

F. Agricultural Marketing

Proceeds from the sale of agricultural produce continue to be the major source of income for farmers across the country. Oranges, apples, potato, cardamom, and vegetables are the predominant crops sold at market. External markets for cereals are limited, but substantial local trading takes place. Substantial trading of meat, butter, and cheese also takes place within the country.

The following maps and tables are presented in this section:

- F.1. Sale of Locally Produced Rice and Maize
- F.2. Sale of Wheat, Barley, Millet and Buckwheat
- F.3. Sales of Horticultural Tree Crops
- F.4. Sales of Farm Produced Dairy Products
- F.5. Sales of Farm Produced Meat
- F.6. Sales of Vegetables



Sales of Locally Produced Rice and Maize

Paddy is widely grown country-wide. It is also the most preferred cereal and there is a large market potential for paddy (sold as rice) within the country itself. Sale of rice is a good source of revenue for farmers. Less maize is sold than rice even though more maize is produced. Maize is sold either in the form of kharang (ground to eatable size) or tegma (flattened maize). Since much maize is being produced, the government is making efforts to market the maize and is making arrangements for farmers to sell their surplus either to the Food Corporation of Bhutan or to the World Food Programme (WFP) (who supply to schools).

Table F.1 shows the amount of rice and maize sold in 2000 in each district, listed in order of the total amount sold of the two grains. The map shows the districts ranked according to the total quantity sold. The superimposed pie charts show the proportion of rice and maize and indicate differences in the total amount per district.

Some 800t of rice was sold in the country in 2000; Punakha district accounted for about 27% of sales (219t), and Paro for about 16% (126t). Trashigang and Sarpang districts had the highest sales of maize, together accounting for about 47% of the country's total sales.

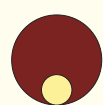
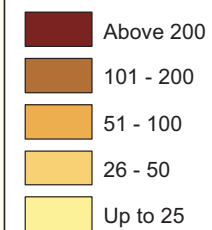
Table F.1

District	Quantity Sold (kg)			District	Quantity Sold (kg)		
	Rice	Maize	Total		Rice	Maize	Total
Punakha	218,506	41,489	259,995	Dagana	18,317	13,132	31,449
Trashigang	65,109	132,963	198,072	S/Jongkhar	18,256	12,507	30,763
Sarpang	56,292	110,128	166,420	Samtse	16,530	6,656	23,186
Paro	126,111	27	126,138	Trongsa	16,648	2,487	19,135
Wangdue	93,755	11,980	105,735	Pemagatshel	1,698	13,583	15,281
Mongar	2,889	85,517	88,406	Zhemgang	3,402	9,950	13,352
Thimphu	69,357	8,803	78,160	Chhukha	4,332	7,072	11,404
Tsirang	39,276	18,789	58,065	Ha	4,838	1,432	6,270
Yangtse	20,414	25,280	45,694	Bumthang	3,770	1,287	5,057
Lhuntse	17,510	15,788	33,298	Gasa	0	0	0
				Bhutan Total	797,010	518,870	1,315,880

Sales of Locally Produced Rice and Maize

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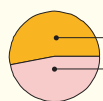
Total quantity sold
in tonnes



Max: 260 t (Punakha)

Min: None (Gasa)

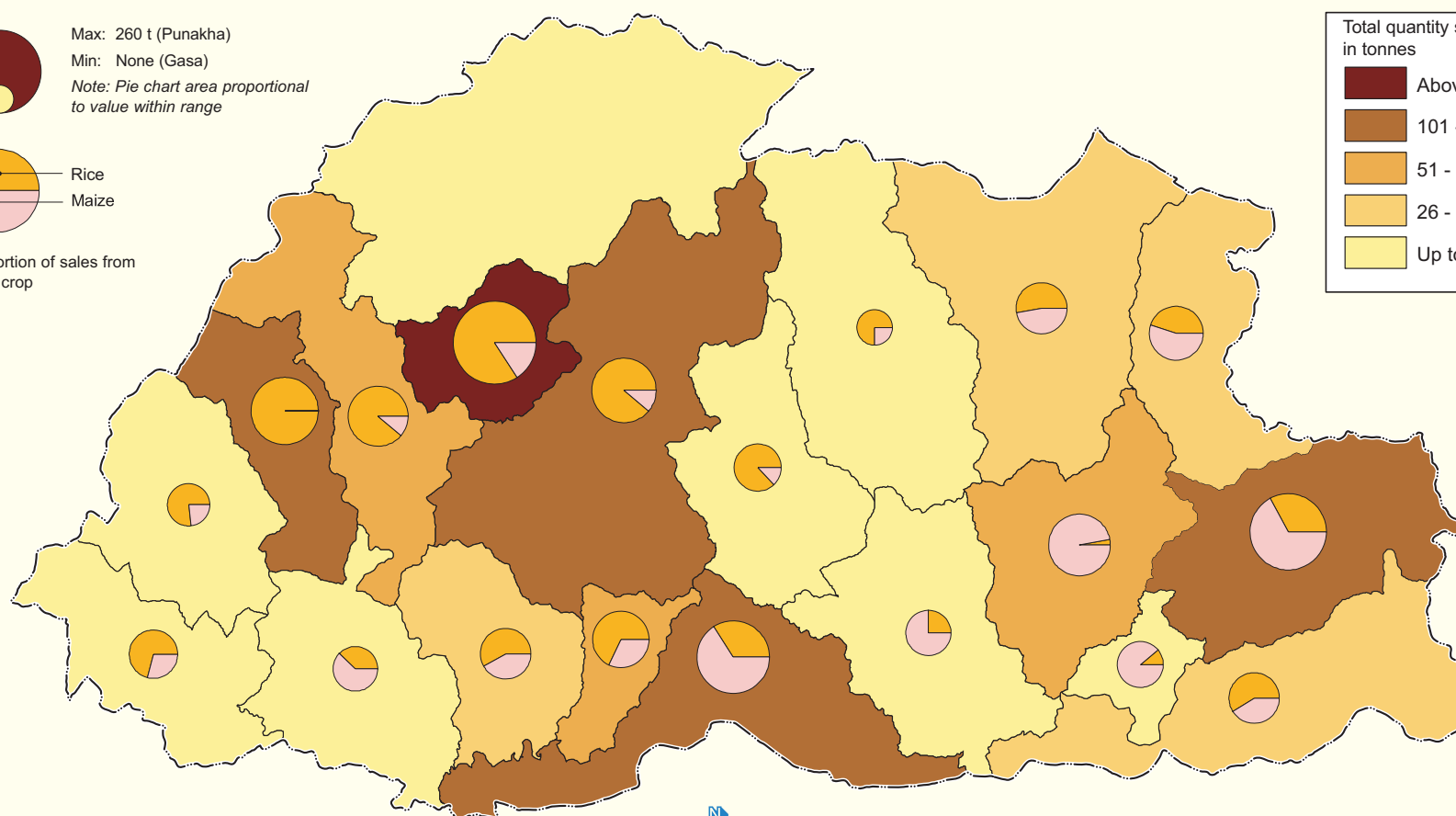
Note: Pie chart area proportional
to value within range



Rice

Maize

Proportion of sales from
each crop



Scale 1:1,500,000



Base Map: Department of Survey and Land Records,
Ministry of Agriculture
Data Source: RNR Statistics 2000, Ministry of Agriculture



PPD, MOA



Sales of Wheat, Barley, Millet and Buckwheat

Nationally, sales of wheat, barley, millet, and buckwheat are very low, only about 7% of that of paddy and maize. However, proceeds from sales are significant for local farmers in areas where these crops are grown.

Table F.2 shows the amount of wheat, barley, millet, and buckwheat sold in 2000 in each district, listed in order of the total amount sold of all four grains. The map shows the districts ranked according to the total quantity sold. The superimposed pie charts show the proportion of sales of the four grains and indicate differences in the total amount sold per district.

Of the four grains, sales of millet were highest (about 40t). Millet is mainly used to brew a local alcoholic beverage, although it is also consumed as a food item in small quantities. Sarpang had the highest sales of millet and sales from this district alone accounted for about 34% of the country's total. Wheat was the second most commonly sold grain at 36t; mostly in the form of flour. Paro had the highest sales of wheat, 40% of the county's total, followed by Punakha and Thimphu. Sales of barley and buckwheat were small in comparison with the other cereals; Wangdue had the highest sales of barley and Bumthang the highest sales of buckwheat.

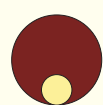
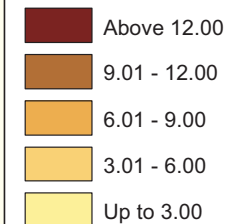
Table F.2

District	Quantity Sold (kg)					District	Quantity Sold (kg)				
	Wheat	Barley	Millet	Buckwheat	Total		Wheat	Barley	Millet	Buckwheat	Total
Paro	14,630	0	0	224	14854	Trashigang	385	196	0	543	1124
Sarpang	0	0	13,648	0	13648	Trongsa	0	1,081	0	0	1081
Chhukha	3,232	450	6,892	216	10790	Lhuntse	0	0	282	0	282
Tsirang	1,434	0	7,368	322	9124	Pemagatshel	0	135	0	0	135
Thimphu	5,002	1,177	0	0	6179	Zhemgang	0	0	67	0	67
Punakha	5,867	257	0	0	6124	Gasa	0	0	0	25	25
Wangdue	3,212	2,434	0	0	5646	Bhutan Total	36,291	7,876	40,361	6,008	90,536
Samtse	0	0	4,763	0	4763						
Bumthang	27	128	0	3,785	3940						
Dagana	34	0	3,560	50	3644						

Sales of Wheat, Barley, Millet and Buckwheat

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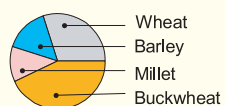
Total quantity sold
in tonnes



Max: 15 t (Paro)

Min: 0.25 t (Gasa)

Note: Pie chart area proportional
to value within range



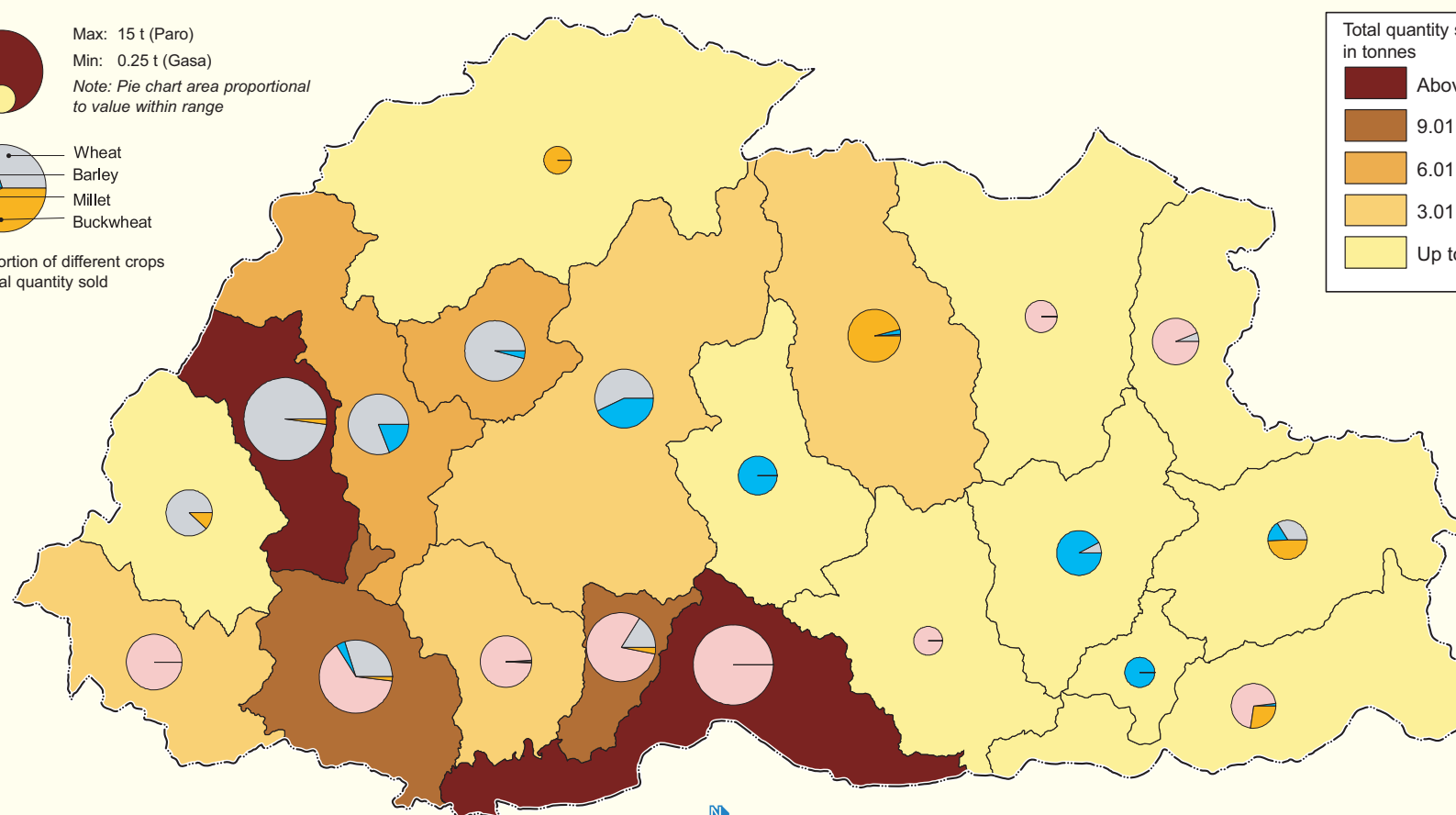
Wheat

Barley

Millet

Buckwheat

Proportion of different crops
in total quantity sold



Scale 1:1,500,000



Base Map: Department of Survey and Land Records,
Ministry of Agriculture

Data Source: RNR Statistics 2000, Ministry of Agriculture



PPD, MOA



Sales of Horticultural Tree Crops

The sale of apples, oranges and other horticultural tree crops is currently one of the major sources of income for farmers in Bhutan. The government is making efforts to promote horticultural production and is exploring the potential of export markets. It is expected that income from the sale of tree crops will continue to increase.

Table F.3 shows the percentage of farm households that sold apples, oranges, or other fruit tree crops (areca nut, walnut, plums, pears, and others) in 2000 in each district, with districts listed in order of the total quantity sold in tonnes (cf. Table C.2 showing total production). The map shows the districts ranked according to the total quantity sold. The superimposed bar charts show the percentage of households selling the different crops.

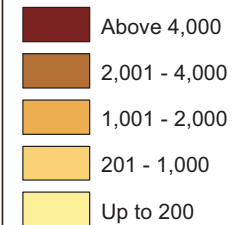
Less than 5% of households sold apples in all districts except Paro, Thimphu, Bumthang, and Ha (between 25 and 59%). In contrast, more than 10% of households sold oranges in 15 of the 20 districts, with the greatest percentage in the southern districts, especially Samdrup Jongkhar (47%), Pemagatshel, and Tsirang. Less than 10% of households sold other fruit in all districts except Sarpang (18%), Punakha, Samdrup Jongkhar, and Trashigang. The southern districts showed the overall greatest quantity sold, as oranges are the most widely traded fruit, but the districts with the highest sales did not necessarily have the highest percentage of farm households selling fruit.

Table F.3

District	% of Households Selling			Total Quantity Sold (t)	District	% of Households Selling			Total Quantity Sold (t)
	Apples	Oranges	Others			Apples	Oranges	Others	
Sarpang	<1	24	18	7,268	Mongar	1	20	4	351
S/Jongkhar	<1	47	11	5,169	Punakha	<1	33	15	306
Samtse	0	28	9	4,105	Trashigang	1	11	10	261
Tsirang	0	42	2	3,521	Wangdue	4	15	8	160
Chhukha	2	37	4	3,149	Bumthang	28	<1	8	159
Thimphu	31	4	3	2,674	Ha	25	<1	2	152
Paro	59	1	2	1,895	Trongsa	2	16	7	115
Zhemgang	<1	38	3	1,736	Trashigang	<1	13	4	91
Dagana	<1	26	1	1,525	Lhuntse	<1	7	6	42
Pemagatshel	<1	46	5	1,016	Gasa	0	5	2	<1

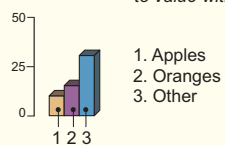
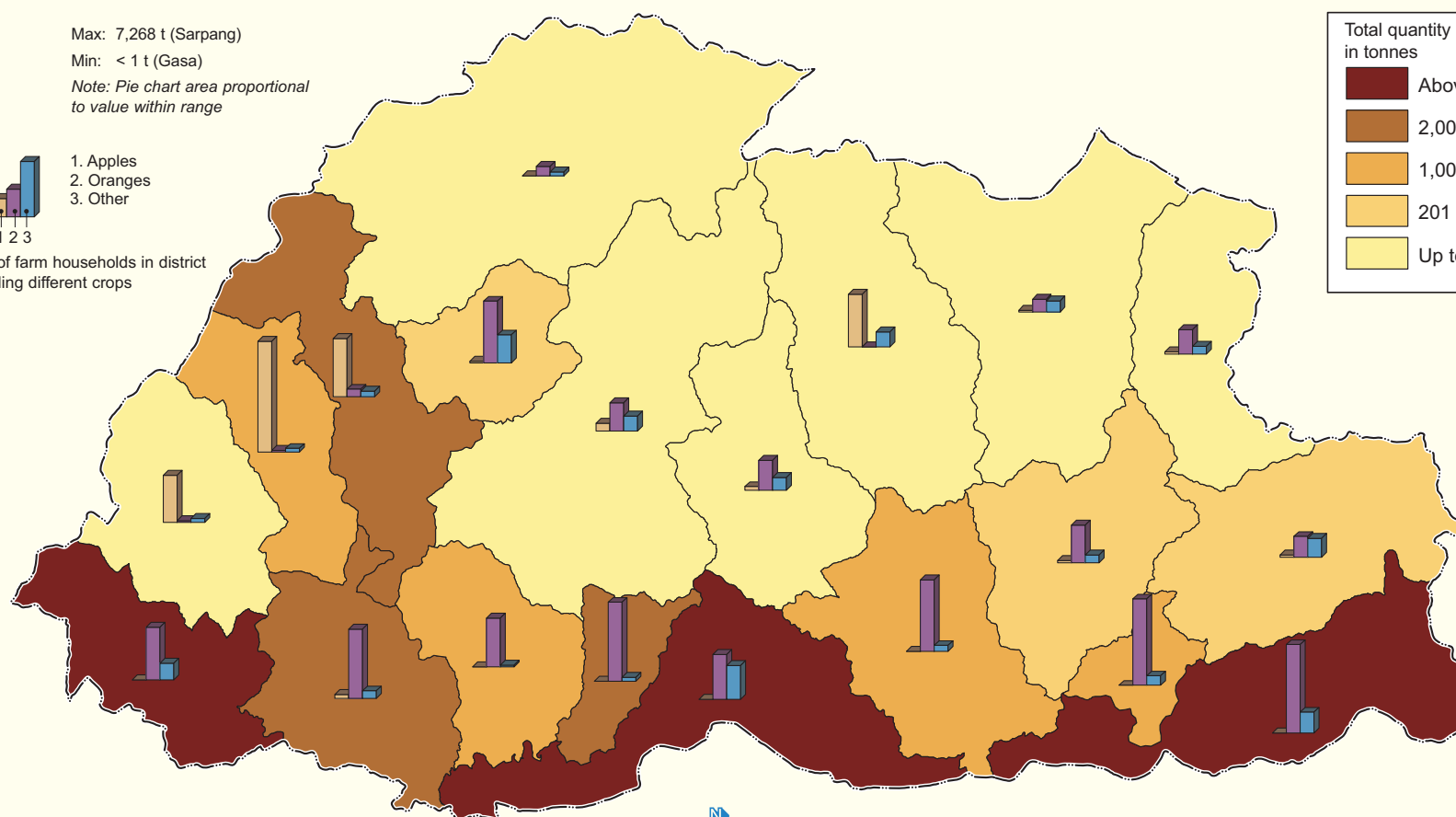
Sales of Horticultural Tree Crops

LEGEND

Total quantity sold
in tonnes

Max: 7,268 t (Sarpang)

Min: < 1 t (Gasa)

Note: Pie chart area proportional
to value within range% of farm households in district
selling different crops

Scale 1:1,500,000



Base Map: Department of Survey and Land Records,
Ministry of Agriculture
Data Source: RNR Statistics 2000, Ministry of Agriculture



PPD, MOA



Sales of Farm Produced Dairy Products

Farmers earn a good income from the sale of milk, butter, and cheese since there is a ready market within the country. A survey conducted by the Natural Resources Training Institute in 1998 on rural income sources showed that 22% of farm income comes from livestock products. Dairy sales mainly comprise butter and cheese, but a considerable amount of milk is also sold. Sales of milk have increased following the promotion of peri-urban dairy development schemes, especially in Thimphu district. The sale of dairy products is more evenly distributed than the sale of cereals and horticultural tree crops; thus although income from dairy products may be smaller it is more equitably distributed.

Table F.4 shows the amount of milk, butter and cheese sold in 2000 in each district, together with the approximate value in million Nu calculated using average prices of Nu 15 per litre for milk, Nu 200 per kg for butter, and Nu 130 per kg for cheese (approximate prices in 2000). The districts are listed in order of the approximate total value of sales. The map shows the districts ranked according to the total value of sales. The superimposed pie charts show the proportion of total sales contributed by milk, butter, and cheese, and also indicate differences in the total value of sales per district.

Milk was sold in all districts except Gasa. Sarpang, which had the highest milk production (Table E.5), also had the highest volume of milk sales (155,000 l), more than twice as much as the next district Chhukha, where a higher proportion of the milk produced is processed. Overall, approximately 27% of the butter and 34% of the cheese produced are sold for cash by farmers. Butter was sold widely in all districts with the greatest amount in Chhukha (76,100 kg) and the least in Gasa (2,400 kg). Sales of cheese were more than double sales of butter, with by far the greatest amount sold in Chhukha (163,000 kg) followed by Sarpang (60,000 kg), and the least in Gasa (4,500 kg).

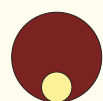
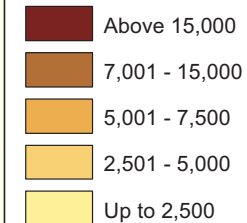
Table F.4

District	Milk		Butter		Cheese		Value mill. Nu	District	Milk		Butter		Cheese		Value mill. Nu
	Litres	Value Nu	Litres	Value Nu	Litres	Value Nu			Litres	Value Nu	Litres	Value Nu	Litres	Value Nu	
Chhukha	72,619	1,089,285	76,079	15,215,800	163,495	21,254,350	37.6	Paro	6,822	102,330	11,974	2,394,800	33,307	4,329,910	6.8
Sarpang	154,653	2,319,795	27,122	5,424,400	59,542	7,740,460	15.5	Lhuntse	2,918	43,770	13,136	2,627,200	20,905	2,717,650	5.4
Trashigang	17,933	268,995	36,161	7,232,200	56,426	7,335,380	14.9	Zhemgang	3,710	55,650	11,027	2,205,400	15,663	2,036,190	4.3
Samtse	36,475	547,125	26,113	5,222,600	44,665	5,806,450	11.6	Bumthang	49,815	747,225	6,652	1,330,400	16,621	2,160,730	4.2
Mongar	11,170	167,550	25,628	5,125,600	41,153	5,349,890	10.6	Trashy Yangtse	2,822	42,330	9,040	1,808,000	15,170	1,972,100	3.8
Ha	17,623	264,345	18,946	3,789,200	48,020	6,242,600	10.3	Pemagatshel	2,439	36,585	7,811	1,562,200	13,923	1,809,990	3.4
Tsirang	8,720	130,800	21,002	4,200,400	45,677	5,938,010	10.3	Trongsa	6,875	103,125	6,895	1,379,000	14,783	1,921,790	3.4
Wangdue	9,827	147,405	12,160	2,432,000	56,570	7,354,100	9.9	Punakha	2,350	35,250	4,736	947,200	14,669	1,906,970	2.9
S/Jongkhar	50,395	755,925	16,694	3,338,800	24,648	3,204,240	7.3	Thimphu	14,850	222,750	4,209	841,800	13,585	1,766,050	2.8
Dagana	4,266	63,990	17,471	3,494,200	26,898	3,496,740	7.0	Gasa	0	0	2,434	486,800	4,467	580,710	1.1
Bhutan Total									476,282	7,144,230	355,290	71,058,000	730,187	94,924,310	173

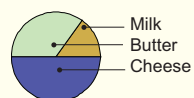
Sales of Farm Produced Dairy Products

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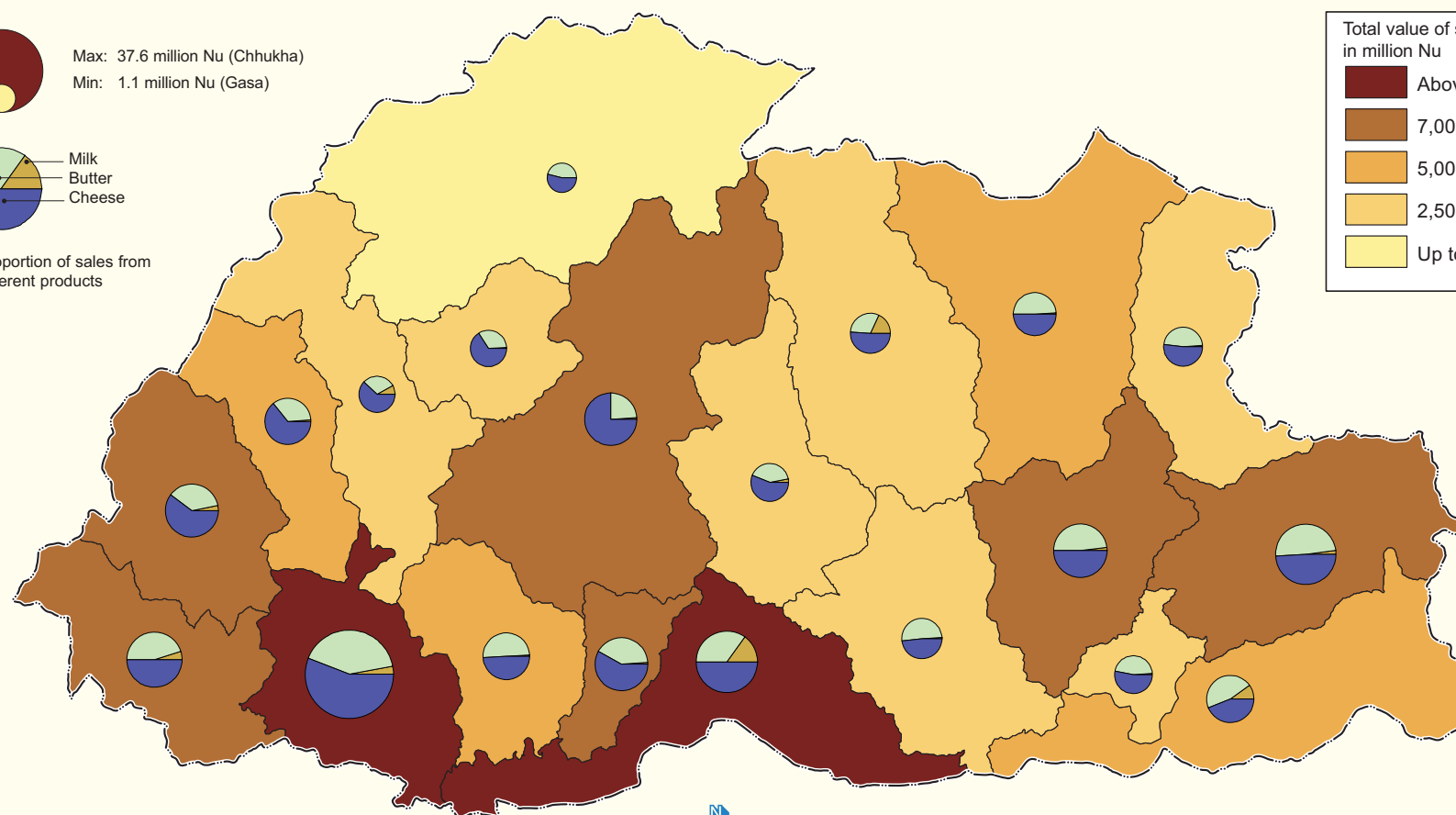
Total value of sales
in million Nu



Max: 37.6 million Nu (Chhukha)
Min: 1.1 million Nu (Gasa)



Proportion of sales from
different products



Scale 1:1,500,000



Base Map: Department of Survey and Land Records,
Ministry of Agriculture

Data Source: RNR Statistics 2000, Ministry of Agriculture



PPD, MOA



Sales of Farm Produced Meat

Sales of meat are far smaller both in quantity and value than sales of dairy produce.

Table F.5 shows the amount of beef, pork, mutton, and chicken sold in 2000 in each district, together with the approximate total value in million Nu calculated using average prices of Nu 45 per kg for beef, Nu 50 per kg for chicken, Nu. 60 per kg for pork, and Nu 130 per kg for mutton (approximate prices in 2000). The districts are listed in order of the approximate total value of sales. The map shows the districts ranked according to the total value of sales. The superimposed pie charts show the proportion by weight of the different types of meat sold per district and also indicate differences in the total value of sales per district.

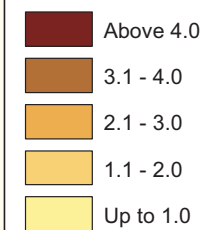
Total farm production and home consumption of meat are shown in Tables E.6 and E.7. Nationally about 40% of all meat produced on farms in 2000 was sold: a total of some 680t worth 32 million Nu, of which 620t was beef, 56t pork, 4t mutton, and about 1t chicken. Trashigang had the highest sales overall, and by far the highest weight sold of beef (133t) and pork (14t). Sales of mutton were highest in Samtse (0.7t), Trashigang, and Tsirang; and of chicken in Sarpang (0.7t). Very little chicken was sold in any other district. Gasa had the lowest sales of meat overall.

Table F.5

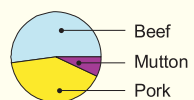
District	Quantity Sold (kg)				Total Sold		District	Quantity Sold (kg)				Total Sold	
	Beef	Pork	Mutton	Chicken	kg	Approx. Value (mill. Nu)		Beef	Pork	Mutton	Chicken	kg	Approx. Value (mill. Nu)
Trashigang	133,321	13,981	725	8	148,035	6.9	Thimphu	25,131	1,148	0	0	26,279	1.2
Mongar	75,626	4,481	6	24	80,137	3.7	Bumthang	21,358	0	37	7	21,402	1
Zhemgang	63,145	2,545	146	18	65,854	3.0	Sarpang	15,358	1,942	245	737	18,282	0.9
S/Jongkhar	47,119	2,745	18	0	49,882	2.3	Chhukha	9,339	6,031	326	27	15,723	0.8
Wangdue	43,110	338	18	8	43,474	2.0	Paro	11,023	2,390	0	0	13,413	0.6
Punakha	35,384	824	0	0	36,208	1.6	Tsirang	5,344	4,218	684	42	10,288	0.6
Pemagatshel	30,079	2,736	0	9	32,824	1.5	Ha	12,479	153	82	0	12,714	0.6
Trashi Yangtse	27,667	2,156	0	0	29,823	1.4	Samtse	3,543	4,440	728	46	8,757	0.5
Trongsa	26,578	867	165	1	27,611	1.3	Dagana	5,234	2,684	265	5	8,188	0.4
Lhuntse	25,519	1,809	16	14	27,358	1.3	Gasa	5,014	233	0	0	5,247	0.2
							Bhutan Total	621,942	55,722	3,576	946	682,186	31.8

Sales of Farm Produced Meat

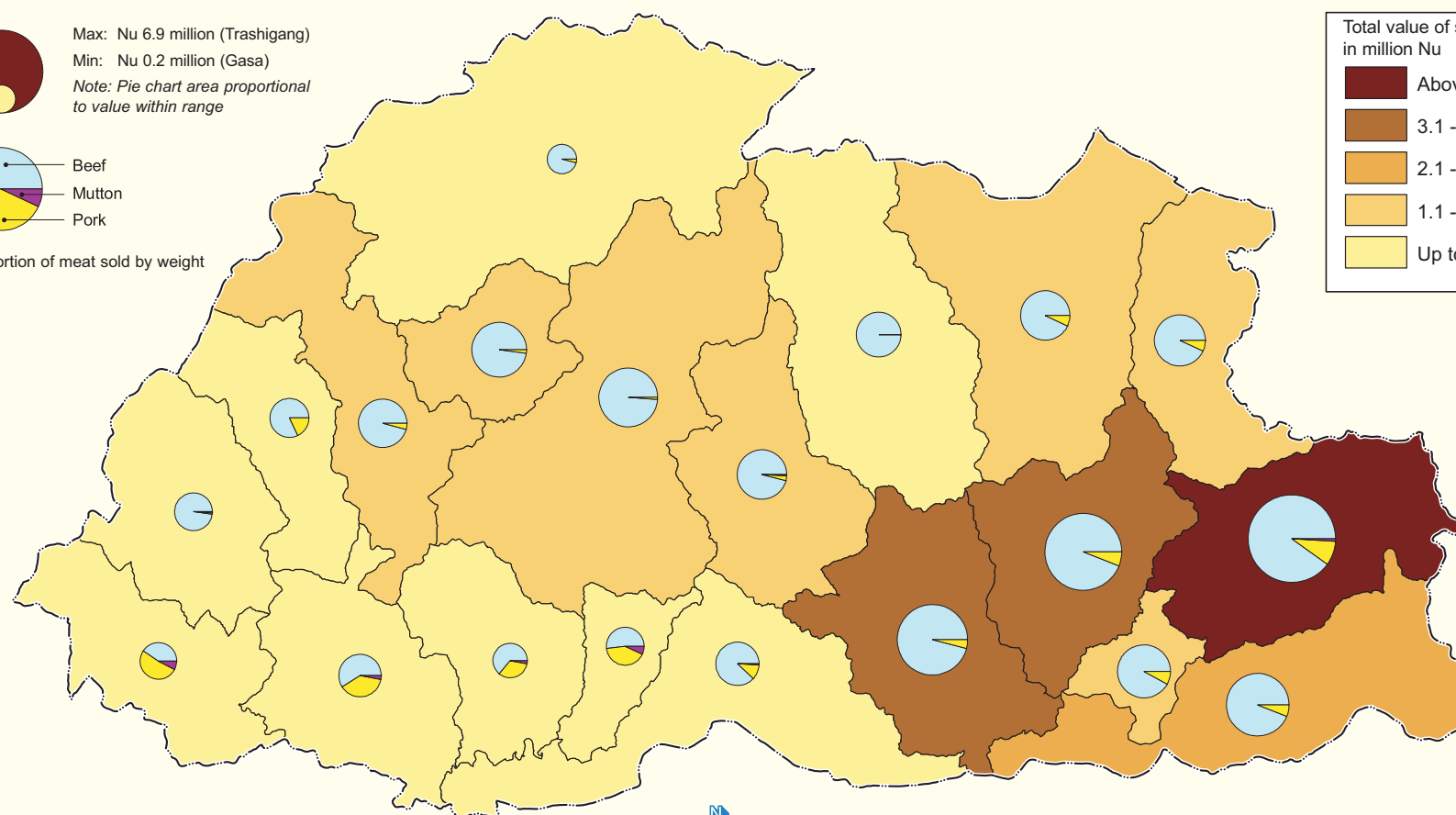
LEGEND

Total value of sales
in million Nu

Max: Nu 6.9 million (Trashigang)
Min: Nu 0.2 million (Gasa)
Note: Pie chart area proportional
to value within range



Proportion of meat sold by weight



Scale 1:1,500,000



Base Map: Department of Survey and Land Records,
Ministry of Agriculture
Data Source: RNR Statistics 2000, Ministry of Agriculture



PPD, MOA



Sales of Vegetables

As with cereals, dairy products, and horticultural tree crops, the sale of vegetables constitutes an important source of income for farmers. Potato and chilli are the most important vegetable cash crops. Other income generating vegetables include radish, tomato, onion, carrot, cabbage, beans, spinach, and even forest products such as mushrooms and fern tops. India is Bhutan's most important export market and most of the potato is exported to India through auction yards. Chilli is mainly sold within the country since there is a big internal demand.

Table F.6 shows the weight of potato, chilli, radish, and other vegetables sold in 2000 in each district, separately and in total. The map shows the districts ranked according to the total quantity sold in each district. The superimposed pie charts show the proportion of the total provided by the different types of vegetable and also indicate differences in the total weight sold in each district.

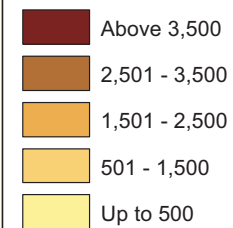
In 2000, a total of 50,000t of vegetables were produced (Table B.11) of which 24,000t were sold. The greatest weight of vegetables was sold in Wangdue and Trashigang, which also produced the most. Potato sales were highest in Wangdue, followed by Trashigang, Chhukha, Bumthang, and Paro. Chilli sales were highest in Paro followed by Punakha and Wangdue.

Table F.6

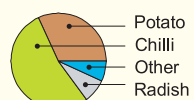
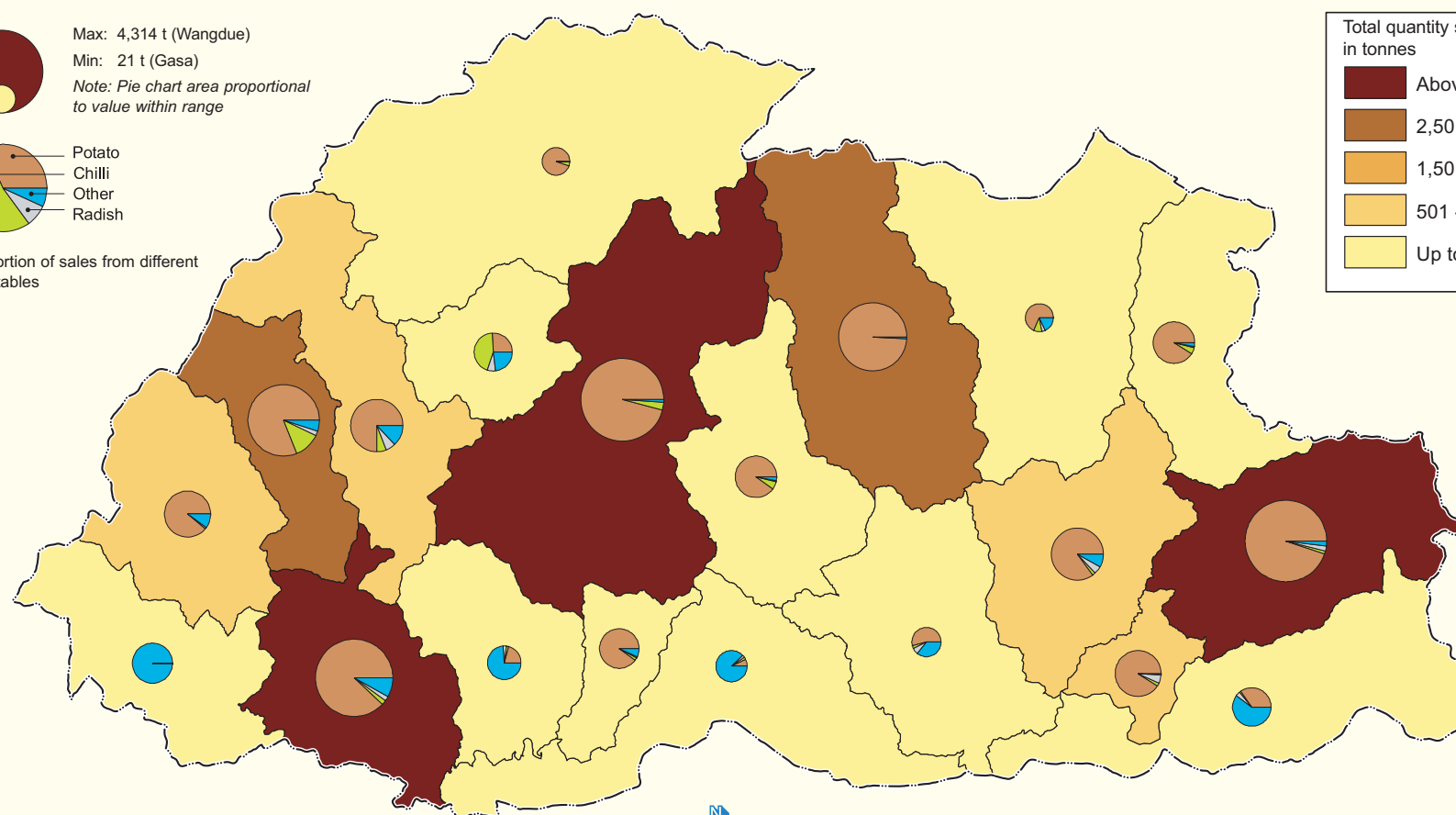
District	Quantity Sold (kg)					District	Quantity Sold (kg)				
	Potato	Chilli	Radish	Others	Total		Potato	Chilli	Radish	Others	Total
Wangdue	4,138,956	115,841	13,953	45487	4,314,237	Trongsa	437,948	27,676	3,606	15,507	484,737
Trashigang	3,961,067	43,974	68,991	76,536	4,150,568	Samtse	0	952	289	414,888	416129
Chhukha	3,197,224	86,659	63,639	267,832	3,615,354	Tsirang	352,606	9,675	4,837	24,424	391,542
Paro	2,367,609	347,559	54,532	163,006	2,932,706	S/Jongkhar	120,206	3,706	15,194	204,415	343,521
Bumthang	2,576,643	3,723	3,714	6509	2,590,589	Punakha	84,649	141,983	22,451	75,991	325,074
Thimphu	872,822	69,060	70,019	159516	1,171,417	Dagana	32,365	3,193	5,125	115,388	156,071
Mongar	980,740	23,816	56,819	87,259	1,148,634	Sarpang	5,908	2,785	1,589	80,283	90,565
Ha	666,814	333	7,798	72366	747,311	Zhemgang	25,726	1,264	3,127	17,132	47,249
Pemagatshel	668,727	16,326	43,385	5,831	734,269	Lhuntse	17,915	2,570	1,091	4798	26,374
Trashi Yangtse	444,760	23,960	4,011	17,555	490,286	Gasa	19,945	907	42	127	21,021
Bhutan Total							20,972,630	925,962	444,212	1,854,850	24,197,654

Sales of Vegetables

LEGEND

Total quantity sold
in tonnes

Max: 4,314 t (Wangdue)
Min: 21 t (Gasa)
Note: Pie chart area proportional
to value within range

Proportion of sales from different
vegetables

Scale 1:1,500,000



Base Map: Department of Survey and Land Records,
Ministry of Agriculture
Data Source: RNR Statistics 2000, Ministry of Agriculture



PPD, MOA



