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Feeder-Calf Price-Support Policies in Japan

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In the long-term the Japanese Government aims to maintain 80 per cent self-sufficiency in beef. Price support programs for feeder-calves are major domestic policy measures designed to encourage domestic beef production in Japan. These price support programs were greatly strengthened during 1977. This paper describes the latest arrangements in detail and reviews the past operation of these programs. The historical background to the feeder-calf price-support policies is also outlined. The link between feeder-calf prices and beef import policies in Japan was clearly demonstrated in 1974. Therefore, the new provisions for guaranteeing the prices of feeder-calves are important in assessing future Japanese beef import policy. Furthermore, the recent financial strengthening of the feeder-calf price-support programs has been achieved with beef import levy funds collected by the LIPC. Feeder-calf price-support policies in Japan are, therefore, of vital interest to anyone concerned about Japanese beef import policy.

The major long-term goal of both beef industry and beef import policy in Japan is the achievement of 80 per cent self-sufficiency in beef [5]. Within this constraint the volume of imports can be enlarged as domestic production and consumption increases. The Australian beef industry, as the major exporter of beef to the Japanese market, will, therefore, be keenly interested in assessing the future production potential of the Japanese beef industry. The most important single determinant of future beef output in Japan will be the availability of feeder-calves for fattening. The future supply of feeder-calves in Japan is likely to be significantly influenced by feeder-calf price support policies.

The basic aim of this paper is to describe and analyse the present arrangements for supporting the price of feeder-calves in Japan. However, initially the changing structure and location of the Japanese cattle industries will be discussed as background. The paper concludes with a section which briefly highlights the important connection between the feeder-calf price-support programs and Japanese beef import policies.

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1 Changing Structure and Location of the Japanese Cattle Industries

Beef comes from two rather different sources in Japan. First, there is the traditional beef cattle industry based on Japanese breeds and a small number of cattle of foreign or mixed breeding.[1] Second, there is the beef produced from the dairy breeds of cattle which are virtually all Holsteins or Friesians. As Table 1 indicates, beef production in Japan is now dominated by the so-called "dairy sector". The "traditional beef sector" has declined in relative importance with the emergence of the dairy-steer fattening industry. The production of beef from dairy steers increased rapidly after 1967 and, as Table 1 shows, by 1974 almost equalled the total output from the traditional beef sector.

Unfortunately, many people in Japan loosely refer to the traditional beef sector as "the beef cattle industry". As a result foreigners may make the mistake of equating the traditional sector to the *whole* beef producing industry. As clearly demonstrated in Table 1, the traditional sector now produces only about one-third of the total beef output in Japan.

Apart from the development of dairy-steer fattening, both the traditional sector and the dairy sector of the Japanese cattle industry have undergone great structural and locational changes over the last 20 years. As those changes are of profound significance, in connection with the future prospects for beef production and policy in Japan, they will now be briefly outlined.

1.1 The Traditional Beef Sector

There have always been essentially two separate groups of producers in the traditional sector. One group of farmers kept the mother cows and raised the calves to the feeder-calf stage (usually 8-10 months of age). Another group of farmers purchased feeder-calves (and older cull animals) and fattened them for slaughter.[2] This division was not always clear-cut. For instance, some "breeder" farmers were also involved in fattening and *vice versa*. Furthermore, in some localities cattle dealers and "grower" farmers, who specialised in purchasing young calves and raising them to the feeder-calf stage were also important. Nevertheless there has always been a distinction between the breeding and the fattening segment of the

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1. As at February 1, 1974 the breed composition of the traditional beef sector in Japan was as follows (in head):—

Japanese Black Hair Wagyu	1,204,100
Japanese Brown Hair Wagyu	121,300
Japanese Shorthorn	38,300
Polled Wagyu	5,000
Angus	2,700
Hereford	7,000
Others	8,600

2. There are a range of recognised fattening systems in Japan. One extreme technique, called the "ideal" method, may involve fattening Wagyu females for 2 or 3 years to achieve the very highest quality carcass. (The Japanese carcass grading system stresses the degree to which the meat is marbled with fat.) However, the majority of young cattle are now fattened by what is termed "the commercial" or "popular beef" method. In this case feeder-cattle around 8 to 10 months of age are fattened steadily in feed-lots until they reach 600 kg (or more) liveweight. (In the case of dairy steers this means until they are 20 to 22 months old.)

Table 1: Beef Production in Japan¶ (1963-1976) (Tonnes dressed carcass weight)*

Year	Traditional beef sector					Dairy secotr				Grand Total All Beef
				Sub-Total				Sub-Total		
	Cow	Bullock	Bull	Amount	As Percentage of All Beef Produced	Dairy Steer‡	Cow	Amount	As Percentage of All Beef Produced	
1963	55,334	40,988	62,963	159,285	83.96	n.a.	30,425	30,425	16.04	189,710
1964	74,322	57,056	53,874	185,252	81.20	n.a.	42,900	42,900	18.80	228,152
1965	71,540	59,405	27,458	158,403	75.92	n.a.	50,231	50,231	24.08	208,634
1966	53,867	44,838	7,803	106,508	71.22	n.a.	43,039	43,039	28.78	149,547
1967	46,241	44,486	9,265	99,992	65.02	6,541	47,261	53,802	34.98	153,794
1968	41,291	48,074	9,401	98,766	57.91	24,876	46,908	71,784	42.09	170,550
1969	56,594	62,372	9,115	128,081	56.49	41,459	57,193	98,652	43.51	226,733
1970	76,812	65,909	8,226	150,947	56.01	37,730	80,515	118,545	43.99	269,492
1971	83,782	67,801	7,299	158,881	54.83	31,116	99,751	130,867	45.17	289,749
1972	81,809	69,255	7,297	158,360	50.52	53,588	101,493	155,081	49.48	313,441
1973	48,558	47,177	5,620	101,355	41.51	58,334	84,505	142,839	58.49	244,194
1974	43,538	59,531	5,321	108,389	34.36	101,092	105,969	207,061	65.64	315,450
1975	53,087	72,755	4,520	130,362	37.37	107,327	111,132	218,459	62.63	348,821
1976	58,938	65,777	4,428	129,143	43.72	74,594	91,644	166,238	56.28	295,381
1977†	n.a.	n.a.	n.a.	148,252	41.43	106,142	103,482	209,624	58.57	357,876

* The data in this table does not include veal produced from the slaughter of young calves.
¶ There are no official data on beef production by categories prior to 1963.
‡ The amount of dairy-steer beef produced prior to 1967 was insignificant. Prior to 1967 dairy-steer beef would have been included in the "bullock" category of the traditional beef sector.
† Preliminary data only, supplied by Australian Meat and Livestock Corporation.
Sources: (i) Ministry of Agriculture and Forestry, Statistics and Information Department, *Statistics of Meat Marketing*. (In Japanese) 1967 and subsequent issues.
(ii) Ministry of Agriculture and Forestry, Statistics and Information Department, *Statistical Year Book of Ministry of Agriculture and Forestry*. (In English) 1972 and subsequent issues.

traditional beef cattle sector. Over the last 2 decades as the traditional sector has contracted and re-structured itself, the distinction between breeders and fatteners has sharpened.

Historically both the breeding and the fattening of beef cattle was a small-scale side-line enterprise on specialist cropping (mainly rice) farms. The native breeds of cattle in Japan were originally used both as draught animals and as a source of manure for crops. When the eating of beef was legalised at the beginning of the Meiji Era (1868) the demand for beef began to increase slowly. By the turn of the century attention was being given to improving the native cattle so that they could perform more efficiently the dual roles of being draught animals and beef producers.[3] As

Table 2: The Changing Structure of the Beef Cattle Industry in Japan (1949-1977)*

Year†	Number of Households with Beef Cattle &/or Dairy Steers	Number of Beef Cattle and Dairy Steers‡	Average Number of Cattle per Household
	('000)	('000)	(head/farm)
1949	1,853.0	2,092.0	1.129
1950	1,985.7	2,252.0	1.134
1951	2,010.1	2,234.2	1.111
1952	2,112.9	2,394.6	1.133
1953	2,192.4	2,502.6	1.141
1954	2,223.9	2,540.6	1.142
1955	2,279.6	2,636.5	1.157
1956	2,319.3	2,718.6	1.172
1957	2,237.6	2,590.1	1.158
1958	2,153.6	2,465.3	1.145
1959	2,084.9	2,365.3	1.134
1960	2,031.5	2,339.7	1.152
1961	1,963.4	2,313.0	1.178
1962	1,878.7	2,332.2	1.241
1963	1,802.5	2,336.7	1.296
1964	1,673.2	2,207.6	1.319
1965	1,434.6	1,885.8	1.315
1966	1,162.7	1,576.9	1.356
1967	1,066.0	1,551.7	1.456
1968	1,027.0	1,666.0	1.622
1969	988.9	1,794.8	1.815
1970	901.6	1,789.0	1.984
1971	797.4	1,759.0 (186.3)	2.206
1972	673.2	1,749.0 (294.9)	2.598
1973	595.4	1,818.0 (444.4)	3.053
1974	532.3	1,898.0 (524.1)	3.566
1975	473.6	1,857.0 (475.5)	3.921
1976	449.6	1,912.0 (485.2)	4.253
1977	424.2	1,987.0 (531.4)	4.684

* Dairy steers were not recorded separately prior to 1971.
† All numbers since 1970 are as at 1st February. In earlier years the census date was 1st December.
‡ Prior to 1967 the number of dairy steers would have been an insignificant component (see Table 1). The figures in brackets are the number of dairy steers *included* in the total figure since 1971.

Sources: (i) Ministry of Agriculture and Forestry, Statistics and Information Department, *Statistics of Livestock*. (In Japanese.) Various issues.
(ii) Agriculture and Forestry Statistics Association, *Pocket Livestock Statistics*. (In Japanese) 1976.

3. For a brief history of the cattle improvement program see Nagamura [11, pp. 55-56].

a result of these changes beef cattle production became a profitable side-line on farms where one or two head were kept for draught purposes.

In the late 1950's but especially after 1960, mechanisation of farming spread rapidly in Japan. By 1965 machines had replaced draught animals on the great majority of farms [12, pp. 168-173]. Since farmers no longer needed one or two cattle for draught purposes, the cattle raising enterprise was assessed in a new light. Keeping cattle involved a great deal of labour since the cattle were normally kept in a barn or tethered and, therefore, required constant attention. In addition, during the 1960's off-farm work was readily available in the industrialised parts of Japan and this created the opportunity for the majority of farmers to become part-time farmers.[4]

The aggregate data in Table 2 demonstrates the impact of farm mechanisation and the availability of off-farm work on the traditional beef cattle sector. The number of households keeping beef cattle was halved between 1960 and 1970 and halved again by 1975.

The abandonment of beef cattle raising did not occur uniformly over all Japan. As can be seen from the detailed statistics in Table 3, the exodus from the traditional beef cattle industry has been much more rapid in some prefectures and regions than in others. The industrialisation and urbanisation of Honshu Island from Tokyo westward, has dramatically reduced both the number of households keeping beef cattle and the number of female beef cattle of breeding age in this part of Japan (See Table 3 and Map 1). One of the agricultural regions in this part of Japan which has always been famous for beef cattle, is the Kinki Region. But over the last 20 years the Kinki Region has suffered a 95 per cent decline in the number of households with beef cattle and a 90 per cent drop in the number of breeding age females. As Table 3 shows, the decline has been even more spectacular in some prefectures within the Kinki Region. The other agricultural regions in central Japan such as Kanto, Hokuriku, Tosan, Chugoku and Shikoku have all registered similar sharp declines.

The two most important beef cattle regions are now Kyushu and Tohoku. Both those regions, in common with the whole of Japan except Hokkaido, have seen a general decline in both the number of farmers with beef cattle and in the number of breeding age females over the last 2 decades (see Table 3). However, these downward trends have not been nearly so marked in these more remote and hence less economically developed regions of Japan. Furthermore, the number of mature females has actually shown an increase in both these regions in the last five years. Beef breeding is, therefore, now concentrated in Kyushu (especially the southern prefectures of Kumamoto, Miyazaki and Kagoshima) and Tohoku. However, a very high proportion of the feeder-calves produced in these regions pass through the feeder-calf markets and are purchased for fattening closer to the major population centres of Japan. Although there are a growing number of larger-scale beef-breeding farms (especially in southern Kyushu) in these two regions and on Hokkaido, the great majority of the feeder-calves are still produced as a side-line enterprise on specialist cropping farms. On the other hand the fattening segment of the traditional sector has undergone substantial modernization.

Unfortunately data is not available showing separately the distribution of breeding and fattening enterprises by size of herd. However, Table 4

4. Less than 12 per cent of farmers in Japan are now regarded as full-time farm operators.

TABLE 3: CHANGING LOCATION OF BEEF BREEDING IN JAPAN AS INDICATED BOTH BY CHANGES IN IN NUMBER OF HOUSEHOLDS RAISING BEEF CATTLE AND BY THE NUMBER OF BEEF BREED FEMALES AGED TWO YEARS OR MORE IN EACH PREFECTURE AND AGRICULTURAL REGION (1957 - 1977).

Prefecture* and Region \ Item and Year	Households raising beef cattle					Beef breed females≥2 years old				
	1957	1962	1967	1972	1977	1957	1962	1967	1972	1977
	(no.)	(no.)	(no.)	(no.)	(no.)	(head)	(head)	(head)	(head)	(head)
HOKKAIDO REGION	610	2,630	5,130	7,130	7,190	640	2,440	5,170	14,900	27,310
2. Aomori	7,580	5,920	5,440	6,090	4,450	4,620	3,900	4,230	10,300	15,900
3. Iwate	39,200	47,020	41,500	37,000	29,100	23,050	29,510	25,300	20,200	36,500
4. Miyagi	53,220	48,470	39,200	30,300	21,600	39,620	28,270	19,600	15,500	14,300
5. Akita	37,480	34,280	21,200	17,500	11,000	20,480	25,500	15,900	18,000	25,000
6. Yamagata	51,770	41,880	27,000	18,700	11,500	33,260	29,310	16,600	11,700	15,100
7. Fukushima	66,340	64,520	44,900	34,300	24,900	52,370	52,610	30,600	23,300	23,300
TOHOKU REGION	255,590	242,090	179,240	143,890	102,550	173,400	169,100	112,230	99,000	129,100
8. Niigata	80,510	59,590	31,900	11,200	6,700	61,640	42,790	16,400	5,770	7,790
9. Toyama	11,050	5,940	1,770	710	320	4,690	1,840	520	150	120
10. Ishikawa	18,720	11,950	3,500	1,800	560	13,960	9,820	2,400	1,950	930
11. Fukui	12,380	8,090	1,760	760	210	9,520	6,000	690	770	570
HOKURIKU REGION	122,660	85,570	38,930	14,470	7,790	89,810	60,450	20,010	8,640	9,410
12. Ibaraki	81,360	69,430	22,400	14,400	8,100	38,890	41,470	10,500	9,190	9,950
13. Tochigi	36,730	48,060	28,000	11,500	6,270	16,250	21,520	9,530	6,950	5,340
14. Gunma	64,220	44,230	24,500	19,700	13,500	15,940	13,270	5,160	2,550	3,150
15. Saitama	51,540	26,700	4,040	2,480	1,160	28,420	14,600	1,860	880	430
16. Chiba	64,960	46,150	10,300	5,610	1,920	44,830	32,430	6,610	1,970	1,660
17. Tokyo	5,150	1,930	620	270	170	2,680	1,780	860	270	80
18. Kanagawa	24,330	11,540	2,060	630	280	17,290	8,090	3,010	750	310
KANTO REGION	328,290	248,040	91,920	54,590	31,400	164,300	133,160	37,530	22,560	20,920
19. Yamanashi	15,380	9,880	4,420	1,630	930	7,540	4,870	1,200	530	550
20. Nagano	52,620	44,780	23,800	16,200	9,200	30,080	22,570	7,740	8,600	4,840
TOSAN REGION	68,000	54,660	28,220	17,830	10,130	37,620	27,440	8,940	9,130	5,390
21. Gifu	41,140	33,330	14,400	7,060	4,380	18,870	20,090	8,870	10,300	9,700
22. Shizuoka	42,110	27,730	9,350	5,530	2,180	26,240	17,880	5,500	4,190	1,710
23. Aichi	47,860	34,800	13,300	4,700	1,620	37,440	27,460	9,570	3,960	2,400
24. Mie	56,260	47,450	15,300	4,690	1,460	47,490	37,320	10,200	6,320	3,800
TOKAI REGION	187,370	143,310	52,350	21,980	9,640	130,040	102,750	34,140	24,770	17,610
25. Shiga	32,570	26,650	9,250	2,060	490	23,320	16,120	4,910	2,650	1,240
26. Kyoto	38,770	28,520	12,500	4,920	1,630	26,910	21,440	8,490	5,940	2,740
27. Osaka	30,210	20,760	3,050	850	170	22,530	14,820	2,140	760	440
28. Hyogo	111,210	94,200	42,500	20,500	10,500	88,630	73,480	30,600	18,800	14,200
29. Nara	23,950	18,010	5,040	900	280	22,430	16,180	4,680	790	400
30. Wakayama	33,490	26,210	5,360	930	450	21,280	18,790	3,290	830	340
KINKI REGION	270,200	214,350	77,700	30,160	13,520	205,100	160,830	54,110	29,770	19,360
31. Tottori	37,650	31,670	18,900	13,100	8,680	43,350	33,040	18,100	16,700	11,000
32. Shimane	53,640	46,440	34,200	23,900	17,500	47,290	45,340	32,500	29,400	26,600
33. Okayama	90,740	66,750	39,100	20,400	13,200	65,940	57,970	31,100	19,400	16,100
34. Hiroshima	93,830	72,800	46,100	26,000	12,800	79,280	68,550	39,100	25,900	18,600
35. Yamaguchi	65,590	63,640	33,700	17,300	6,720	29,630	28,930	10,600	10,500	6,770
CHUGOKU REGION	341,450	281,300	172,000	100,700	58,900	265,490	233,830	131,400	101,900	79,070
36. Tokushima	42,650	35,650	18,800	12,000	3,540	19,390	17,680	7,620	5,170	1,590
37. Kagawa	48,780	38,930	21,600	10,100	4,480	28,030	26,110	9,170	10,600	8,010
38. Ehime	62,410	43,090	19,500	8,290	3,430	19,540	15,610	4,110	4,480	2,000
39. Kochi	37,100	34,250	16,100	5,650	2,610	28,130	24,300	9,980	6,020	3,390
SHIKOKU REGION	190,940	151,920	76,000	36,040	14,060	95,090	83,700	30,880	26,270	14,990
40. Fukuoka	69,260	59,650	31,200	9,000	1,680	24,810	19,390	9,250	2,350	840
41. Saga	34,260	28,520	14,400	7,880	4,270	24,580	20,920	8,840	5,800	6,230
42. Nagasaki	63,350	58,470	42,600	29,100	20,800	49,390	48,700	28,600	31,300	36,400
43. Kumamoto	70,050	69,040	53,500	34,900	23,700	63,620	75,220	51,800	48,600	47,000
44. Oita	67,030	61,030	44,900	30,800	14,200	57,190	54,470	32,200	26,800	24,300
45. Miyazaki	58,090	60,610	56,300	48,800	38,700	52,320	64,320	56,200	71,100	93,100
46. Kagoshima	110,490	119,520	100,000	85,900	59,500	73,290	97,340	78,400	90,500	96,400
KYUSHU REGION	472,530	456,840	342,900	246,380	162,850	345,200	380,360	265,290	276,450	304,270
OKINAWA	n.a.	n.a.	n.a.	n.a.	6,160	n.a.	n.a.	n.a.	n.a.	15,200
ALL JAPAN TOTAL	2,237,640	1,878,710	1,066,000	673,170	424,190	1,506,690	1,354,060	700,200	613,390	642,630

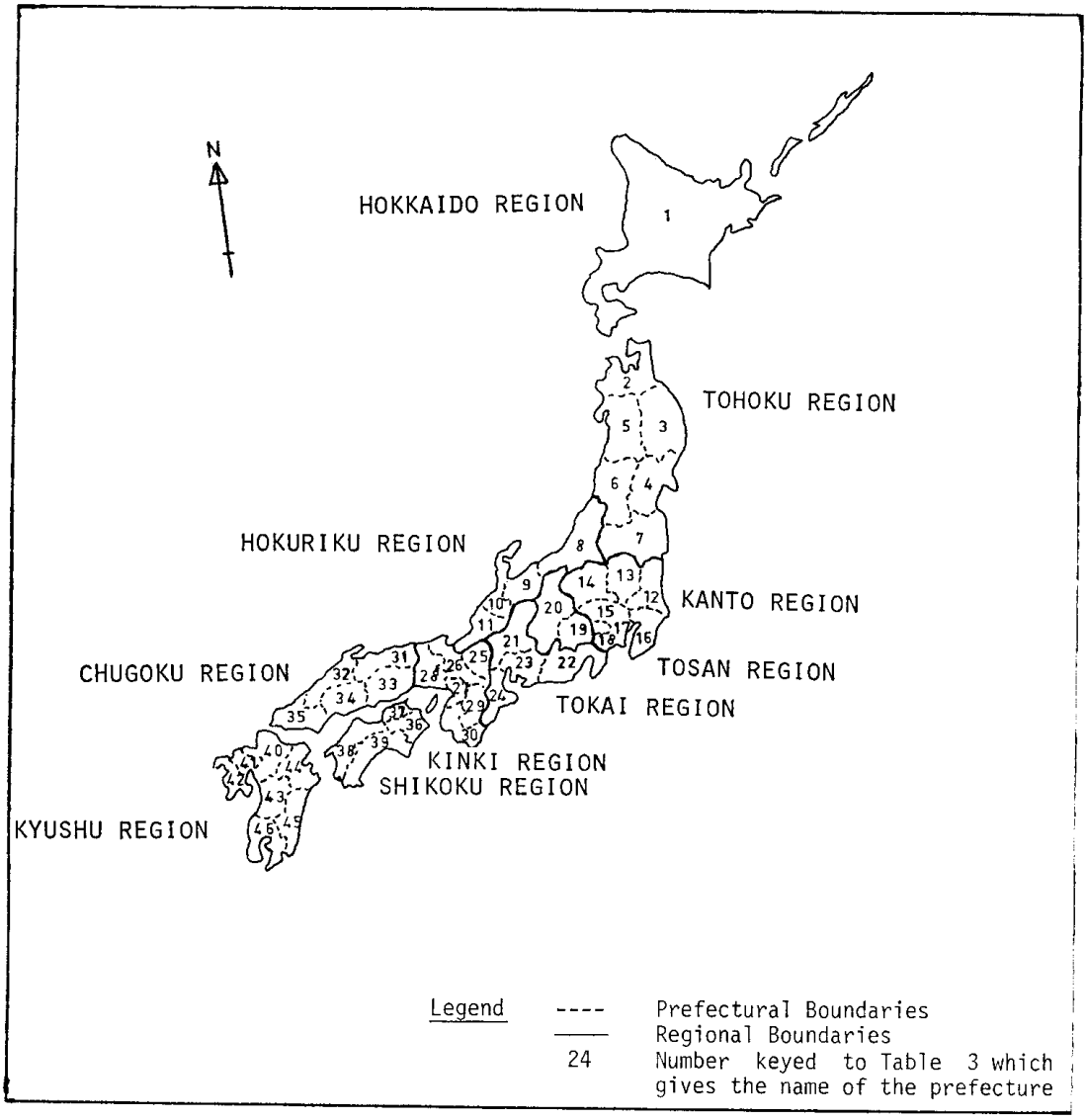
*The number in front of each prefecture is keyed to Map 1 thus indicating the location of the prefecture.

Sources: (i) Number of households in 1957 and 1962 from Ministry of Agriculture and Forestry, Outline of Livestock Keeping, (In Japanese), 1963.

(ii) Number of beef breed females in 1957 and 1962 from Agricultural Policy Research Committee, Research on the Estimate of Private Fixed Capital in Agriculture. (In Japanese) March, 1966.

(iii) All other data from: Ministry of Agriculture and Forestry, Statistics and Information Department, Statistics of Livestock (In Japanese),1976 and Ministry of Agriculture and Forestry (Personal communication).

shows the available data for the whole traditional beef sector. Since 1971 there has been a very significant move towards large-scale specialist enterprises. However, the overwhelming majority of the new larger-scale enterprises would be fattening feed-lots rather than breeding enterprises.



Map 1: Agricultural Regions and Prefectures of Japan.

The large-scale exodus from traditional beef cattle raising in the early 1960's temporarily increased beef production from the beef sector (see Table 1). However, the heavy slaughtering of female breeding stock threatened the long-term production potential of the traditional beef sector. Producer co-operatives and other interested parties began to pressure the Prefectural and National Governments for policy initiatives aimed at arresting the decline in the traditional beef sector breeding stock. In response, since the late 1960's the Ministry of Agriculture and Forestry (MAF) and the prefectural departments of agriculture most concerned about the trad-

*Table 4: Distribution of Japanese Beef Cattle Enterprises by Size of Herd**
(1971-1976)

Year	Number of farms								Total Number of Farms with Beef Cattle and/or Dairy Steers
	With 1-2 Cattle	With 3-4 Cattle	With 5-9 Cattle	With 10-19 Cattle	With 20-29 Cattle	With 30-49 Cattle	With 50-99 Cattle†	With 100+ Cattle	
1971	637,100	101,600	44,000	9,610	2,267	1,716	1,060	—	797,353
1972	515,500	96,360	43,870	9,830	3,787	2,365	1,534	—	673,246
1973	433,000	86,680	44,790	13,380	4,848	2,872	2,159	—	587,729
1974	370,100	87,250	46,720	15,710	5,961	3,474	3,077	—	532,292
1975	315,300	86,080	44,360	14,760	5,800	3,759	3,545	—	473,604
1976	282,800	90,510	46,025	16,512	5,950	3,870	2,715	1,256	449,638

* As in Table 3, the data in this table includes dairy steers being fattened.
† Until 1976 these figures include the "100 and over" category.
Source: Ministry of Agriculture and Forestry, Statistics and Information Department, *Statistical Yearbook of Ministry of Agriculture and Forestry*. (In English) 1976.

itional beef sector, have introduced a whole range of programs aimed both at encouraging farmers to keep beef cows for breeding purposes and at preventing the slaughter of baby beef-breed calves. From the data in Tables 3 and 5 one could conclude that these policies have been successful. The decline in the number of beef females in the most important beef producing regions has been arrested and there are some signs of a significant upward trend in cow numbers. Furthermore, the slaughtering of baby calves has dropped to a very low level. On the other hand, the last 4 years have been periods of relatively slow economic growth in Japan. Off-farm part-time work has been harder to find. Therefore, perhaps many farmers have decided to keep their small beef breeding enterprise going for the time being. However, should Japan enter another period of economic expansion, the very high opportunity cost of the labour required to tend the cattle may result in another sharp increase in the number of small-scale beef farmers selling off their breeding stock and leaving the traditional beef sector.

Table 5: Slaughtering of Baby Calves in Japan (1963-1976)

Year	Number of Beef Breed Calves Slaughtered	Number of Dairy Breed Calves Slaughtered*
	(head)	(head)
1963	29,693	220,239
1964	25,932	258,013
1965	13,558	238,959
1966	5,994	151,664
1967	5,067	145,329 (10,681)
1968	4,636	172,766 (17,616)
1969	5,128	318,196 (32,222)
1970	3,808	308,767 (19,169)
1971	2,682	221,480 (17,157)
1972	2,693	121,082 (16,095)
1973	2,606	33,026 (9,369)
1974	1,936	169,148 (28,952)
1975	2,272	124,849 (16,394)
1976	2,107	74,153 (14,722)

* The figures in brackets show the number of bull calves fattened before slaughter for veal. These figures were not kept separately before 1967. The number of bull calves shown in brackets is *included* in the total number of dairy calves slaughtered.
Source: Ministry of Agriculture and Forestry, Statistics and Information Department, *Statistics of Meat Marketing.* (In Japanese) 1967 and subsequent issues.

One of the earliest and now most important policies aimed at protecting the traditional beef sector was the so-called feeder-calf price stabilisation program. However, before this program is discussed some brief background on the dairy sector will be presented.

1.2 The Dairy Sector

As suggested by the data in Table 5, until about 1965 a high proportion of both male calves and surplus female calves born to dairy cows were slaughtered soon after birth for veal or for processing. However, incomes and hence the demand for beef increased very rapidly in Japan during

the 1960's. At the same time, as already explained, the capacity to produce beef feeder-calves was actually declining in the traditional beef sector. Therefore, in the late 1960's beef-fattening farmers and their co-operatives began to grow and fatten dairy steers. As a result a whole new beef-producing industry has emerged based on the calves produced as a by-product of the dairy industry. In this respect the future of the beef and dairy industries in Japan are closely interdependent.

The dairy industry has undergone massive restructuring and relocation over the last 20 years which in many respects has been much more dramatic than that suffered by the traditional beef sector. Hokkaido has emerged as the major dairying region with more than 30 per cent of all the dairy cows in Japan. As a result Hokkaido has become a major source of dairy steers for fattening in feed-lots closer to the population centers.

In Hokkaido and elsewhere in Japan, almost all dairy steers are born on farms where milk production is the major enterprise. As many of these farmers raise some, if not all, of their replacement females, there is often insufficient space or feed available for growing dairy male calves as well. Therefore, with the increased demand for dairy-steer feeder-cattle, an entirely new dairy-steer-growing industry has emerged since 1970. This industry, as one would expect, has been closely associated with the development of large-scale feed-lots using modern technology to fatten dairy steers. As a result, the distinction between "growing" and "fattening" farms is not absolute. Many of the larger feed-lots in particular, also grow some, if not all, of their own feeder cattle.

The history and organisation of the dairy-steer segment of the beef industry is, therefore, very different from the traditional beef sector. Producer co-operatives play a much more dominant role in the growing and distribution of dairy steers for fattening than is the case for beef breed feeder-cattle. The movement of dairy steers from the major breeding and growing regions (Hokkaido and Tohoku) is largely controlled by the farmer co-operatives through their national and prefectural federations. Although no precise data is available it seems that the vast majority of dairy breed feeder-calves do not pass through a livestock market at the feeder-calf stage. This is in sharp contrast to the situation in the traditional beef sector and has led to the major differences between the price-support programs for beef feeder-calves and the program for dairy-steer feeder-calves.

2 Outline of the Price Support Programs for Feeder-calves

There are, of course, many similarities between the feeder-calf deficiency payments schemes now in operation for the traditional beef sector and the dairy sector of the Japanese beef industry. However, the programs are sufficiently different to warrant looking at each in turn. Furthermore, the last two years have seen the introduction of a whole set of new policies to "strengthen" the support program for the traditional beef sector. As yet these new additions to the original deficiency payments program have not been extended to cover dairy steers.

2.1 The Original Deficiency Payments Program for Beef Feeder-Calves

Actually this program is not a single national program. In 1977 there were 28 similar schemes each operating in a single prefecture and each controlled by a separate prefectural beef-calf price stabilisation fund association. The details concerning these 28 schemes are set out in Table 6.

TABLE 6 : DETAILS OF EACH PREFECTURAL ASSOCIATION PRICE SUPPORT SCHEME FOR BEEF BREEDS OF FEEDER CALVES

Names (& Locations)[c] of Prefectures with Stabilization Fund Associations Operating Price Support Programs for Beef Feeder-Calves		Date of Inception of Deficiency Payments Scheme for Beef-Calves[d]	Basic Capital Subscribed by Members of Association		Breed of Cattle Covered by Scheme[a]	Standard Support Price Per Calf in 1977	Ordinary Levy Per Cow Required in 1977	Number of Cows Contracted Under the Scheme in 1976[b]	Number of Markets Covered by the Scheme		Period Over Which Weighted Average is Calculated	Details of Standard Grade of Beef Feeder-Calf			Special Support Price Per Calf in 1977	Number of Contracting Parties	
			Total	LIPC Contribution								Weight		Age		Members of the Association	Affiliated Co-ops
			¥'000	¥'000		¥'000	¥				mths	Female kg	Male kg	days	¥'000		
Hokkaido	(1)	1/4/73	115,000	50,000	BH	176	13,100	3,000	5		6	160-249	160-249	180-269	-	1	37
Aomori	(2)	1/4/73	97,580	30,000	SH	176	13,100	6,500	5		6	160-259	170-309	180-269	-	26	26
Iwate	(3)	23/7/70	100,580	50,000	BH SH	206 155	15,300 11,500	11,994 8,133	6	3 3	4	190-259 161-209	210-279 181-229	210-289 181-229	216 165	95	95
Miyagi	(4)	3/3/70	60,210	30,000	BH	206	15,300	7,100		3	4	190-259	210-279	210-269	-	3	57
Akita	(5)	1/7/70	101,200	40,000	" BB SH	206 183 156	15,300 13,600 11,600	7,047 2,135 1,273	5	2 2 1	3	200-280 240-340 200-280	220-300 240-340 220-300	196-305 226-345 166-285	216 192 168	1	90
Yamagata	(6)	1/8/70	60,000	30,000	BH	206	15,300	4,240		4	4-6 9-3	190-269	210-289	210-299	-	2	21
Fukushima	(7)	26/6/70	121,050	50,000	"	206	15,300	17,597		5	3	170-249	190-279	180-269	-	19	3
Ibaraki	(12)	1/4/71	62,970	30,000	"	200	14,900	4,561		3	3	210-249	230-269	250-279	-	14	14
Tochigi	(13)	13/10/71	60,200	30,000	"	196	14,600	3,131		2	4	190-230	210-250	210-270	-	15	15
Nagano	(20)	1/4/73	80,000	40,000	"	212	15,700	4,088		2	3	180-250	200-270	210-270	230	1	46
Niigata	(8)	2/7/70	61,490	30,000	"	200	14,900	2,600		3	3	181-240	181-240	181-240	-	41	41
Gifu	(21)	20/7/70	60,000	30,000	"	223	16,600	4,800		3	6	180-230	200-240	211-280	-	1	24
Kyoto	(26)	1/4/69	60,100	30,000	"	240	17,900	2,500		3	3	181-230	181-230	211-270	240	26	26
Hyogo	(28)	1/4/70	100,000	50,000	"	260	19,300	13,000		4	6	190-220	200-230	211-270	-	13	52
Tottori	(31)	18/3/68	80,000	40,000	"	223	16,600	12,903		4	3	170-224	190-244	170-229	-	1	49
Shimane	(32)	1/4/68	100,000	50,000	"	223	16,600	23,262		3	3	220-250	240-270	230-260	-	1	68
Okayama	(33)	7/3/69	80,590	40,000	"	223	16,600	13,720		3	3	181-230	201-250	181-240	230	2	44
Hiroshima	(34)	27/3/69	80,000	40,000	"	220	16,400	12,537		4	3	200-269	200-269	210-269	230	39	54
Yamaguchi	(35)	4/3/70	60,000	30,000	BH*	210	15,600	4,023		4	6	201-240	221-260	211-270	-	47	55
Kagawa	(37)	13/7/70	60,100	30,000	BH	216	16,100	1,800		1	3	181-240	181-240	221-280♀ 201-260♂	224	1	9
Kochi	(39)	25/6/70	60,104	30,000	BB	218	16,200	2,120		3	3	160-240	160-240	181-240♀ 151-210♂	-	2	44
Saga	(41)	13/8/71	65,000	30,000	BH	213	15,800	4,680		1	3	181-280	201-300	241-330	-	1	24
Nagasaki	(42)	30/6/70	87,300	40,000	"	213	15,800	23,498		3	3	200-280	200-280	240-300	215	27	27
Kumamoto	(43)	21/3/68	161,350	50,000	BB BH	213	15,800	31,000	8	7 1	4	230-280 230-270	250-310 250-290	210-300 240-330	220	115	67
Oita	(44)	28/3/68	100,000	50,000	"	215	16,000	22,200		6	3	201-260	221-280	211-270	220	51	51
Miyazaki	(45)	15/3/68	145,500	65,000	"	215	16,000	75,000		3	3	221-270	241-300	271-300♀ 301-330♂	222	13	57
Kagoshima	(46)	19/3/68	215,390	65,000	"	215	16,000	58,566		6	3	210-250	240-279	240-299	222	18	78
Okinawa	(47)	4/2/74	80,100	30,000	"	205	15,200	10,138		3	4	201-330	201-330	240-330	210	26	26
TOTAL OR AVERAGES						213	15,847	399,146						6 months	223		

[a]Designated breeds:- BH = black haired Wagyu
BB = brown " "
SH = Japanese shorthorn

[b]Final data for 1977 not available

[c]The number in brackets gives the location of the prefecture as shown on Map 1.

[d]Dates are given as day/month/year.

*In Yamaguchi Prefecture the scheme also covers the polled Wagyu breed of cattle.

SOURCE: M.A.F. (personal communication).

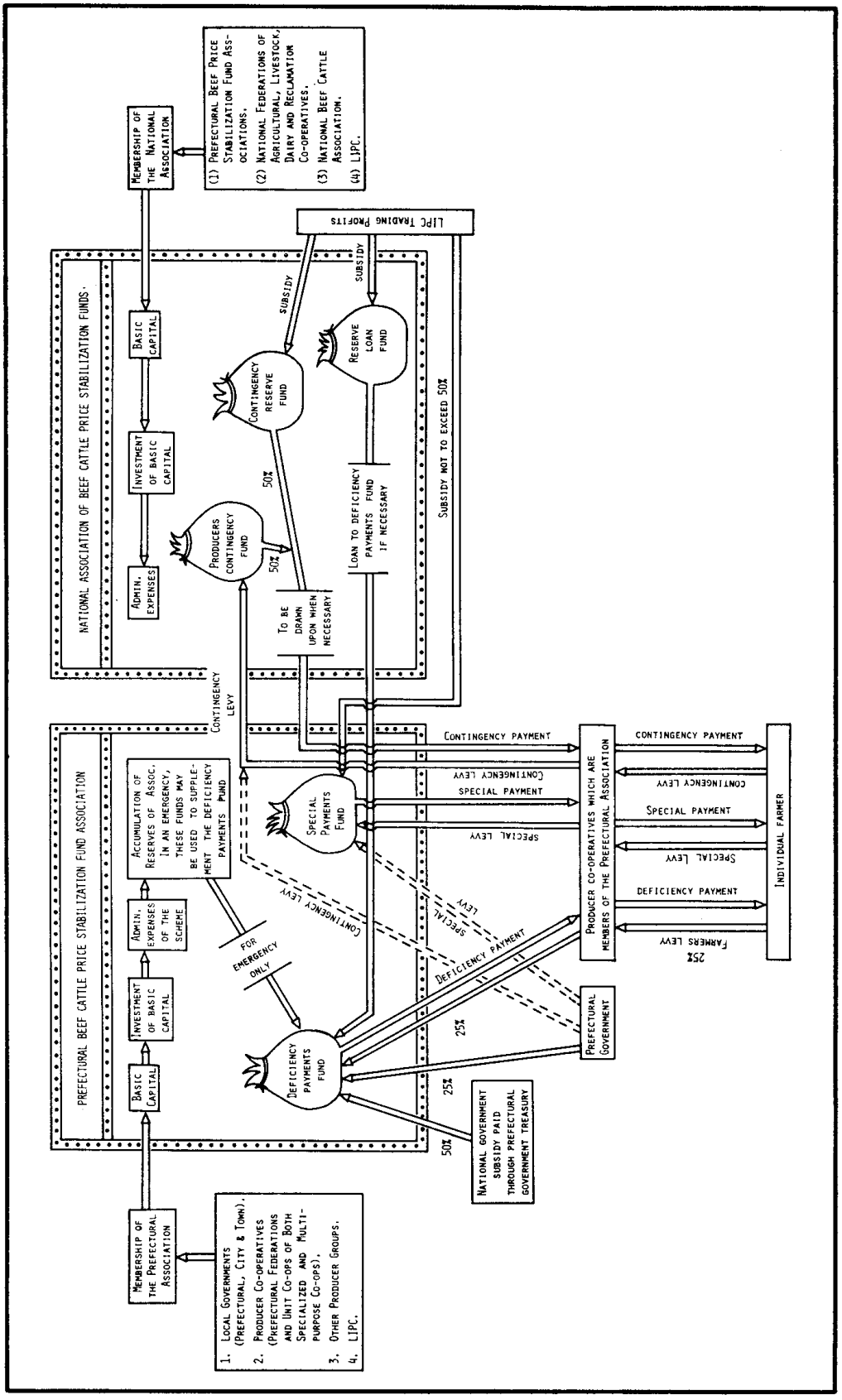


Figure 1: Outline of Feeder-Calf Price-Support Arrangements for the Traditional Beef Sector in Japan

As initially conceived the prefectural based programs were to be partly self-financing deficiency payments schemes. Originally the program could be represented by a much simpler diagram than Figure 1 which represents the original scheme plus the recent additions to be discussed below. If attention is concentrated on the large-framed box on the left of Figure 1 the basic components of the original program are easily recognised.

First, a prefectural association was set up to administer the program within the given prefecture. The members of this association are the groups co-operating in the scheme. The members, naturally enough, will be those local groups interested in preserving the traditional beef industry, plus the Livestock Industries Promotion Corporation (LIPC) acting on behalf of MAF (*i.e.* the National Government).[5] The basic capital is subscribed by these members. (See Table 6 for details.) It is important to note at this point that the LIPC share of the basic capital does not come from "profits" on LIPC trading activities. It was provided by a direct national government budget appropriation for the purpose of establishing these prefectural associations. The basic capital of the association is invested in government securities, the interest on which is used to cover the administrative costs incurred by the association in operating the price support program. Any surplus interest over and above administrative costs must be accumulated in a reserve fund as shown in Figure 1. In an emergency these reserves may be used to supplement the deficiency payments fund. With the rapid escalation of administrative costs since these prefectural associations were established, none of the associations have managed to build a worth-while reserve fund by saving the interest earned on the basic capital. In part, this unexpected result has led to the recent additions to the original support program which will be discussed below.

The primary administrative tasks of the prefectural associations are: first, to organise contracts with farmer co-operative organisations (who are members of the association) acting on behalf of the farmers; second, to control the flow of money into and out of the deficiency payments fund; and third, to monitor feeder-cattle prices and determine the amount of deficiency payment (if any) which is to be made.

The contracts commit owners of breeding females belonging to the designated beef breeds (see Table 6 for which breeds are designated in which prefecture) to pay a specific levy per mother cow. The authority responsible for ultimately determining the magnitude of these levies is the Livestock Bureau of MAF.

In return for paying the levy the farmer receives a guarantee that when the off-spring of his cow is sold in one of the nominated markets, he will be covered by the scheme. Each contract is for a period of 4 years but may be abridged. The legal contract is between the producer co-operative and the stabilisation fund association, not between the farmer and the association. Further, since all payments are made to producers through

5. For more detail on the LIPC and Japanese beef import policies see Longworth [3].

two years. The authority to set the floor-price for each prefecture participating in the program rests with the Livestock Bureau of MAF. The formal government statement covering the program states that the standard support price shall be set after considering costs of production, past price trends the producer co-operatives participating in the schemes, the co-operatives play a significant role in administering these price-support schemes. Perhaps the fact that farmers must make their contracts through the co-operative movement and hence sell their calves through these channels, may be one of the reasons why the percentage of breeding cows covered by the scheme is so low in some prefectures.[6]

As shown in Figure 1, the farmer's levy paid to his co-operative (which in turn pays it to the association for safe-keeping in the deficiency payments fund) is matched by a similar contribution from the prefectural government. In addition, the national government also contributes an amount equal to the sum of the farmer's levy and the prefectural government's contribution. The national government subsidy is paid through the prefectural government treasury not through the LIPC, to ensure that the management of the deficiency payments fund is subject to national as well as prefectural government auditing processes.

Basic to the deficiency payments program is the idea of the "standard calf". As can be seen from Table 6 the standard beef breed feeder-calf varies a little from prefecture to prefecture. Each prefectural price-support association collects price data from the nominated calf markets in the prefecture and determines a series of monthly average prices per head for the standard calf. These monthly average prices are weighted by the number of calves sold each month and averaged over the agreed averaging period. (As shown in Table 6 this period is either 3, 4 or 6 months depending on the prefecture concerned.) If this final average price for the standard calf is below the standard support price, all farmers who sold calves during the averaging period concerned receive a deficiency payment. The amount of the deficiency payment is normally calculated as 80 per cent of the difference between the weighted average price for the standard calf and the standard support price. The same deficiency payment per head is made on all calves irrespective of grade, age or sex, provided that: (i) the mother of the calf is covered by a contract with the association; (ii) the calf has been sold at one of the nominated markets during the agreed averaging period; (iii) the calf is over 4 months and under 12 months old on the day of sale; and (iv) that the calf weighs more than the minimum weight on the sale day.

The determination of the standard support price is fundamental to the operation of the deficiency payments scheme. Under the laws controlling these price support programs the floor prices may only be adjusted every

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6. The majority of Wagyu breeding farmers are small rice producers who keep only 1 or a few cows (see Table 4). They have traditionally had close ties with the local cattle dealer or broker, many of whom also supply the bull (when necessary), livestock feed and medicines, credit, and husbandry advice. Although these farmers are all members of a unit (village) co-operative, they will feel remote from the prefectural federation of co-operatives administering the feeder-calf price-support scheme. In these ultra-conservative rural communities, therefore, many traditional Wagyu-calf producers still sell their calves through their "friend" the cattle dealer rather than through co-operative channels.

and other relevant factors. In practice, however, it seems that the Livestock Bureau of MAF have adopted a fairly mechanistic procedure based on past price trends for determining the standard support price in each prefecture. *First,* a simple linear time trend line is fitted to the average monthly price data for the standard calf. For this calculation 8 years of monthly data are used (if available) ending with the average price for the month of March immediately preceding the beginning of the next two Japanese fiscal years for which the new standard support price is to apply. (Japanese fiscal years are 1st April to 31st March.) *Second,* this simple trend line is used to predict a value for the price series mid-way through the first of the two fiscal years for which the new support price is needed. *Third,* the standard error of estimate for the linear trend line (*i.e.,* the standard deviation of prices around the linear trend function) is calculated and half of this value subtracted from the predicted price for month 6 of the coming fiscal year. The result of this last step is the provisional standard support price for the next two years.

The calculation just described is repeated for each prefecture with a beef feeder-calf price support program. The final standard support price in each prefecture will be determined after discussions with the prefectural government, producer co-operatives and other interested parties. Steps are taken to see that neighbouring prefectures have essentially the same support price.

2.2 The Original Deficiency Payments Program for Dairy Steer Feeder-Calves

In principle, the deficiency payment scheme for dairy-steer feeder-calves operates in parallel with the programs for the traditional beef breeds. The prefectural beef-calf price stabilisation fund associations administer the scheme on a prefectural basis in much the same way as for the traditional beef breeds. When a prefectural association undertakes to operate a dairy feeder-steer price guarantee program, the members of the association must subscribe extra basic capital to provide increased interest revenue to cover the extra administrative costs. (See Table 7.)

In detail, there are some important differences between the original support programs for the traditional beef breeds and the original scheme for dairy steers. *First,* the support price is the same for all prefectures operating a dairy-steer price-support program. *Second,* the standard dairy steer feeder-calf is the same for all Japan. *Third,* only male calves are included in the dairy scheme. *Fourth,* the calves do not have to be sold in the designated markets. (These markets are designated only in regard to establishing the standard calf and the weighted average price. The price recording and averaging operations are performed by the Livestock Bureau of MAF which then determines the "all Japan average price" for the standard dairy-steer feeder-calf.) *Fifth,* the averaging period is 3 months for all prefectures. *Sixth,* and most importantly, only those baby calves passing through the hands of the producer co-operative members of the prefectural price stabilisation association can be placed under contract and hence receive the feeder-calf price guarantee (see Figure 2). *Seventh,* as just implied, the per head deficiency payments levy is paid to the prefectural association by the co-operative when they sell (or lease) the baby calves to grower farmers. *Eighth,* the levy is paid per calf not per mother cow as in the traditional beef sector.

Names (and Locations) of Prefectures With Stabilisation Fund Associations Operating Price Support Programs For Dairy Feeder-Calves (b)		Date Scheme Commenced for Dairy Steers	Details of Capital Subscribed by Members of the Association ('000 yen)			Number of Steers Contracted Under the Scheme in 1976 (c)	Number of Members in the Association
			Basic Capital (a)	Additional Capital for Dairy Steer Scheme	LIPC Contribution (a)		
Hokkaido	(1)	1/4/72	115,000	102,200	50,000	24,000	2
Aomori	(2)	20/12/72	97,580	36,000	30,000	3,800	1
Iwate	(3)	1/4/72	100,580	20,700	50,000	5,220	1
Miyagi	(4)	5/8/72	60,210	17,000	30,000	2,800	3
Yamagata	(6)	1/4/72	60,000	11,200	30,000	1,000	2
Fukushima	(7)	24/8/72	121,050	19,300	50,000	3,343	3
Ibaraki	(12)	1/4/73	62,970	11,100	30,000	973	4
Gumma	(14)	19/7/72	60,000	60,000	30,000	2,960	4
Kamagawa	(18)	12/2/74	50,000	50,000	25,000	1,300	7
Nagano	(20)	1/4/72	80,000	50,300	40,000	7,300	1
Shizuoka	(22)	1/10/72	60,300	60,300	30,000	2,245	25
Niigata	(8)	26/7/72	61,490	26,700	30,000	2,000	2
Gifu	(21)	1/7/72	60,000	26,100	30,000	3,700	1
Aichi	(23)	20/11/72	62,000	62,000	30,000	5,000	1
Tottori	(31)	1/4/72	80,000	6,400	40,000	1,134	1
Okayama	(33)	1/4/72	80,590	9,300	40,000	1,790	20
Hiroshima	(34)	1/4/72	80,000	4,100	40,000	682	1
Tokushima	(36)	1/4/72	61,500	61,500	30,000	4,848	21
Kagawa	(37)	1/4/72	60,100	31,600	30,000	2,000	1
Ehime	(38)	29/7/72	60,200	60,200	30,000	2,000	1
Fukuoka	(40)	1/4/72	60,350	60,350	30,000	5,000	18
Saga	(41)	12/8/72	65,000	19,500	30,000	2,000	1
Nagasaki	(42)	30/8/72	87,300	7,800	40,000	2,320	6
Kumamoto	(43)	1/4/72	161,350	22,400	50,000	5,000	4
Miyazaki	(45)	1/4/72	145,500	9,000	65,000	5,000	4
Kagoshima	(46)	1/4/73	215,390	10,500	65,000	3,000	6
TOTAL						100,415	

a, The figures shown in these columns for prefectural associations listed both in this table and in Table 6 refer to the same amounts of money.
b, The number in brackets gives the location of the prefecture as shown on Map 1.
c, The data for 1977 are not available.
N.B. Other Details of the Dairy Feeder-Calf Scheme Were as Follows in 1977: 1. The standard guaranteed price for all Japan is 85,000 yen per head. 2. The levy paid by the producer co-operatives on behalf of fattening farmers is 8,840 yen per dairy steer. The designated markets are at Fukuroi in Shizuoka Prefecture and at Awaji in Hyogo Prefecture. 4. Market prices are averaged over a 3 month period. 5. The standard calf is 5-7 months old weighing between 180 and 240 kg (average 210 kg).

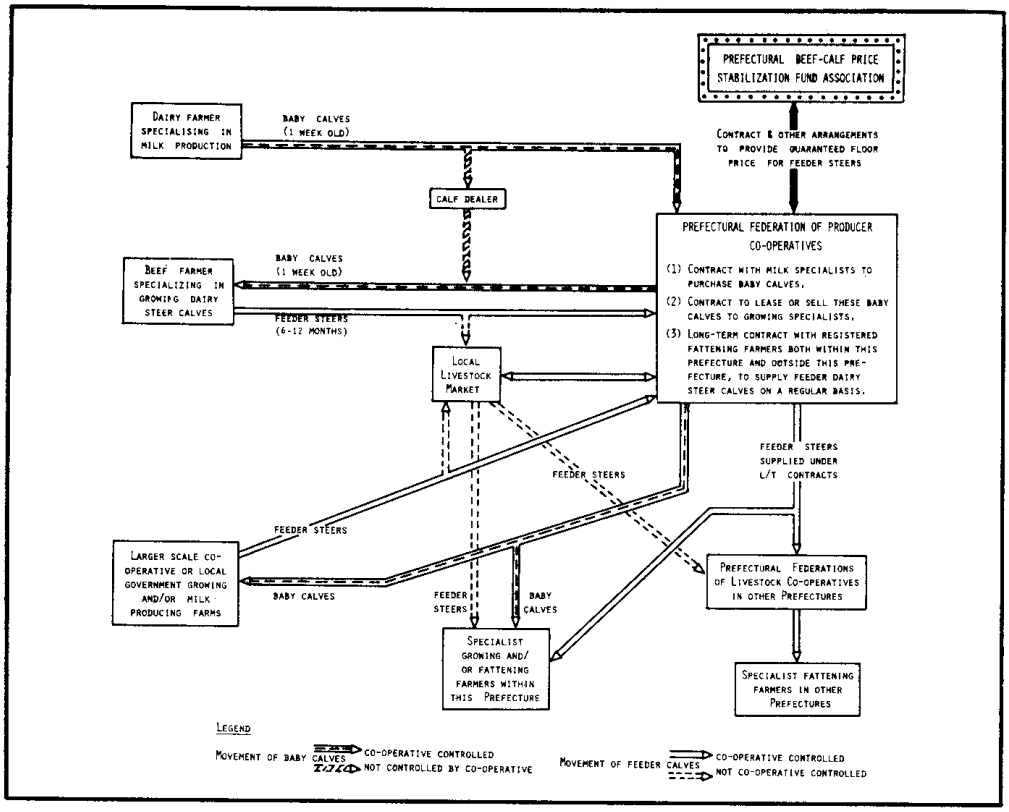

Figure 2: Outline of Key Role Played by Producer Co-operatives in Dairy Steer Raising and Price Support Program.

As already pointed out and illustrated in Figure 2, the producer co-operatives are in a very strong position in regard to the dairy breeding and growing business. Since dairy feeder-cattle do not have to pass through the designated livestock markets (or any market for that matter) to attract the support price guarantee, a major part of the price-support program for dairy steers is virtually controlled by the producer co-operatives.

2.3 Recent Additions to the Beef Feeder-Calf Price Support Program

In April of 1970 the National Association of Beef Cattle Price Stabilisation Funds was established by MAF. The basic structure of this national organisation is similar to that of the prefectural price support associations all of which are members of the national body. As set out in Figure 1, the other members of the national association are the four national federations of producer co-operatives interested in beef and dairy production,[7] the National Beef Cattle Association representing all non-co-operative producer groups interested in cattle; and the LIPC.

7. The 4 national federations of co-operatives are as follows:—
National Federation of General Agricultural Co-operatives (Zenkoku Kyōdō Kumiai Rengōkai);
National Federation of Livestock Co-operatives (Zenkoku Chikusan Nōgyō Kyōdō Kumiai Rengōkai);
National Federation of Reclamation Co-operatives (Zenkoku Kaitaku Nōgyō Kyōdō Kumiai Rengōkai); and
National Federation of Dairy Co-operatives (Zenkoku Rakuno Nōgyō Kyōdō Kumiai Rengōkai).

Initially the primary objectives of the national association were to co-ordinate the activities of the prefectural beef-calf price-support associations (of which there were only eleven in April 1970) and to encourage the formation of new prefectural associations. As can be seen from Table 6, the later objective was quickly achieved with 7 new prefectural beef schemes being initiated before the end of 1970 and 3 more being added in 1971. In 1972 the deficiency payment concept was extended to cover dairy-steer feeder-cattle. In that year, 23 of the prefectural beef-calf price stabilisation associations introduced the special support price scheme for dairy-steer calves. (See Table 7 for details.) Since 1972 only a further 3 prefectures have introduced the dairy-steer price-support program.

An important point is frequently over-looked when discussing Japanese beef price-support policy. The brief historical review just presented emphasises that the feeder-calf price-support programs for both beef and dairy calves were initiated well before the "oil-shock" and the catastrophic collapse of the Japanese wholesale beef prices in late 1973 and early 1974.[8] These schemes were originally designed to protect the calf-raising segment of the cattle industry from just this kind of crisis. However, the 1974 slump in feeder-calf prices demonstrated the potential financial weakness of the essentially independent prefectural deficiency payments schemes. As a result, a number of policies have now been added to the original deficiency payments schemes for beef calves to financially strengthen the beef (but not the dairy) feeder-calf price-support program.

Although the situation differs slightly from prefecture to prefecture (see Table 8), Figure 1 presents a general outline of the current financial arrangements for beef breeds of cattle. In those prefectures where all of the strengthening measures have been adopted, the individual farmer will have 5 different funds protecting the price of his beef feeder-calves. These funds are all illustrated in Figure 1.

The original deficiency payments fund has already been described. This fund is now backed by a national "reserve-loan-fund" created with part of the trading profits accumulated by LIPC on beef imports (and other activities). In late 1977 this loan fund, which is administered by the National Association of Beef Cattle Price Stabilisation Funds, consisted of 600 million yen. This reserve-loan-fund is to provide money to prefectural associations when their deficiency payments funds become exhausted. The money is (in theory) to be loaned at 2.5 per cent interest for a period generally not to exceed 4 years. However, on the recommendation of the national association administering the loan fund, the Director of the Livestock Bureau of MAF has the power to waive part or all of the repayments on these loans.

The third fund providing price-support is labelled "special-payments-fund" in Figure 1. In future farmers will pay a special levy (details of which will be discussed below) to this fund through their co-operatives. Furthermore, the prefectural governments will also be expected to contribute to this fund as well as to the original deficiency payments fund. LIPC trading profits are to provide up to 50 per cent of the contributions to this fund each year in the future. Although the operation of these prefecturally administered funds is only now (late 1977) being formalised, the LIPC paid 296 million yen into these funds in 1976.

8. See Longworth [3].

Table 8: Prefectural Association Participation in the Various Aspects of the General Feeder-calf Price-Support Program (as at October 1977)

Names of Prefectures With Beef Cattle Price Stabilisation Fund Associations	Prefectures With Feeder-Calf Price Support Programs		Prefectures in Which Price Support Program Includes a Special Payments Fund	Prefectures in Which Price Support Program Includes the Contingency Funds
	For Beef Cattle Breeds	For Dairy Steers		
Hokkaido	*	*		*
Aomori	*	*		*
Iwate	*	*	*	*
Miyagi	*	*		
Akita	*		*	
Yamagata	*	*		
Fukushima	*	*		
Ibaraki	*	*		
Tochigi	*			
Gumma		*		*
Kanagawa		*		*
Nagano	*	*	*	
Shizuoka		*		
Niigata	*	*		
Gifu	*	*		
Aichi		*		
Kyoto	*		*	
Hyogo	*			
Tottori	*	*		*
Shimane	*			
Okayama	*	*	*	*
Hiroshima	*	*	*	*
Yamaguchi	*			*
Tokushima		*		
Kagawa	*	*	*	*
Ehime		*		
Kochi	*			
Fukuoka		*		
Saga	*	*		*
Nagasaki	*	*	*	
Kumamoto	*	*	*	*
Oita	*		*	*
Miyazaki	*	*	*	*
Kagashima	*	*	*	*
Okinawa	*		*	*
Number Participating	28	26	13	16†

† This column includes some potential participating prefectures as of October 1977.

The fourth and fifth funds have been called contingency funds in Figure 1. The "producer-contingency-fund" is a recently organised national accumulation of pre-existing contingency funds which existed in some prefectures. Farmers (through their co-operatives) pay a contingency levy into this fund and it now seems that prefectural governments are being asked to contribute to this fund as well. As an incentive, the second "contingency-reserve-fund" has been set up with LIPC trading profits. Any contingency payments out of these two funds are to be made on a 50/50 basis. Both the contingency funds, like the "reserve-loan-fund", are to be administered by the national association as shown in Figure 1.

The conditions under which this complicated series of funds will be used to make payments to farmers (through their co-operatives) is best explained by reference to Figure 3. There are now really two different support prices as shown in Figure 3. The standard support price is the basic one and its determination has already been discussed. In the 13 prefectures where the price stabilisation associations have established a

"special-payments-fund", a special support price is also established (see Table 8). This second and higher support price must not exceed the standard support price by more than 10,000 yen per head. The special levy paid into the special-payments-fund by farmers must be greater than 40 per cent of the difference between these two support prices. As mentioned earlier, this special levy is collected by the prefectural association and attracts up to a 1:1 subsidy from the LIPC. Both the level of the special support price and the magnitude of the special levy to be paid by farmers must be set by the prefectural association in consultation with the LIPC.

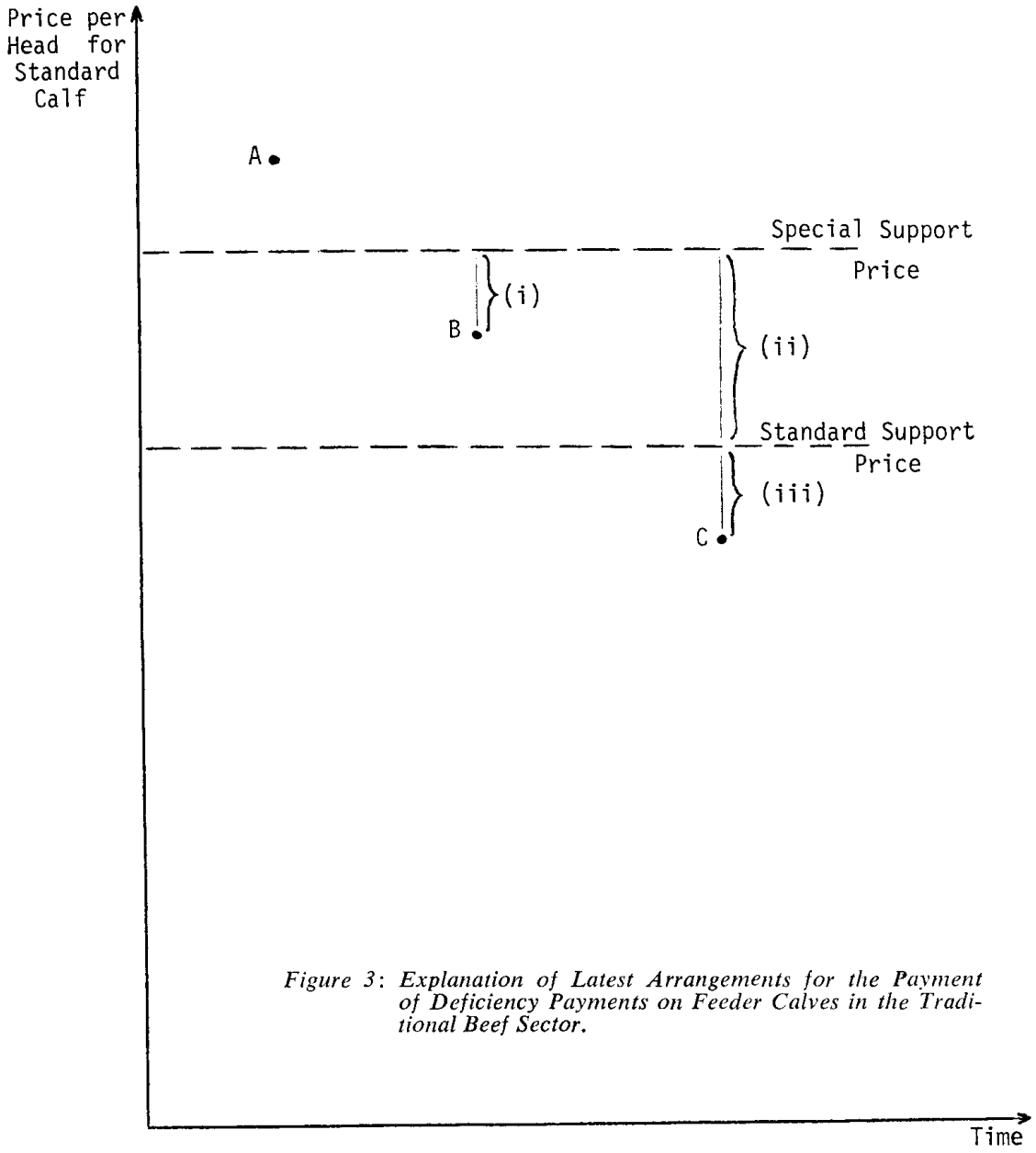

Figure 3: Explanation of Latest Arrangements for the Payment of Deficiency Payments on Feeder Calves in the Traditional Beef Sector.

When the weighted average price of a standard calf for the agreed upon averaging period is at a level such as A in Figure 3, no payments are made to farmers. At price levels between the two support prices (*e.g.*,

at B) farmers receive a payment from the special-payments-fund. This payment is set at 80 per cent of the gap marked (i) in Figure 3. However, the prefectural association has the power to reduce the payout percentage

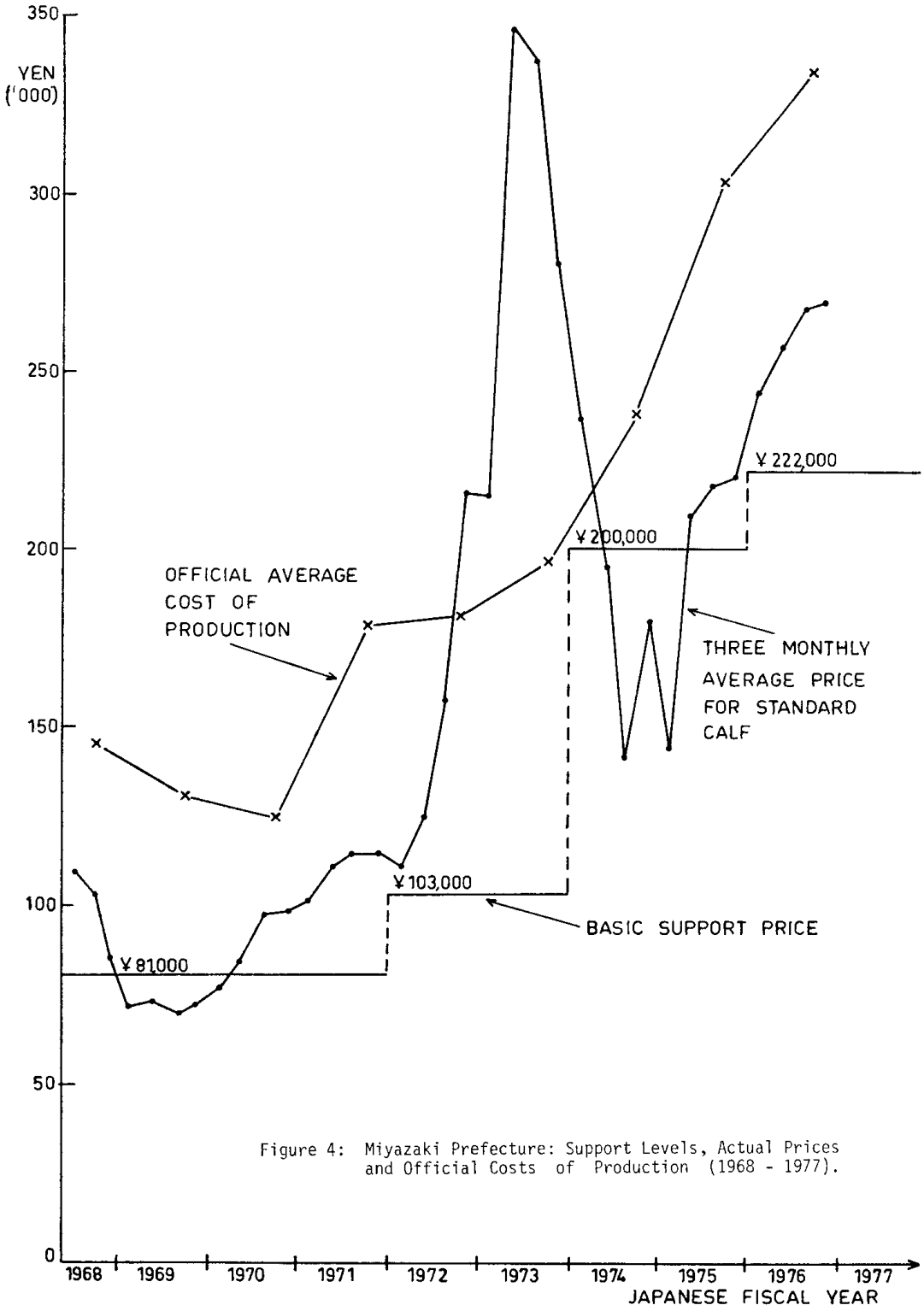

Figure 4: Miyazaki Prefecture: Support Levels, Actual Prices and Official Costs of Production (1968 - 1977).

if necessary. At price levels such as C, farmers may receive two payments. One from the special-payments-fund as just described and normally determined as 80 per cent of price gap (ii) in Figure 3. The second payment will be received from the deficiency-payments-fund. Normally this second payment will be 80 per cent of the gap marked (iii) in Figure 3. But again the prefectural association has the authority to reduce the percentage of the gap paid to farmers.

Obviously participating farmers who have previously paid all the required levies would resent any cut in the pay-out percentages. This seems to be one of the reasons for the creation of the contingency funds which are designed as a second line of defence. In the 9 prefectures where the price support programs include both a special-payments-fund and a contribution to the national producers-contingency-fund (see Figure 1 and Table 8), the contingency funds may be drawn upon to maintain the 80 per cent pay-out from both the deficiency payments and the special-payments-fund. In the case of the remaining 7 prefectural associations contributing to the contingency fund but not operating a special-payments-fund, the contingency funds can be used to bolster the deficiency-payments-fund and hold the pay-out percentage at 80 per cent.

If all else fails, any of the prefectural authorities can now borrow from the reserve-loan-fund to finance their deficiency payments to farmers. In this case it is highly likely that the pay-out percentage would be reduced.

3 The Feeder-calf Price Support Programs in Operation

Once again it will be necessary to consider the programs for the traditional beef sector separately from the program for the dairy sector.

3.1 Traditional Beef Sector

As already mentioned, the first prefectural schemes for the traditional beef sector were launched in 1968 and have now been operating for almost a decade. Due to the differences between the various prefectural schemes it is not appropriate to assess these support programs at the national level. Therefore, the Miyazaki Prefecture scheme will be discussed as a case-study. Miyazaki was the first prefecture to implement a feeder-calf price support program. Furthermore, as can be seen from Table 3, it is the prefecture with the second largest number of mature beef females and one of the few prefectures in which beef cattle numbers have increased substantially over the last decade.

Figure 4 summarises the operation of the support program in Miyazaki Prefecture since its inception in the July/September quarter of the 1968 Japanese fiscal year. The basic guaranteed price was held constant for the first 4 years. However, it has been raised every second year since April 1972. (It was pointed out earlier that the basic guaranteed price may only be varied at 2-yearly intervals.) The especially large increase in April 1974 (almost 100 per cent) is largely attributable to the mechanistic formula used to establish the guaranteed price (see above). Given that feeder-calf prices were falling rapidly at the time and that the official cost of production

had not risen dramatically after the big jump in 1971,[9] one would have expected a more modest increase in the basic guaranteed price in 1974.

The 3-monthly average price for the standard calf has dropped below the basic guaranteed price twice and deficiency payments have been made to farmers on both occasions according to the formula already discussed. The price of the standard calf remained below the basic guaranteed price for all of the 1969 fiscal year and the first quarter of 1970. This situation together with the downward trend in the official cost of production at the time, must have been the prime reason why the basic guaranteed price was not altered in April 1970. The second time the price of the standard calf fell below the basic guaranteed price was in 1974. As shown in Figure 4, feeder-calf prices in Miyazaki reached extremely high levels in 1973 only to collapse suddenly in 1974. This pattern was similar throughout Japan and was the major factor responsible for the cancellation of beef import quotas in 1974 and early 1975.[10] Since early 1975 the price of the standard calf has risen more or less in line with the rapidly rising official cost of production and there are great pressures on the Livestock Bureau of MAF to agree to raising the basic guaranteed price substantially in April 1978.

Farmer participation in the Japanese beef feeder-calf price-support programs is entirely voluntary and varies considerably from prefecture to prefecture. If the number of cows contracted under the various prefectural schemes in 1976 (see Table 6) is compared with the number of mature beef-breed females in these prefectures at the 1st February 1977 (see the last column of Table 3), one can obtain a rough estimate of the coverage of the schemes in that year. The lowest participation rate indicated by these data was 11 per cent in Hokkaido. On the other hand, a number of prefectures register over 90 per cent coverage (Kyoto, Hyogo, Tottori, Oita). However, in the Tohoku and Kyushu Regions where beef breeding is now concentrated, the level of participation is not as high as one might expect. For example, the average level of participation for the whole Tohoku Region is only 51 per cent. In the southern Kyushu prefectures of Kumamoto, Miyazaki and Kagoshima (easily the 3 most important prefectures for the traditional beef sector) the participation rates in 1977 were 66, 81, and 61 per cent respectively.

3.2 The Dairy Sector

As explained above, the price support program for dairy-steer feeder-calves is a national scheme and, at any given time, there is only one standard support price for dairy steers calves and only one definition of the standard calf for all Japan. However, the concept of the standard calf has been altered since the inception of the scheme in 1972. Originally the standard dairy-steer feeder-calf was regarded as being a 130 kg. live weight animal and the original basic guaranteed price for 1972 and 1973 was determined on this basis. But by the 1976 to 1977 period the standard dairy-steer

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9. There are two official cost of production figures calculated by MAF. "Primary production costs" are defined as the total of all costs (*except* land rent and interest on capital) *minus* the value of by-products. This is the concept of cost of production used in Figure 4 and discussed in this paper. The other official cost, namely the "secondary production cost", equals primary production costs *plus* land rent and interest on capital.

10. No strong written evidence for this important conclusion can be cited. However, it has been verbally confirmed by many well informed people in Japan.

feeder-calf had been redefined as an animal weighing 210 kg. (range 180-240 kg.). Therefore, one cannot really compare the three basic guaranteed prices which have been established (each for 2 years) since 1972. Each price refers to a different standard animal.

Dairy-steer feeder-calf prices dropped even more sharply than the price for traditional beef-breed feeder-calves in 1974 and remained depressed for most of 1975. As can be seen in Table 5 the result was a dramatic increase in the number of dairy calves slaughtered for veal in 1974 and 1975. The depressed prices in 1974 and 1975 did not, however, result in a corresponding rise in the slaughter rate for young beef breed animals (Table 5). The price-support programs, therefore, appear to have been effective in the traditional beef sector but a relative failure in the dairy sector. There were, however, other factors at work in the dairy sector. For example, the growing of dairy-steers to the feeder-calf stage tends to be a specialist rather than a side-line enterprise, and hence more responsive to market signals. Furthermore, the percentage of dairy-steer calves covered by the price guarantee does not appear to ever have exceeded 40 per cent. In fact, in 1973 just over 108 thousand dairy steer calves were covered by the price support guarantee arrangements. In the following year when virtually all of these steers and their age cohort would have been fattened and slaughtered, almost 308 thousand dairy steers were killed for beef. Therefore, only a little over one-third of the eligible dairy steer calves were actually covered by the scheme in 1973. Of course, 1973 was only the second year the dairy-steer feeder-calf scheme had been in operation and prices at the time were well above the basic guaranteed price and rising. Both these facts could have mitigated strongly against a high level of participation in 1973. Nevertheless, even by 1976 only 100 thousand dairy-steer calves were under contract (*cf.* 108 thousand in 1973). The level of participation has not improved dramatically since 1973.

Even though the dairy-steer feeder-calf price support program has not been particularly successful nor popular with the relevant producers, it has not received the special attention recently afforded the schemes for the traditional beef sector. The so-called "strengthening" of the price support programs for beef-breed feeder-calves only serves to emphasise where the political initiative lies in the Japanese beef industries. The traditional beef sector would appear to have more political influence than the interests concerned with dairy-steer raising.

4 Concluding Comments

The political influence of the traditional beef sector of the Japanese beef industry has tended to increase as the breeding segment has contracted and become concentrated in the less economically developed parts of Japan. Future domestic and import policies for beef will continue to reflect the needs of these traditional beef cattle interests. The single most important policy goal sought by these people is a strong price-support program for feeder-calves.

The demand for feeder-cattle is a derived demand. A relatively small down-turn in the wholesale market prospects for beef can precipitate a major drop in the demand for feeder-cattle. The feeder-cattle price-support programs were originally introduced to protect producers from these price slumps. Due to limited financial resources these programs have been conservatively administered. The recent changes aimed at strengthening the financial backing behind these deficiency payments schemes may make it

possible to protect feeder-calf producers who participate in these schemes against extreme downward movements in the feeder-calf market in response to sudden declines in the wholesale-beef market. If this strategy is adopted and the two markets are more or less separated, the administrators of the beef import quotas need no longer be so sensitive about short-term wholesale-beef price movements and their impact on feeder-calf prices. It should, therefore, be much easier for the Japanese Government to agree to quota announcements on a regular and longer-term basis than in the past.

The additional funds now available for the support of feeder-calf prices have been largely provided by the LIPC from accumulated trading profits and import levies. Beef imports have been the source of almost all this money in recent years. If the guaranteed prices for feeder-cattle are raised and substantial deficiency payments have to be made, then the current price-support arrangements will create a continuing need for the LIPC to make a "profit" from beef imports. In this respect the recent changes in the feeder-calf price-support schemes have "locked" the LIPC into a situation which did not exist before. The LIPC and hence the Japanese Government is now heavily dependent on maintaining the current beef importing system so as to finance the feeder-calf price-support programs.

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