

Livestock Grabbed Top Agrarian Share in 1991

By Shinzo Nakase

Nineteen hundred and ninety-one was a memorable year for the Japanese livestock industry, taking over the top spot in agrarian production. At 27.1% of total production (valued at ¥11.5 trillion) livestock surpassed rice, at 25.5%, which long having been dominant is gradually diminishing.

The strong national economic growth since the 1960s meant a concomitant rise in individual income. Thus the Japanese diet moved to a higher grade with a subsequent rise in livestock consumption. In 1991, livestock (including imports) accounted for 15.4% of total Japanese food consumption on a caloric basis and 30.3% of the total protein supply. The latter figure exceeds marine products (21.4%) which once composed the majority of animal protein supply.

Despite its size, the Japanese livestock industry has a surprisingly short history. Going back to the ancient ages, Emperor Tenmu ordered "Never eat the meat of cattle, horses, dogs, monkeys and chickens," in 676 A.D. The official ban on eating meat was reissued from time to time right up until the Meiji Restoration of 1868. Thus for 1,200 years Japanese could not publicly produce nor consume livestock products. Such a long period in which meat eating was banned was the result of several factors: Buddhism prohibits the killing of living things; rice growing best fits Japan's climate, geography and social structure and its production

was highly efficient; and sufficient protein could be obtained from fish and soybeans. All in all, there was little need for livestock farming and it did not become an indispensable part of agriculture as it had in the West.

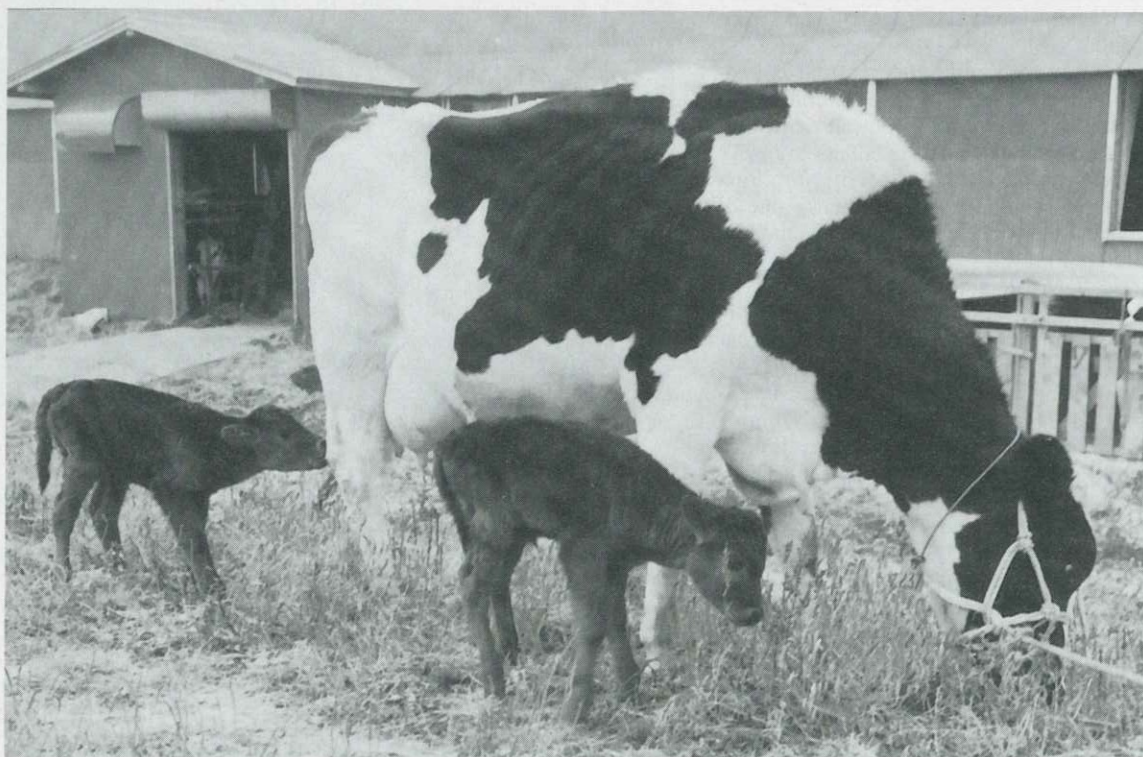
With the Meiji Restoration, the government took aggressive measures to promote livestock farming as a part of its modernization policy. As a result, just before the Second World War the number of livestock had risen to 2.41 million cattle, 1.22 million horses, 1.14 million pigs and 50 million chickens. However, by the end of the war, with the exception of some grazing cattle and horses, most livestock had been destroyed.

The number of livestock returned to

fluctuations became more frequent. The government responded by adding new measures to adjust supply/demand conditions and to support and stabilize prices on top of existing production promotion policy. Thus agrarian policies became more and more complex, as they remain to this day.

Scale of livestock farming increases

In 1992, total livestock production reached ¥3.1 trillion, comprising milk cows at 29%, pigs at 21%, cattle at 19%, layers at 16% (for eggs) and broilers at 13% (for meat). The table (page 17) shows the total number of livestock farms



Advanced technology has enabled one breed of cow to give birth to and milk another through the use of surrogate mothers.

prewar levels by the early 1950s and has risen sharply since then. However, after the late 1950s, over production and price

and head count, followed by the average head count per farm as of February 1, 1991, as compared to 1971.

Photo: Snow Brand Milk Products Co., Ltd.

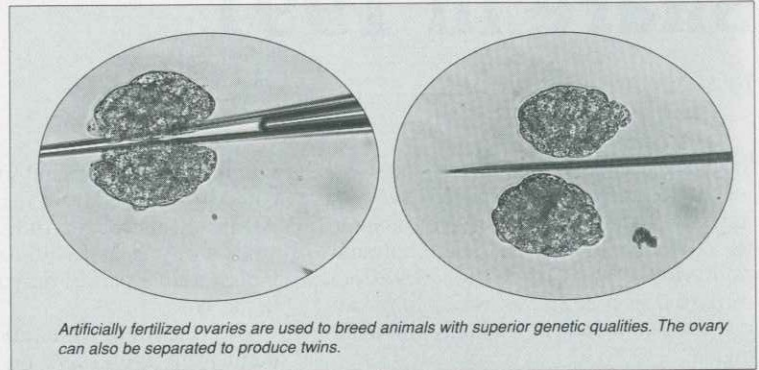
After the late 1960s, the number of livestock farmers decreased noticeably while average farm size increased, the result of livestock farming becoming increasingly specialized and no longer just a part of mixed farming (which is declining). Further, the merits of large-scale farming became obvious for poultry and pig farming as well as for cattle fattening, especially with technical and management advancements. Cattle breeders and dairy farmers, however, whose operations are strongly restricted by land scarcity, have shown slower business scale expansion than the aforementioned facility-intensive livestock farming which does not require as much land.

Overall scale expansion has been boosted by the growing numbers of exceptionally large-scale farmers. The recent emergence of super-scale production (farming more than 50,000 pigs, 300,000 chickens or 1,000 beef cattle) run by food processing companies, wholesalers or commercial feed processors has had a significant impact on supply capacity and price trends.

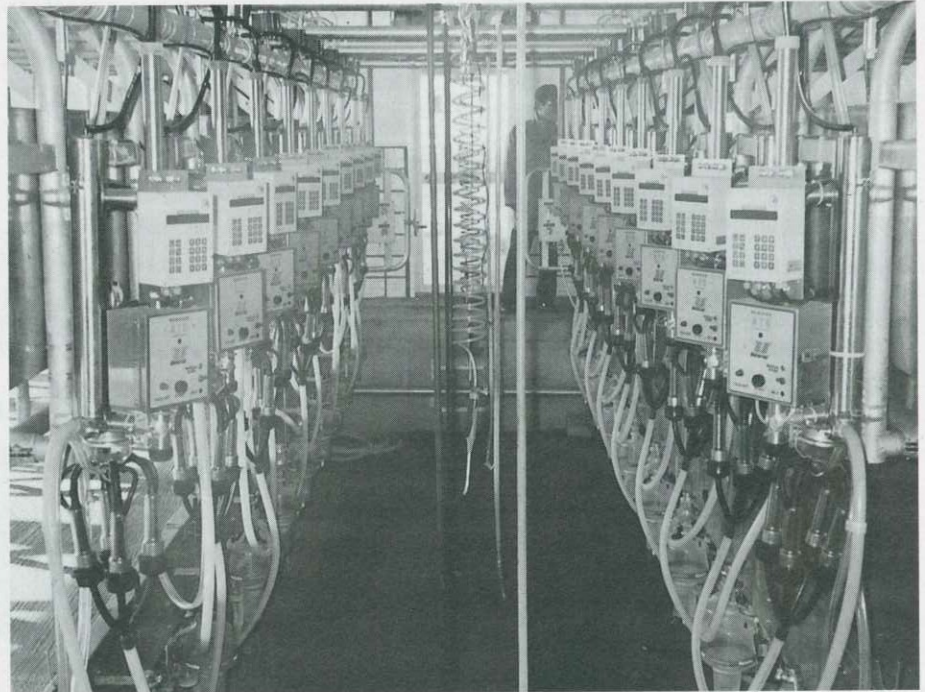
Current feed grain imports (maize, kaoliang and barley), on which small- and medium-size livestock (pig and chicken) farmers and beef cattle raisers are very dependent, have reached nearly 17 million tons per year. The self-sufficiency rate of concentrate feed (including wheat and rice bran) is now less than 10% in terms of total digestible nutrients (TDN).

It may be natural for chicken and pig farmers to rely almost entirely on concentrated feed but in Japan, even beef cattle farmers and dairy farmers rely on concentrated feed at a level substantially higher than other countries due mainly to limited land resources. As a result, self-sufficiency for feed on a TDN basis was about 45% for cattle breeders and 38% for dairy farmers in 1991. Especially in recent years, this trend has accelerated due to increased fodder imports of hay and rice straw which has accompanied the stagnation of domestically grown forage crops. This causes a structural distortion in large-sized livestock production which should be based on land.

Thus, the following tasks are urgent: more efficient land utilization by, for example, growing forage crops on set-aside paddies derived from the rice diversion policy; the promotion of grazing on public pastures managed by municipal



Artificially fertilized ovaries are used to breed animals with superior genetic qualities. The ovary can also be separated to produce twins.



Today, most milking is done by automatic milkers in modern milking parlors.

governments or farmers' cooperatives; and the efficient utilization of farming by-products such as rice straw.

The disposal of livestock excrement has become a serious problem holding back many farmers. This is particularly true in the case of facility-intensive chicken and pig farming (also called processed livestock farming as opposed to the large-sized cattle and horse farming known as land-intensive livestock farming) which often lack sufficient fields needed for (expensive) closed excrement disposal facilities. Add to this about 3,000 complaints annually from neighbors about water pollution, bad smells and pestilence.

Complaints are decreasing at a moderate rate, however, due partly to counter measures such as common excrement disposal facilities, moving farms and introducing facility leasing to individual farmers.

Meanwhile, the number of livestock farms has been declining; dairy and beef cattle farmers by about 6% annually with poultry and pig farmers shrinking more rapidly at 8% to 9% and 15% respectively. For all the above, the number of small-sized farms is decreasing rapidly while large-sized farms are steadily increasing. The declines are due to the lack of generational successors, aging farmers, labor shortages, debts and excrement disposal

problems. Thus it is vital to secure future farmers to take measures like training, utilizing abandoned farmland and assisting farmers in the payment of their debts.

Innovation in production technology

Regardless of which type of farming, Japan's livestock performance is, on average, fairly competitive with advanced countries. Government-initiated progeny testing systems of cattle have been established with the help of farmers and private associations. Frozen semen of proved sires as well as selected boars and sows from established inbred strains are supplied throughout the nation. In addition, a new embryo transference technique using in vitro external fertilization techniques was developed in the 1980s. This new method is already aiding the proliferation of Japanese cattle (*wagyu*) with superior genetic qualities.

In 1970, most of Japan's livestock production maintained a 90% self-sufficiency ratio. By 1980, it fell to somewhere between 70% and 79% for beef, and between 80% to 89% for fresh milk and dairy products (although eggs alone maintained 100% partly due to their commodity nature). In 1991, beef struggled to stay at 50% while other livestock products fell to between 70% and 79%. The basic reason for this was the inability of domestic production to keep up with the strong demand for livestock products. For example, strong demands from the restaurant industry have been responsible for an increase in imports, except for fresh milk.

However, supply/demand conditions for meat have entered an unprecedented phase. Meat prices are falling because of imports, but demand will not grow as Japan's dietary standard has exceeded the saturation level and the economic slowdown has discouraged people from dining out, depressing restaurant sales. Regarding dairy farming, fresh milk demand growth has halted after strong rises in the past. Current supply/demand conditions and prices shows high volatility.

Universal tariffication of agrarian imports are currently being negotiated at the Uruguay Round talks. Japan has already liberalized all livestock imports—with the exception of basic dairy products of which the Livestock

Japanese Livestock Farming

Year	Farming units (1,000)		Number of livestock (1,000)		Number of livestock per farming unit	
	1971	1991	1971	1991	1971	1991
Milk Cow	279	60	1,856	2,067	7	35
Cattle	797	221	1,759	2,796	2	13
Pig	398	36	6,904	11,335	17	315
Layers	1,373	11	123,906	139,706	90	13,911
Broilers	18	5	63,114	142,729	3,558	28,091

Industry Promotion Corporation (a quasi-governmental agency) is the sole importer when necessary. To protect domestic producers from major price falls and sharp increases in imports some measures are being considered. First, an emergency import restriction on beef has been initiated which will raise tariffs if imports increase more than 20% annually. Second, compensatory tariffs on pork will be levied to make up the difference between the import price and a standard domestic price.

There are several livestock price stabilization systems now in effect:

- 1) Raw milk for processing accounts for nearly 40% of total milk production. There have been reversed price gaps between the buyer's price, which milk processors can afford, and the seller's price at which dairy farmers maintain production with differences being compensated by the government. Also, to modify the price fluctuation of major dairy products like butter and skimmed milk powder, a mixed measure has been undertaken by the Livestock Industry Promotion Corporation. It increases stocks of domestic supply when prices are falling and releases them and/or imports to the market when prices are rising.
- 2) Similarly, when the price of beef and pork are declining, the Livestock Industry Promotion Corporation increases its stocks and releases them when prices are rising. As for pork, lower import tariffs are also applied when prices rise.
- 3) When feeder calves prices fall below the remunerative level, the government compensates the difference. This system was introduced one year before beef imports were liberalized.
- 4) When the price of major mixed feed

ingredients (maize, kaoliang and soybean meal) rises sharply above a certain level, farmers' payments are supplemented using a fund deposited by the government and feedmakers to a feed price stabilizing organization.

Hope for the future

Facing a steady decline in cattle and beef prices since the April 1991 beef import liberalization and the devastating impact on domestic producers, industry-related people have been making strenuous efforts to get through these hard times. Beef exporting countries strongly demanded that Japan liberalize imports and hoists the free trade flag during long-lasting beef trade negotiations. Yet they still maintain their own import restrictions which has made Japanese farmers deeply resentful and almost nihilistic. Dairy, pig and chicken farmers also are deeply troubled by the instabilities in demand and prices amplified by higher imports.

Last June the Ministry of Agriculture, Forestry and Fisheries published *Basic Direction of the New Policies for Food, Agriculture and Rural Areas*. Although this basic policy mainly focuses on cultivation, parallel work should be done for the livestock industry as well. Actual management indicators need to be worked out, and existing policies revised in response to a liberalized market. Through this process, we hope that Japanese livestock farming can have a bright future in the 21st century.

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