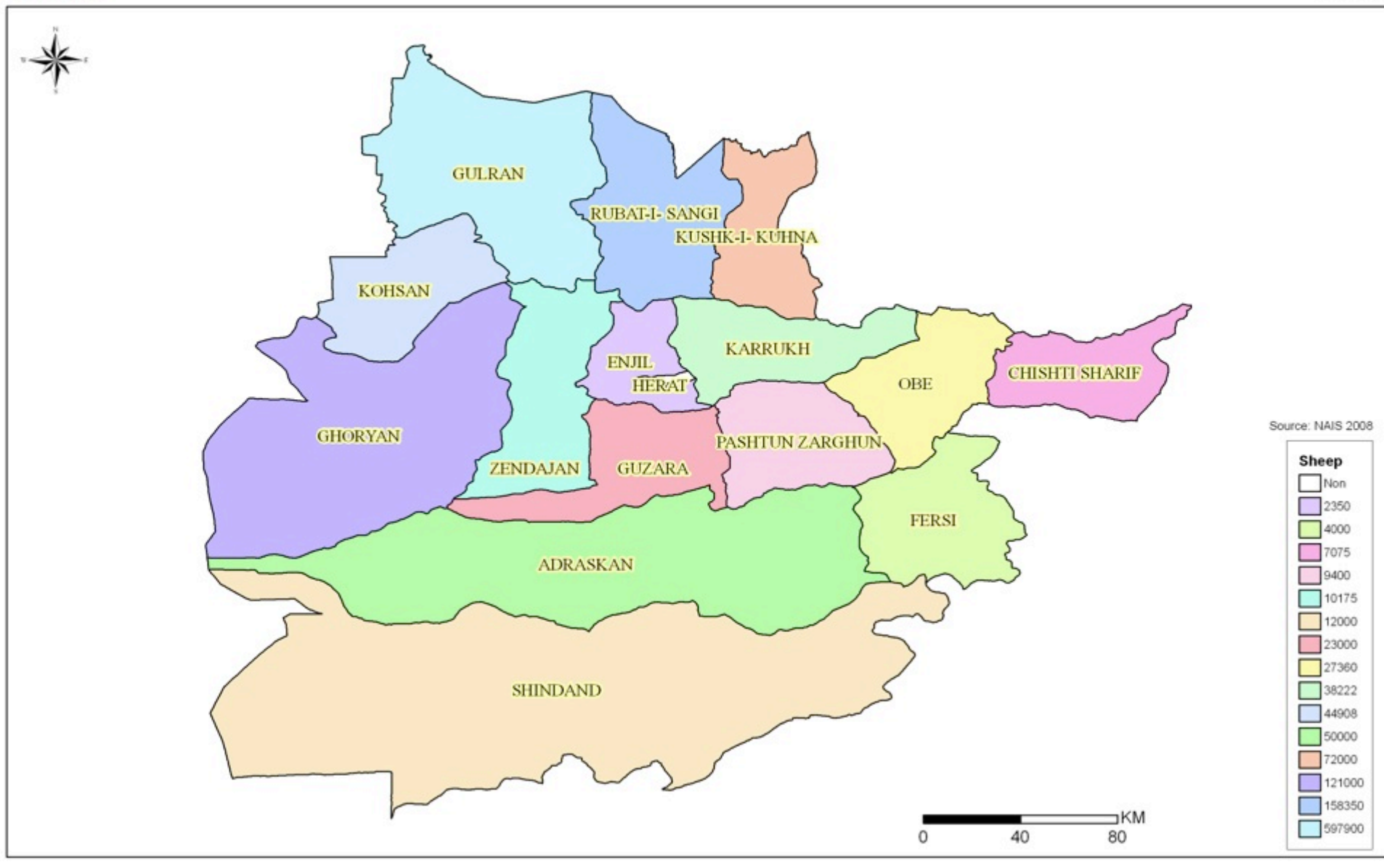
- Non
- 1 Aug - 31 Aug
- 1 Sep - 15 Sep
- 1 Sep - 30 Sep
- 15 Aug - 15 Sep
- 15 Jul - 23 Aug
- 23 Aug - 31 Aug
- 23 Sep - 8 Oct
- 8 Aug - 8 Sep

0 50 100
KM

Herat Province Livestock



Herat Province Livestock (Sheep)



Herat Province Livestock (Hen)

