Structure of the dairy sector and challenges in Hokkaido

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Structure of dairy sector

Geography of dairy sector



Geography of dairy sector



Source: MAFF Statistics of Milk and Dairy products

Outlines of dairy sector in Hokkaido

Losing 200 dairy farms each year



Num. of dairy farms by herds size					
	2020				
1~19	437				
20~29	313				
30~49	1,240				
50~79	1,730				
80~99	640				
100 \sim	1,319				
300~	177				
total	5,840				

- 182 left dairy sector in 2018
 - With 21 new entrants
- 171 were under 80 cows
- The reasons for leaving;
- Ageing and succession issues 60
- Conversion to rearing dairy heifers 29
- Conversion to arable farming 20
- Sickness, accidents and death of farmer 16
- Conversion to the livestock sector 16

				Hokkaido		Japan excl.	Hokkaido
				2007	2017	2007	2017
Owners age	Below 50		%	41.5	37.8	23.2	19.5
	Over 50	with successor	%	25.7	18.3	20.7	26.9
		no successor	%	12.3	20.3	27.8	35.1
		undecided	%	19.5	11.8	26.9	15.5
No response			%	1	11.9	1.4	3
Num. of dairy farms			4,150	2,817	12,267	7,562	

Succession in Dairy farms

Data; Japan Dairy Council "Dairy farm national survey 2017"

Production concentration

Milk production by farm size in Hokkaido

Milk production /farm/year						
	~1000		1000~5000		5000~	
	Milk		Milk		Milk	
	farm Number	production	farm Number	production	farm Number	production
		(tons)		(tons)		(tons)
2003	7,910	3,060,000	430	660,000	4	20,000
2008	6,647	2,730,000	609	990,000	11	70,000
2013	5,574	2,370,000	738	1,220,000	22	160,000
2017	4,770	2,120,000	819	1,380,000	38	300,000
2018	4,537	2,000,000	862	1,470,000	46	370,000
2019	4,321	1,930,000	910	1,590,000	50	410,000

Source; Data from Hokkaido local goverment

18% of dairy farms produce 51% of total milk

Challenges facing the dairy sector by farm scale

Mega Dairies

- Addressing the labor shortage with the introduction of large machinery, such as harvesters and milking robots
- As a result, if production costs go up or down?

Mega dairy: yearly producing 1000~3000 tons of milk

Production cost in Hokkaido

Prodoction cost incl. unpaid interet and rent

ven/100kg FCM3.5%

- No clear downward trend
- Increased depreciation on dairy cows
- High by-product price contributes the production cost.

			•	0
	Production			
	cost	Depreciation		
		of cow	BY-products	
	А		В	A+B
2008	7,283	1,102	890	8,173
2009	7,181	1,180	875	8,056
2010	7,263	1,276	1,026	8,289
2011	7,357	1,290	1,025	8,382
2012	7,377	1,316	1,065	8,442
2013	7,440	1,273	1,188	8,628
2014	7,426	1,206	1,222	8,648
2015	6,797	1,201	1,627	8,424
2016	6,976	1,443	1,901	8 <i>,</i> 877
2017	7,145	1,623	1,955	9,100
2018	7,485	1,879	1,971	9,456

Source: MAFF "survey of milk production cost"2018

yen/100kg FCM3.5%

	Milking cow size				
	Hokkaido Total	30~50	50~80	80~100	100~
Variable Cost					
Feed	3,602	3,765	3,690	3,852	3 <i>,</i> 467
Concentrate	2,585	2,472	2,408	2,586	2,701
Forage/silage	1,017	1,293	1,282	1,266	766
Veterinary survices and supplies	260	288	231	278	261
Labour cost	1,591	2,509	1,989	1,631	1,094
Unpaid family labour	1,325	2,347	1,783	1,363	773
Hired labour	266	162	206	268	321
Utilities	273	283	273	282	265
Miscellaneous expenditure	957	979	951	949	946
Total variable cost	6,683	7824	7134	6992	6033
Fixed Cost					
Depreciation					
Cows	1,879	1,786	1,717	1,778	1,993
Buildings	241	200	227	236	260
Machinary	438	377	423	373	469
Taxes	126	127	125	121	125
Interest and rent (incl. own land and capital)	554	612	617	631	478
Total fixed cost	2,773	2,605	2,630	2,706	2,873
By-product value	1,971	2,197	2,061	2,066	1,829
cow	1,751	1,876	1,789	1,813	1,678
Production cost	7485	8,232	7,703	7,632	7,077

Source: MAFF "survey of milk production cost"2018

A case;

- 2.5 billion yen (20 million euro) for a 650-milking cow barn and a rotary parlour
- Targeting 6,500 tones per year

Half of the cost is subsided by the state

Are mega dairies accumulating enough reserves and equity to renew its facilities when it's needed?

Small and Middle size farms

status

- Still significant roles in milk production
- Family labours
 - Vulnerable
- Also important to rural communities

Challenges

- Matching to new entrants
- Encourage investment in the preservation of facilities
 - Developing cheap ways to maintain the facilities
- Developing businesses to support family farms
 - Milking Helpers
 - TMR centres
 - Contractors

Agricultural cooperatives "JA"

- Multi-business
 - purchasing, credit, agricultural advice and others
 - Sales operations are carried out through the Federation of cooperatives, HOKUREN.
- Area/region based
 - Almost all diary farmers are member of cooperatives in their regions.





Conclusions

- Securing farm labour
 - Improving the status of the job in dairy industry
 - Not only physical but also intellectual work
- Reducing production costs
 - Investigating production costs and sustainability, especially for large scale farmers
 - Increasing milk production from forage of own land, improving grasslands and making better use of manure... environmental protection

• Supporting for larger farmers

- ICT experts
- Environmental issues
- Strengthening the functioning of the agricultural cooperatives and collaboration with related industries, universities and research institutions
- Management succession in large companies

• For small and middle size family farms

 Investment in facilities, management succession and development of financial services to ensure the viability of family-scale dairy operations.