

SOME LEGAL AND ECONOMIC ASPECTS
OF
LIVESTOCK MARKETING*

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Efficient marketing of livestock in this country is hampered by at least two major restraints. The first restraint is the widespread practice of shipping live animals long distances to the country's major market - Manila. The second restraint consists of the many laws that concern the marketing of livestock and meat. To a large degree the first restraint is the result of the second one.

A general rule in marketing is: products that encounter a substantial weight loss during processing should be processed in or near the production areas - the processing plants should be raw-material-oriented. In actual practice, however, the plants that process meat for Manila are largely market-oriented due to legal restraints. These restraints operated to prevent the livestock and meat industry from becoming as efficient as it should be, and thus, inhibit the industry to the disadvantage of both producers and consumers.

OBJECTIVES

The first objective of this study is to review the rules and regulations involved in the marketing of livestock and meat, with special reference to large animals, including hogs. This analysis should provide a basis for the economic phase of the study, which has as its objective an examination of the economics of marketing live cattle and hogs versus chilled carcasses from distant areas to Manila. And if economics favors marketing chilled carcasses from distant areas, a logical third objective is to propose adoption of a meat inspection

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***Refer to p. 27.

system that will insure wholesome meat and meat products for consumers in Manila and throughout the country and permit the uninhibited flow of meat to all markets.

The requirements for meat in Manila are substantial. Manila consumers must depend upon producers located in many areas for their meat supplies. Providing the essential meat for the largest market in the country should not be a "privilege" paid for in large part by producers, but rather a "necessity" that calls for the most efficient marketing system possible. This is, in brief, the overall objective of the study.

PROCEDURE

Governmental regulation of livestock marketing stems from rules and regulations provided by the Revised Administrative Code, executive orders promulgated by the president, administrative orders issued by the secretary of Agriculture and Natural Resources, acts of Congress (including the Local Autonomy and Barrio Charter Acts) and city ordinances. In this study, a brief review and appraisal of the general rules and regulations will be presented, and then an examination and appraisal will be made of certain regulations pertaining to Manila. Although other political subdivisions reportedly have rules comparable to those of Manila, only Manila will be considered in this study.

Based on the data available regarding shipments of hogs and cattle from distant ports to Manila, a schedule of shipping records to be obtained for the economic phase of the study was developed as follows:

<u>Area</u>	<u>Number of records</u>	
	<u>Hogs</u>	<u>Cattle</u>
Davao	6	—
Cagayan de Oro	1	3
Cotabato	3	3
Cebu	3	1
Iloilo	3	6
Masbate	2	4
Negros Occidental (Bacolod)	1	1
	<u>19</u>	<u>18</u>

However, the ability or inability to obtain the essential cooperation of hog and cattle shippers, plus the inability to contact certain known shippers during the time allotted for field work resulted in a somewhat different record pattern. The final results were based upon shipping records obtained as follows:

<u>Area</u>	<u>Number of records</u>	
	<u>Hogs</u>	<u>Cattle</u>
Davao	2	—
Gen. Santos	3	3
Cotabato	2	—
Cagayan de Oro	2	6
Cebu	3	—
Bacolod	2	1
Iloilo	2	1
Masbate	2	2
	<hr/> 18	<hr/> 13

Information obtained from cooperating shippers included annual shipments, frequency of shipments, shrinkage data, costs for the most recently completed shipment, and source of livestock, problems encountered in shipping animals and related data. By obtaining shipping records in July and August, 1970, the best shipping season (the cool months) was avoided; so was the poorest shipping period (the hot months and during typhoons). Thus, the records obtained should be reasonably representative of average conditions, and further, they avoided the use of extensive recall information where actual records were not available or the shippers declined to refer to them.

The shipping cost data will be analyzed by shipping point or points depending upon the approximate number of days required to move animals by ship to Manila.

The eighteen hog shippers included in this study shipped nearly 85,000 hogs to Manila during the year (table 4). Based on some 1,400 shipments, the average shipment was fifty-nine hogs. But this varied widely between areas. For Cotabato, the average shipment was 116 head; for Cebu-Bacolod, the average shipment was twenty-eight head.

The fifteen cattle shippers sent a total of nearly 14,000 cattle to Manila during the year. The average shipment amounted to eighteen head.

Costs of shipping live animals and chilled carcasses have been computed on a per-head and on a per kilogram dressed-weight basis. To compute the dressed weight, a 70% yield was used for hogs and a 50% yield was used for cattle. If the head and feet are shipped intact on hog carcasses, the value of these items in Manila was assumed to at least

equal the extra shipping cost involved. In fact, a profit should be realized. Thus, carcasses without the head and feet were used in this analysis. Chances are good that this will be a common procedure in the future.

TABLE 4

SUMMARY OF HOG AND CATTLE SHIPMENTS,
THIRTY-THREE SHIPPERS,
1969-1970

Item	Gen. Davao	Santos	Cotabato	Cagayan de Oro	Cebu Bacolod	Iloilo Masbate
Approximate days to Manila	7	6	5	3	1.5	1
	<u>Hogs</u>					
Shippers	2	3	2	2	5	4
Total shipped, year	11,100	12,715	30,160	8,320	6,282	15,860
Number of ship- ments	208	168	260	156	225	416
Average shipment	53	76	116	53	28	38
	<u>Cattle</u>					
Shippers	—	3	—	6	—	6*
Total shipped, year	—	4,600	—	2,576	—	6,700*
Number of shipments	—	208	—	122	—	452*
Average shipment	—	22	—	21	—	15*

*Includes one shipper from Bacolod.

LEGAL CONSIDERATIONS

GENERAL RULES AND REGULATIONS¹

Public Order. Some of the major rules and regulations designed to maintain public order are as follows:

1. All large cattle in municipalities² that have attained the age of two years (except those owned by the National Government) must be branded with the registered brand of the owner and the registered brand of the municipality in the presence of the Municipal Mayor, Treasurer and Secretary or their representatives and cattle thus branded shall be registered with the Municipal Treasurer, who issues a certificate of ownership. (Secs. 515 and 516, Revised Administrative Code.)
2. The sale or transfer of large animals shall be registered with the Municipal Treasurer of the municipality in which the sale or transfer is made and the Treasurer will issue a Certificate of Title in favor of the transferee. (Secs. 520, 521, and 529, Revised Administrative Code.)
3. The slaughter of livestock is under the control and supervision of the government as follows:
 - a. Large cattle may not be slaughtered at a municipal slaughter house unless a permit to do so has been obtained from the Municipal Treasurer. (Sec. 532, Revised Administrative Code.)
 - b. The slaughter of male and female carabaos, horses, mares and cows was prohibited, unless authorized by the Secretary of Agriculture and Commerce, in order to increase the supply of work animals. (Republic Act 11, September 2, 1941.) This was later changed so that horses, mares and cows could be slaughtered but until May 16 1970, no permit would be issued for the

¹Adapted in part from: Anacleto B. Coronel, "Government Policies Affecting Marketing of Livestock," a paper presented at the NFAC-NEC-USAID-sponsored Workshop Seminar on Marketing Fruits and Vegetables, Feed Grains and Livestock held 24-29 November 1969.

²In places not organized into municipalities, branding is done in the presence of three persons appointed by the provincial governor.

slaughter of female carabaos if they were 20 years of age or older. (Executive Order No. 100, 8-1967.) On May 16, 1970, the slaughter of carabaos was prohibited. (Executive Order 234.) This was amended August 5 1970 to allow the slaughter of carabaos three years of age or over upon the issuance of a slaughter permit by the Municipal Treasurers or City Treasurers involved. (Executive Order No. 253.)

- c. City and barrio officials may impose taxes on the movement of animals out of their respective administrative areas. (Local Autonomy and Barrio Charter Acts.)

Health Requirements. The regulations designed to insure wholesome meat for consumers and protect animal health are as follows:

1. Chartered cities, municipalities, and municipal districts are empowered to establish or authorize the establishment or slaughterhouses, to provide for their veterinary or sanitary inspection, to inspect and regulate the use of the same, and to charge reasonable slaughter fees. No fees shall be charged for veterinary or sanitary inspection of meat from large cattle or other domestic animals slaughtered outside the city, municipality, or municipal district, when such inspection was made at the place the animals were slaughtered. Meat of large cattle or other domestic animals slaughtered in the slaughterhouses operated by the National Government may be sold in any city, municipality, or municipal district without restrictions and without paying any extra fees or levies of any kind whatsoever, either directly or indirectly (Commonwealth Act No. 655, January 21 1941.)
2. Ante-mortem examination and inspection shall be made of cattle, carabaos, horses, hogs, sheep, goats and deer to be slaughtered to prevent contamination of wholesome meat which random slaughtering might cause. Condemned animals are isolated and disposed of; suspected animals are allowed to be slaughtered separately from the apparently healthy ones. (Secs. 8-15, Bureau of Animal Industry, Administrative Order No. 9, S. 1954.)
3. Post-mortem examination and inspection shall be made of the carcasses and parts of all cattle, carabaos, horses, hogs, sheep, goats, and deer slaughtered at any national, city,

municipal, or licensed private abattoir. From this inspection, meat is marked "inspected and passed" if fit for human consumption, "condemned" if unfit for consumption, "passed for sterilization" or "retained" when parts are diseased. (Secs. 16-22, op. cit.)

4. The movement of animals within the country is under the control of the government as follows:
 - a. No animal may be shipped or transported from one province to another without a permit having been secured from the PC commander of the province (this requirement was repealed in April 1968) after a health certificate has been obtained from the provincial veterinarian concerned.
 - b. No animal may be moved or transported from a place, barrio, municipality or province covered by a quarantine order until the order has been lifted.

Brief Appraisal. It would appear that the provisions of Commonwealth Act No. 655, except for the fees and each place (instead of the national government) providing inspection service, would facilitate the free flow of meat, and meet the requirements of a national meat inspection scheme. But these provisions are apparently not followed. Regulations pertaining to the antemortem and postmortem inspection of animals to insure wholesome meat for consumers are essential. Laws to protect animal health are important too. However, other regulations are designed for order — to prevent rustling. But the registration and even licensing of cars does not prevent "carnapping," nor does locking house doors and windows prevent thievery. Thus, it would appear that, aside from earning revenue for governmental units, the public-order regulations do little more than hinder or restrain the free marketing of livestock.

VETERINARY INSPECTION BOARD

An act of Congress (Republic Act 1842 of June 1957) created a Meat Inspection Board for the city of Manila. The act combined into a single agency all functions and related activities associated with veterinary work in the city. Thus, the Veterinary Inspection Service of the Manila Health Department, the Collection Service of the Department of Finance, the Cleaning, Sanitation and Disposition Service of the Department of Public Services, and the Meat Delivery

Service of the Department of Engineering and Public Works were consolidated into the Meat Inspection Board (MIB).

A second act of Congress (Republic Act 3865 of June 1964) amended the original act by changing the name of the MIB to the Veterinary Inspection Board (VIB), whose functions were to provide veterinary and regulatory services covering meat, poultry, fish, milk, and their products; and to provide impounding service. The VIB is the only governmental agency in the country involved in veterinary public health work that is autonomous of the Health Department of the Bureau of Animal Industry.

Among the board's specific duties of importance in this study are the following:³

1. Supervise and control all public and private abattoirs, corrals, meat-processing operations, butcher shops, packing plants and rendering operations.
2. Regulate and control the slaughtering of livestock; prohibit the slaughtering of livestock unless supervised by the board; and inspect meat and meat products destined for human consumption. The general procedures followed in meat inspection are largely governed by the "Rules and Regulations Governing Meat Inspection in the Philippines," (A.O. No. 9) and partly by procedures established by the VIB.
3. License and inspect slaughterhouses, packing plants and butcher shops as well as places where meats are dressed, processed or offered for sale.
4. Provide for measures to control and prevent the transmission of animal diseases to man.
5. Dispose of livestock and meat unfit for human consumption.

It should be noted that the above-mentioned legislative act is supported by Manila Ordinance No. 4739, which prohibits the sale of meat from clandestine operations; and Sec. 996-a of the Revised Ordinances of the City of Manila, which specifies that persons selling unwholesome, or diseased meat are criminally liable. Nevertheless, for the year 1967-1968 more than 7,000 kgs. of meat from clandestine

³Adapted in part from: Primo Arambulo, "The Manila Veterinary Inspection Board - Pioneer Veterinary Public Health Office in the Philippines," *Animal Husbandry and Agricultural Journal*, October 1969.

operations, and of unwholesome condition and being offered for sale were confiscated.

Additional City of Manila veterinary ordinances of importance consist of:

1. All animals . . . shall be subject to inspection by the veterinarians of the Bureau of Agriculture (now the Bureau of Animal Industry) before being admitted into the city. (Sec. 1124.)
2. It shall be the duty of every owner of a bovine animal, over two years old, kept within the limits of the city, to brand such animal with the owner's private brand, a true copy of which brand shall be filed in triplicate with the City Treasurer, and to register such animal with the City Treasurer who shall, at the time of registration, brand the animal with the brand of the city. (Sec. 1252.)
3. It shall be unlawful for any person to sell or offer for sale fresh meat within a radius of 250 meters from any city public market: Provided, this ordinance shall not apply to cold storage meat imported from foreign countries or from any province, town, barrio or other place of the Philippines when such meat is duly marked and accompanied by a certificate showing that the animals furnishing the meat have been subject to an antemortem and postmortem examination and found good for human consumption by a veterinarian of the Bureau of Animal Industry, and when said cold storage meat has been kept for not less than 20 days in any establishment duly equipped for cold storing meat and other food products. (Sec. 997-1.) More recently, the 20-day requirement was repealed by Manila Ordinance 4739 which prohibits meat of animals slaughtered in other areas of the country from entering the Manila market (unless it is from an accredited plant.)

Animals Inspected. The VIB has inspected an average of more than 4 million animals annually during the past four years (table 1.) Approximately 84% of the inspected slaughter has been chickens and other poultry. Hogs represented nearly 15% of the inspections; and other kinds of animals represented only about 1%, with cattle and carabaos being the most important. However, carabaos have increased in number inspected while cattle have decreased.

The total dressed weight of meat animals inspected has risen

sharply from approximately 34.4 million kilograms in 1966-1967 to nearly 46.4 million kilograms in 1969-1970. Much of this increase in inspected dressed weight of cattle has declined and that of poultry, the fourth largest source of meat, has varied over the four-year period.

It is important to note three facts concerning the average dressed weights of animals slaughtered under VIB inspection during the past four years. They are:

1. The average dressed weight of hogs has increased 3.1 kilograms/head, or 7%.
2. The average dressed weight of cattle has increased 23.3 kilograms/head, or 15%.
3. The average dressed weight of chickens has increased 0.2 kilogram/head, or 33%.

From this brief analysis, it appears that farmers have already taken steps to increase the output of meat by producing more meat per animal. This is a good and necessary step in meeting the demand for more protein foods. But their efforts need to be supplemented by governmental efforts to improve marketing efficiency, if even greater gains are to be obtained in the production of protein foods.

TABLE 1

INSPECTED SLAUGHTER OF ANIMALS, VIB, MANILA

Item	1966-67	1967-68	1968-69	1969-70
		<u>Thousand head</u>		
Hogs	541.7	580.1	617.1	654.2
Carabaos	12.7	19.8	39.2	40.2
Cattle	33.9	30.1	23.5	24.4
Horses	2.3	3.0	0.0	0.1
Goats	0.1	0.1	0.4	0.2
Chickens	2,964.5	3,276.8	3,439.1	2,789.9
Other*	399.0	385.6	336.0	268.5
TOTAL	3,954.2	4,295.5	4,455.9	3,770.5

	<u>Thousand kilograms, dressed weight</u>			
Hogs	24,601.1	26,937.5	29,193.3	31,772.2
Carabaos	2,288.3	3,030.4	7,135.5	7,678.6
Cattle	5,249.1	4,619.7	3,879.7	4,344.8
Horses	215.2	281.9	0.7	13.1
Goats	0.9	1.6	4.4	2.8
Chickens	1,822.5	2,276.3	2,783.0	2,264.6
Other*	<u>198.4</u>	<u>766.4</u>	<u>163.4</u>	<u>283.5</u>
TOTAL	34,375.5	37,913.8	43,160.0	46,359.6

	<u>Kilograms/head, dressed weight</u>			
Hogs	45.4	46.4	47.3	48.5
Carabaos	180.2	153.0	182.0	191.0
Cattle	154.8	153.5	165.1	178.1
Horses	93.6	94.0	104.3	129.2
Goats	11.8	12.9	11.5	11.4
Chickens	0.6	0.7	0.8	0.8

*Largely other poultry.

Source: VIB, Manila.

Financial Data. Financial data for the past four years indicate that the VIB, after a deficit in 1966-1967, has been essentially self-supporting, and has contributed modest to large sums to the city and national governments (the antemortem fees go to the latter). The general data are as follows:

<u>Item</u>	<u>1966-67</u>	<u>1967-68</u>	<u>1968-69</u>	<u>1969-70</u>
	<u>Thousand pesos</u>			
Municipal collections	2,343.9	2,575.1	2,915.1	3,214.3
Antemortem fee	<u>370.5</u>	<u>395.8</u>	<u>427.4</u>	<u>451.1</u>
Total collections	2,714.4	2,970.9	3,342.5	3,665.4
Operating budget	2,821.5	2,803.2	2,915.1	2,460.5
Excess	- 107.1	167.7	882.0	1,204.9

Some of the fees collected relevant to this study are as follows:⁴

Stockyard:	₱0.20 for hogs/day 0.30 for cattle/day
Antemortem inspection:	0.60 for hogs 0.90 for cattle
Slaughter and postmortem inspection:	0.05/kilogram
Storage and chilling:	0.25/hog carcass/day 0.30/quarter of beef/day 0.60/hog carcass or quarter of beef within Manila; double the rate for delivery to suburban points.

The operating expenses cover a wide range of cost items but are heavily represented by wages and salaries (and related benefits) of the some 440 employees of the VIB.

Sources of Livestock. Except for chickens and other poultry, a high proportion of the animals slaughtered under supervision of the VIB apparently come from distant areas and arrive in Manila by ship and/or railway receipts for the same year, given in table 2.

TABLE 2
ANIMALS ARRIVING IN MANILA BY SHIP AND RAILWAY, 1966-1967

Item	No. of Head	Item	No. of Head
Hogs	455,768	Horses	4,402
Carabaos	12,738	Goats	6,850
Cattle	37,277	Chicken	26,078

Source: *Livestock and Poultry Marketing Bulletin*, BAI, Department of Agriculture and Natural Resources, Vol. I, No. 4, January - March 1970.

The number of hogs arriving by ship and/or railway represented more than 75% of the inspected hog slaughter in 1966-1967. Carabaos

⁴VIB Resolution No. 1, S.-1969 as approved 13 January 1970.

arriving by ship and/or railway represented about 2/3 of the inspected slaughter of carabaos. Substantially, more cattle, horses and goats arrived by ship and/or railway than were slaughtered under inspection. But some of these animals were first used for purposes other than meat or sold live on an individual basis. Thus, arrivals by ship and/or railway may logically exceed reported slaughterings. Even so, it is also logical to expect that a sizeable share of the slaughterings came from distant areas.

The leading sources of the animals sent to Manila by ship and/or railway in 1966-1967 are presented in table 3.

TABLE 3
LEADING SOURCES OF ANIMALS ARRIVING IN
MANILA BY SHIP AND/OR RAILWAY, 1966-1967

Rank	Hogs	Carabaos	Cattle	Horses	Goats	Chickens
<u>Source and number in thousands</u>						
1	Davao 87.8	Occ. Neg. 3.4	Iloilo 8.2	Masbate 2	Capiz 2.1	Iloilo 10.6
2	Cebu 46	Masbate 1.7	Masbate 6.3	Or. Neg. 0.8	Masbate + 0.9	Cebu 6.6
3	Cotabato 44.3	Iloilo 1.2	Cotabato 3.5	Occ. Neg. 0.4	Iloilo 0.7	Albay 2.1
4	Iloilo 43.3	Cotabato 1.2	Cagayan de oro 3.3	Mindoro 0.2	Albay 0.7	Masbate 2.1
5	Ozamis City 41.1	Cebu 1	Mindoro Occ. 3	Cebu 0.2	Naga 0.5	Naga 1.1

Ibid.

The proportion of the different kinds of animals sent to Manila by ship and/or railway accounted for by the five leading sources in 1966-1967 was as follows:

Hogs:	58%	Horses:	82%
Carabaos:	70%	Goats:	72%
Cattle:	65%	Chickens:	86%

These data simply indicate that a few sources generally account for the bulk of the livestock shipped to Manila.

The exact distance that the livestock was actually shipped is not readily available. However, the approximate direct air distance from the city or the major port (in the provinces) to Manila may be measured. Of course, the actual rail or ship distances will undoubtedly be greater than the direct air distances, but the latter will serve as an indication of the relative distances involved. Some of the approximate direct air distances are as follows:

	<u>Km.</u>		<u>Km.</u>
Gen. Santos	1090	Negros Occidental (Bacolod)	483
Davao	969	Iloilo	455
Cotabato	895	Masbate (Masbate)	372
Cagayan de Oro	790	Albay (Legaspi)	330
Ozamis City	776	Camarines Sur (Naga)	265
Negros Oriental (Dumaguete)	639	Mindoro Occidental (San Jose)	240
Cebu (Mactan)	563		

Brief Appraisal. It appears that the city of Manila, under Republic Act 3865, has a good livestock and meat inspection system – a system that should insure wholesome meat and meat products for its people. But the law requires that live animals be shipped to Manila for slaughter in accredited abattoirs and this is not an economic practice for animals produced in distant areas.

It is also evident that the VIB's activities are generally more than self-supporting. Further, it is apparent that a substantial share of the major livestock items (except poultry) comes to Manila from distant areas – in fact, many animals come from areas located substantial distances away. And lastly, it has been shown that livestock producers have been increasing the output of meat per animal. Thus, the stage is set – the time is appropriate – for the government to provide the essential legislation that will permit more efficient marketing of livestock and meat.

HOG SHIPMENTS

TOTAL COST

The total cost of shipping live hogs to Manila ranged from ₱20.57/

head for Iloilo-Masbate to ₱48.63/head for Davao (table 5). With the exception of Cagayan de Oro, the cost per hog declined as the shipping time to Manila declined, as should be expected. The shippers in Cagayan de Oro incurred relatively high assembly costs in procuring hogs from the Bukidnon area that raised their total cost above that for Cotabato.

TABLE 5
WEIGHT DATA AND TOTAL COST OF SHIPPING HOGS,
FARM TO MANILA BUYER, EIGHTEEN SHIPPERS, 1970

Item	Davao	Gen. Santos	Cotabato	Cagayan de Oro	Cebu- Bacolod	Iloilo- Masbate
Average live weight/head (kgs.)						
At farm:	80	91	73	75	79	58
In Manila:	64	86	66	69	74	53
Kgs. shrinkage	16	5	7	6	5	5
Per cent shrink- age	20	5.5	9.6	8	6.3	8.6
Cost/head (pesos):						
Shipping	20.39	22.59	17.22	22.68	10.43	10.04
Shrinkage	<u>28.24</u>	<u>14.56</u>	<u>11.82</u>	<u>10.98</u>	<u>13.61</u>	<u>10.53</u>
Total	48.63	37.15	29.04	33.66	24.04	20.57

A substantial share (33 to 58%) of the total cost for shipments from the different ports was represented by weight shrinkage of the hogs. The actual shrinkage ranged from 5 to 16 kgs./hog. But since the average weight of the hogs shipped from the different areas varied from 58 to 91 kgs., the percentage shrink ranged from 5.5% for General Santos to 20 for Davao.

The question that must be answered is: In view of the relatively high cost of shipping live hogs to Manila and the weight shrinkage involved, would it be possible to reduce shrinkage and other costs involved in marketing live hogs by processing them in the various port areas and shipping chilled hog carcasses to Manila?

DETAILED COSTS AND SAVINGS

Some notes regarding the procedures used in computing costs and savings are in order:

1. The delivery cost for chilled carcasses moved from a processing plant to the dock and from the dock to a storage in Manila was computed at half the delivery rate per carcass from Vitas to retailers in Manila. The half rate was used to reflect savings in moving large quantities from point to point rather than large to small quantities at numerous points and collecting for the deliveries.
2. The ship transport cost was computed at ₱0.20/kg. for Davao, Gen. Santos and Cotabato, ₱0.12 for Cagayan de Oro and ₱0.10/kg. for Visayan ports. These rates are in line with the prevailing contract rates for frozen foods in line with the ₱0.48 kilogram rate for shipping frozen meat from New Zealand and Australia to Manila, which requires eighteen to twenty-four days. It is believed that regular, volume shippers can contract shipments at or near the assumed rates.
3. The fill for hogs amounts to about 4 kgs./90-kg. animal. With feeding enroute, little fill will be lost. Thus, most of the shrinkage must be carcass loss. For each location, a conservative projection of the savings in shrinkage was made, as shown in the footnote to the tables.
4. The chilling and storage charge used was the daily rate charged by Vitas. It was assumed that the carcasses would be held in chilled storage for an average of two days.
5. The saving per kilogram for a chilled carcass reflects both cost and dressed weight differences.

Davao. Live hogs had an average farm weight of 80 kgs. in the Davao area, but shrinkage reduced this to 64 kgs. in Manila, equivalent to 44.8 kgs. of dressed weight at a 70% yield (table 6). The total shipping cost amounted to ₱48.63/hog.

By processing the hogs in Davao and allowing for approximately a 2% weight shrink in cooling the carcass and a 1% weight shrink during transport, an 80-kg. hog should provide 52.5 kgs. of dressed meat in Manila. This process would incur an extra charge for cooling and storage but shrinkage, transport to the dock, loading, ship transport,

unloading and delivery costs should be reduced — some by substantial amounts. The cost of feed enroute to Manila and the cost of a convoy would be eliminated; charges for tong, fees, and permits should be eliminated as this study will propose. Assembly costs were not projected to change. However, with a processing plant in the area, the two phases of assembly may be combined in some instances with some savings likely.

As a result, the cost of shipping a chilled carcass to Manila has been projected at ₱23.68 (per carcass), which is equal to ₱0.45/kg. of dressed meat in Manila. This represents a substantial saving (₱0.64/kg.) from the cost of shipping live hogs.

Gen. Santos. The live weight of hogs shipped from Gen. Santos averaged 91 kg. at the farm (table 7). (But farm weight here refers to the weight at public scales in Gen. Santos). Heavy feeding enroute to Manila was practiced by the shippers, so the weight in Manila had only dropped to 68 kgs., giving a modest shrink of only 5.0 kgs. The live weight in Manila was equivalent to 60.2 kgs. of dressed weight. The total cost amounted to ₱37.15/hog. This was equivalent to a cost of ₱0.62/kg. of dressed meat.

Assuming the same chilled carcass shrink rates (as for Davao), a 91-kg. hog processed in Gen. Santos should yield 62 kgs. of dressed carcass in Manila. Shipping chilled carcasses would result in an extra transport charge (for movement to the processing plant), an extra charge for chilling and storage, and a somewhat higher ship-transport cost. The latter results from heavy carcasses being transported on a per-kilogram basis rather than on a per-head basis. Savings have been projected for the other cost items due to reductions in costs or complete elimination of the items. Shrinkage was the major item reduced in importance; feed cost enroute to Manila was the major item eliminated.

The cost of shipping a chilled carcass to Manila was projected at ₱22.07 (per carcass), equivalent to ₱0.36/kg. of dressed meat. This represents a saving of ₱0.26/kg., or about 42% of the cost for shipping live hogs.

TABLE 6

DAVAO: ITEMIZED SHIPPING COST FOR HOGS AND
PROJECTED SAVING WITH LOCAL SLAUGHTER
AND SHIPMENT OF CHILLED CARCASSES

Item	Live hog		Chilled carcass	
	80 kgs. at farm 64 kgs. in Manila Dressed wt., 44.8 kgs.		80 kgs. at farm 77 kgs. at plant Dressed wt., 52.5 kgs.	
			Cost	Saving
	Pesos/hog		Pesos/carcass	
Transport:				
To highway	2.00		2.00	—
To corral or plant	0.85		0.85	—
To dock	0.76		0.30	0.46
Tong	0.16		—	0.16
Loading	0.42		0.25	0.17
Ship transport	10.74		10.50	0.16
Feed enroute	2.22		—	2.22
Convoy	1.19		—	1.19
Unloading	0.29		0.15	0.14
Delivery	1.07		0.30	0.77
Fees, permits	0.69		—	0.69
Shrinkage*	28.24		8.75	19.49
Chilling, storage, 2 da.	—		0.50	-0.50
TOTAL COST	48.63		23.68	24.95
Pesos/kilogram, Manila				
Live weight	0.76		—	—
Dressed weight	1.09		0.45	0.64

*Shrinkage saving projected at 69% of the live animal shrinkage cost.

TABLE 7
 GEN. SANTOS: ITEMIZED SHIPPING COST FOR
 HOGS AND PROJECTED SAVING WITH LOCAL SLAUGHTER
 AND SHIPMENT OF CHILLED CARCASSES

Item	Live hog		Chilled carcass	
	91 kgs. at farm 86 kgs. in Manila Dressed wt., 60.2 kgs.		91 kgs. at farm 90.5 kgs. at plant Dressed wt., 62 kgs.	
		Cost	Saving	
	Pesos/hog			Pesos/carcass
Transport:				
To highway	—	—	—	—
To corral or plant	—	1.10	-1.10	
To dock	1.10	0.30	0.80	
Tong	0.17	—	0.17	
Loading	0.98	0.25	0.73	
Ship transport	10.58	12.48	-1.99	
Feed enroute	6.25	—	6.25	
Convoy	1.34	—	1.34	
Unloading	0.40	0.15	0.25	
Delivery	1.48	0.30	1.18	
Fees, permits	0.29	—	0.29	
Shrinkage*	14.56	6.99	7.57	
Chilling, storage, 2 da.	—	0.50	-0.50	
TOTAL COST	37.15	22.07	15.08	
Pesos/kilogram, Manila				
Live weight	0.43	—	—	
Dressed weight	0.62	0.36	0.26	

*Shrinkage saving projected at 52% of the live animal shrinkage cost.

Cotabato. In the Cotabato area, the farm weight of hogs shipped to Manila average 73 kgs. (table 8). Shrinkage amounted to 7 kgs., thus giving a delivered weight of 66 kgs., or a dressed weight of 46.2 kgs. The total cost of shipping live hogs averaged ₱29.04/head, or, on a dressed-weight basis, ₱0.63/kg.

A live hog weighing 73 kgs. in Cotabato should give a chilled carcass weighing 49 kgs. in Manila, after allowing for approximately 3% shrink in carcass weight. Extra costs would be incurred for delivery to the processing plant and for chilling and storage. Savings were projected for all the other cost items involved, with the largest savings resulting from reduced shrinkage and elimination of feed cost enroute to Manila.

The net result was a projected cost of ₱17.84 for shipping a chilled carcass to Manila. This amount was equivalent to a cost of ₱0.35/kg. of dressed meat and indicated a saving of ₱0.27/kg., or about 43%.

Cagayan de Oro. The live weight of hogs average 75 kgs./animal in the Cagayan de Oro area (table 9.) Shrinkage enroute to Manila averaged 6 kgs. This left a live animal weight of 69 kgs., equivalent to a dressed carcass weight of 48.3 kgs. Due to the relatively high assembly costs for hogs in this area (compared with Cotabato, for example), the total shipping cost amounted to ₱33.66/hog and exceeded that for Cotabato by more than ₱4.50/head. On a dressed-weight basis, the cost amounted to ₱0.70/kg. — greater than that for either Gen. Santos or Cotabato.

If a 75-kg. live hog was slaughtered in the area and the chilled carcass sent to Manila, the carcass upon arrival should weight 50.4 kgs. No savings were projected for assembling costs although some would likely occur if a processing plant was properly located in the area. The cost of chilling and storage would represent an added charge. But savings were projected for all the other cost items. The extent of savings was very low for ship transport and largest for the potentially reduced shrinkage.

The total cost projected for shipping chilled carcasses to Manila (from hogs processed in Cagayan de Oro) amounted to ₱22.76/carcass or ₱0.45/kg. dressed weight. This results in a saving of ₱0.25 kg. of dressed carcass, or about 36%.

TABLE 8

COTABATO: ITEMIZED SHIPPING COST FOR HOGS AND
PROJECTED SAVING WITH LOCAL SLAUGHTER AND
SHIPMENT OF CHILLED CARCASSES

Item	<u>Live hog</u>		<u>Chilled carcass</u>	
	73 kgs. at farm 66 kgs. in Manila Dressed wt., 46.2 kgs.		73 kgs. at farm 72 kgs. at plant Dressed wt., 49 kgs.	
			Cost	Saving
	<u>Pesos/hog</u>		<u>Pesos/carcass</u>	
Transport				
To highway	—		—	—
To corral or plant	—		1.38	—1.38
To dock	1.38		0.30	1.08
Tong	0.08		—	0.08
Loading	1.14		0.25	0.89
Ship transport	10.58		9.88	0.70
Feed enroute	1.81		—	1.81
Convoy	0.53		—	0.53
Unloading	0.50		0.15	0.35
Delivery	0.50		0.30	0.20
Fees, permits	0.70		—	0.70
Shrinkage*	11.82		5.08	6.74
Chilling, storage, 2 da.	—		0.50	—0.50
TOTAL COST	29.04		17.84	11.20
Pesos/kilogram, Manila	—		—	—
Live weight	0.44		—	—
Dressed weight	0.63		0.36	0.27

*Shrinkage saving project at 57% of the live animal shrinkage cost.

TABLE 9
CAGAYAN DE ORO: ITEMIZED SHIPPING COST FOR
HOGS AND PROJECTED SAVING WITH LOCAL SLAUGHTER
AND SHIPMENT OF CHILLED CARCASSES

Item	Live hogs	Chilled carcass	
	75 kgs. at farm 69 kgs. in Manila Dressed wt., 48.3 kgs.	75 kgs. at farm 74 kgs. at plant Dressed wt., 50.4 kgs.	Cost
	<u>Pesos/hog</u>	<u>Pesos/carcass</u>	
Transport:			
To highway	3.54	3.54	—
To corral or plant	6.13	6.13	—
To dock	0.42	0.30	0.12
Tong	—	—	—
Loading	1.88	0.25	1.63
Ship transport	6.14	6.10	0.04
Feed enroute	1.11	—	1.11
Convoy	0.94	—	0.94
Unloading	0.66	0.15	0.51
Delivery	0.70	0.30	0.40
Fees, permits	1.16	—	1.16
Shrinkage*	10.98	5.49	5.49
Chilling storage, 2 da.	—	0.50	-0.50
TOTAL COST	33.66	22.76	10.90
Pesos/kilogram, Manila			
Live weight	0.49	—	—
Dressed weight	0.70	0.45	0.25

Cebu-Bacolod. Shipments from Cebu and Bacolod were combined in this analysis, because the shipping times to Manila were nearly identical. The hogs shipped from these areas had an average farm weight of 79 kgs. (table 10). Upon arrival in Manila, the average weight was 74 kgs./hog — a shrinkage of 5 kgs. The total cost amounted to ₱24.04/hog. With an average dressed weight of 51.8 kgs., the cost amounted to ₱0.46/kg.

*Shrinkage saving projected at 50% of the live animal shrinkage cost.

Using the assumed chilled carcass shrinkage rates, a 79-kg. hog processed in this general area should yield a carcass weighing 53.2 kgs. in Manila. But shipping chilled carcasses will result in an extra assembling charge, a slightly higher ship transport charge, and of course a chilling and storage charge. Other cost items, especially shrinkage and feed, will be reduced.

The net result is that shipping a chilled carcass has been project to cost ₱16.37/carcass or ₱0.31/kg. The cost per kilo for a chilled carcass (compared with that for the carcass of a live animal) represents a saving of ₱0.15/kg., or approximately 33%.

**CEBU-BACOLOD: ITEMIZED SHIPPING COST FOR
HOGS AND PROJECTED SAVING WITH LOCAL SLAUGHTER
AND SHIPMENT OF CHILLED CARCASSES**

Item	Live hog 79 kgs. at farm 74 kgs. in Manila <u>Dressed wt., 51.8 kgs.</u>	Chilled carcass 79 kgs. at farm 78 kgs. at plant <u>Dressed wt., 53.2 kgs.</u>	
	Pesos/hog	Cost	Saving
		<u>Pesos/carcass</u>	
Transport:			
To highway	—	—	—
To corral or plant	—	1.34	-1.34
To dock	1.34	0.30	1.04
Tong	—	—	—
Loading	0.50	0.25	0.25
Ship transport	5.14	5.36	-0.22
Feed enroute	1.27	—	1.27
Convoy	0.72	—	0.72
Unloading	0.50	0.15	0.35
Delivery	0.67	0.30	0.37
Fees, permits	0.29	—	0.29
Shrinkage*	13.61	8.17	5.44
Chilling, storage, 2 da.	—	0.50	-0.50
TOTAL COST	<u>24.04</u>	<u>16.37</u>	<u>7.67</u>
<hr/>			
Pesos/kilogram, Manila			
Live weight	0.32	—	—
Dressed weight	0.46	0.31	0.15

*Shrinkage saving projected at 40% of the live animal shrinkage cost.

Iloilo-Masbate. These two areas were combined for analysis purposes because the shipping times to Manila were practically the same. The hogs shipped from these areas had an average farm weight of 58 kgs. (table II). Upon arrival in Manila, the average live weight amounted to 53 kgs. giving a shrinkage of 5 kgs., or nearly 9%. The total cost involved amounted to an average of ₱20.57/hog. On a dressed-weight basis, this cost amounted to ₱0.55/kg.

TABLE 11
ILOILO-MASBATE: ITEMIZED SHIPPING COST FOR
HOGS AND PROJECTED SAVING WITH LOCAL SLAUGHTER
AND SHIPMENT OF CHILLED CARCASSES

Item	<u>Live hog</u> 58 kgs. at farm 53 kgs. in Manila Dressed wt., 37.1 kgs.		<u>Chilled carcass</u> 58 kgs. at farm 57 kgs. at plant Dressed wt., 38.7 kgs.	
	Pesos/hog		Cost	Saving
	Pesos/hog		Pesos/carcass	
Transport:				
To highway	—	—	—	—
To corral or plant	0.57	0.57	—	—
To dock	0.91	0.30	0.61	0.61
Tong	0.02	—	0.02	0.02
Loading	0.64	0.25	0.39	0.39
Ship transport	4.44	3.89	0.55	0.55
Feed enroute	0.17	—	0.17	0.17
Convoy	0.54	—	0.54	0.54
Unloading	0.50	0.15	0.35	0.35
Delivery	0.85	0.30	0.55	0.55
Fees, permits	1.40	—	1.40	1.40
Shrinkage*	10.53	5.69	4.84	4.84
Chilling, storage, 2 da.	—	0.50	-0.50	-0.50
TOTAL COST	20.57	11.65	8.92	8.92
Pesos/kilogram, Manila				
Live weight	0.39	—	—	—
Dressed weight	0.55	0.35	0.25	0.25

*Shrinkage saving project at 46% of the live animal shrinkage cost.

By processing the animals and shipping chilled carcasses, substantial savings may be achieved. The only extra cost involved will be for chilling and storage. Savings were projected for all the other items, ranging from ₱0.02 for tong, which should not exist to ₱4.84 for shrinkage, which must be reduced.

As a result of the projected savings possible through the shipping of a chilled carcass rather than a live animal, the cost per carcass amounted to ₱11.65. On a per-kilogram basis, the cost was ₱0.30; the saving was ₱0.25. This represents a cost reduction of 45%.

Brief Appraisal. The potential savings available through marketing chilled carcasses rather than live hogs are substantial. For the areas studied, the saving per kilogram of dressed weight ranged from ₱0.15 to ₱0.64. On percentage basis the saving ranged from 33 to 59%. The costs and savings may be summarized as follows:

Area	Peso cost/kilogram, dressed weight		Saving		Increased weight of carcass (kilos)
	Live hog	Chilled carcass	Pesos/ kilogram	Per cent	
Davao	1.09	0.45	0.64	59	7.7
General Santos	0.62	0.36	0.26	59	1.8
Cotabato	0.63	0.36	0.27	43	2.8
Cagayan de Oro	0.70	0.45	0.25	36	2.1
Cebu-Bacolod	0.46	0.31	0.15	33	1.4
Iloilo-Masbate	0.55	0.30	0.25	45	1.6

Other considerations are also involved. The chilled carcasses upon arrival in Manila should weigh from 1.4 to 7.7 kgs. more than the carcasses of live hogs slaughtered in Manila due to reduced shrinkage. If an average of 2 kgs. was gained per carcass and applied to just half of the 456,000 hogs arriving in Manila by ship and/or railway (see table 2), a gain of 456,000 kgs. of meat would be had. At a wholesale price of ₱3.50/kg., the extra meat would have a value of nearly ₱1.6 million. This should represent a substantial gain to producers and consumers.

Further, by processing hogs in the major production areas, the by-products (blood meal, bone meal and meat scraps) be available for local use rather than shipped back to the producing areas from Manila. This too represents a potential saving.

The best way to market yellow corn grown in distant areas is through feeding it to hogs and marketing the corn as pork. With an improved marketing system, hog production should be stimulated, and a larger market will be available in the corn-producing areas for yellow corn. This should help solve the marketing problems for corn and even other feed grains.

Establishing processing plants in areas outside of Manila should provide employment opportunities and aid in the economic growth of these areas. And it is likely that wage rates for skilled processing plant workers would be lower in other areas than in Manila. This would be a "plus" factor too and enable the processing job to be performed at a lower cost than at present.

CATTLE SHIPMENTS

Cattle shipments will be analyzed by regions (Mindanao and Visayas) and by firms within each region having weight data and those without weight data. This procedure simply means that the results will not be as precise for any shipping point as for hogs, but the general principles involved will be adequately illustrated.

TOTAL COST

The firms in Mindanao (with weight data) shipped a total of nearly 4,500 cattle to Manila during the year and had an average shipment of twenty-nine head (table 12). The average farm weight was 327 kgs., the Manila weight was 304 kilos, giving a shrinkage of 23 kgs., or 7.0%. Firms with weight data in the Visayas area shipped 1,500 cattle during the year, with an average shipment of seventeen head. Cattle from this area weighed 263 kgs. at the farm, 244 kgs. in Manila, giving a shrinkage of 19 kgs., or 7.2%.

For the firms without weight data, those in Mindanao shipped nearly 2,700 head, with an average of fifteen head/shipment. Those in the Visayas area shipped a total of 5,200 head and the average shipment was fourteen.

The cost of shipping live cattle to Manila ranged from ₱82.26 to ₱114.33/head. The highest cost was for the Mindanao shippers without weight data; the lowest cost was for the Visayan shippers with weight data. The total cost for all Mindanao shippers averaged about ₱112.00/head; for all Visayan shippers, about ₱86.50.

DETAILED COST AND SAVINGS

Some notes regarding the procedures used in computing savings are:

1. The delivery cost for chilled carcasses moved from a processing plant to the dock and from the dock to a storage in Manila was computed at half the delivery rate per carcass from Vitas to retailers in Manila. The half rate was used to reflect savings in moving large quantities from point to point, rather than large quantities from a point to small quantities at numerous points and collection for the deliveries.
2. The ship transport cost was computed at ₱0.20 centavos/kg. for Mindanao and 10 centavos/kg. for Visayas. These rates are in line with the prevailing contract rates for frozen foods, and in line with the ₱0.48/kg. rate for shipping frozen meat from New Zealand and Australia to Manila, which requires eighteen to twenty four days. It is believed that regular, volume shippers can contract shipments at or near the assumed rates.
3. For each shipping area, a conservative projection of the saving in shrinkage was made, as shown in the footnote to the tables.
4. The chilling and storage charge used was the daily rate charged by Vitas. It was assumed that the carcasses would be held in chilled storage for an average of two days.
5. The saving per kilo for a chilled carcass reflects both cost and dressed weight differences.

Mindanao. The firms with weight data shipped cattle having an average weight at the farm of 327 kgs. (table 13). Upon arrival in Manila, the animals had an average live weight to 304 kgs., which was equivalent to 152 kgs. of dressed carcass. The total cost of shipping a live animal, over a third of which was shrinkage, amounted to ₱199.67. This represents, on a dressed-weight basis a cost of ₱0.72/kg.

TABLE 12
WEIGHT DATA AND TOTAL COST OF SHIPPING
CATTLE, FARM TO MANILA BUYER, FIFTEEN SHIPPERS,
1970

Item	Firms with weight data		Firms without weight data	
	Mindanao*	Visayas	Mindanao	Visayas
Number shipped (1969-1970)	4,496	1,500	2,680	5,200
Total shipments	156	88	174	364
Average shipment	29	17	15	14
Average weight/head (kgs.)				
At farm	327	263	—	—
In Manila	304	244	—	—
Kgs. shrinkage	23	19	—	—
Per cent shrinkage	7.0	7.2	—	—
Cost/head (pesos):				
Shipping	72.48	44.00	63.93	52.39
Shrinkage	<u>37.19</u>	<u>38.26</u>	<u>50.40</u> ***	<u>38.26</u> **
TOTAL	109.67	82.26	114.33	90.65

By processing cattle in the production areas, a 327-kg. animal should have a plant weight of at least 323 kgs. Allowing for a 3% shrink for cooling and transporting to Manila, the dressed carcass should weigh 156.3 kgs. But shipping the chilled carcass to Manila incur an extra assembly charge and a chilling and storage charge. However, all other cost items have been projected to result in savings for shipping a carcass versus a live animal. Substantial savings were projected for shrinkage, ship transport and for the elimination of fees and permits.

*Represents two shippers from Southern and one from Northern Mindanao.

**Represents one shipper from Southern Mindanao and five from Northern Mindanao.

***Estimated at same value as from comparable shippers in corresponding areas with weight data.

**MINDANAO: ITEMIZED SHIPPING COST FOR CATTLE
AND PROJECTED SAVING WITH LOCAL SLAUGHTER
AND SHIPMENT OF CHILLED CARCASSES**

	Live animal 327 kgs. at farm 304 kgs. in Manila Dressed wt., 152 kgs.	Chilled carcass 327 kgs. at farm 323 kgs. at plant Dressed wt., 156.3 kgs.		
			Cost	Saving
	Pesos/head			Pesos/carcass
Transport:				
To highway	—	—	—	—
To corral or plant	—	10.09	10.09	-10.09
To dock	10.09	1.20	1.20	8.89
Tong	—	—	—	—
Loading	3.39	1.00	1.00	2.39
Ship transport	39.71	31.66	31.66	8.05
Feed enroute	3.23	—	—	3.23
Convoy	3.94	—	—	3.94
Unloading	0.83	0.60	0.60	0.23
Delivery	4.14	1.20	1.20	2.94
Fees, permits	7.15	—	—	7.15
Shrinkage*	37.19	23.28	23.28	13.91
Chilling, storage, 2 da.	—	2.40	2.40	-2.40
TOTAL COST	109.67	71.43	71.43	38.24
Cost/kilogram, Manila				
Live weight	0.36	—	—	—
Dressed weight	0.72	0.46	0.46	0.26

The net result is a projected cost of shipping a chilled carcass of ₱71.43. This is equal to a cost of ₱0.46/kg. and represents a saving of ₱0.26/kg., or approximately 36%.

For the firms shipping cattle from Mindanao, without weight data, a shrinkage cost equal to that for comparable shippers (shown in table 12) was used and the total cost and saving projected. With live cattle, these firms had a total cost of ₱114.33/head. By shipping chilled carcasses, the cost was computed to be ₱69.71/carcass. This provides a saving of ₱44.62/animal, or 38%.

*Shrinkage saving projected at 37% of the live animal shrinkage cost.

Visayas. Firms, with weight data, shipped cattle that weighed 263 kgs. at the farm (table 14). With 19 kgs. of shrinkage, the live animals weighed 244 kgs. in Manila, equivalent to a dressed carcass weight of 122 kgs. The cost of shipping such cattle to Manila averaged ₱82.26/head or, on a dressed-weight basis, the cost amounted to ₱0.67/kg.

By processing cattle in the production areas, the live weight at the processing plant should be at least 259 kgs. After allowing for carcass shrinkage, the dressed weight in Manila should be 126 kgs. The extra cost involved in shipping a beef carcass would be transport to the dock (from the processing plant), and chilling and storage. The loading charge would be somewhat higher due to unusually low loading costs found in the area for live animals. All other costs would be reduced with the major reductions being for shrinkage and ship transport.

The total cost of shipping a chilled beef carcass to Manila was computed to be ₱51.25. On a dressed-weight basis, this cost was equivalent to ₱0.41/kg. The saving involved in shipping a chilled carcass (instead of a live animal) amounted to ₱0.26/kg., or about 39%.

The firms without weight data (if charged a shrinkage cost equal to that for other area firms with weight data) had a total cost of ₱90.65/head. If carcasses were shipped, the cost was projected to amount to ₱42.96/carcass. The saving that results from the changed shipping procedure amounted to ₱47.69/head, or 53%.

Brief Appraisal. A substantial saving can be affected by changing the marketing procedure for beef cattle produced in distant areas and shipped to Manila. The costs and savings may be summarized as follows:

Area	Peso cost/kilogram dressed weight		Saving Pesos/kilogram		Increased wt. of carcasses kgs.
	Live animal	Chilled carcass			
Mindanao	0.72	0.46	0.26	36	4.3
Visayas	0.67	0.41	0.26	39	4

TABLE 14
 VISAYAS: ITEMIZED SHIPPING COST FOR CATTLE
 AND PROJECTED SAVING WITH LOCAL SLAUGHTER
 AND SHIPMENT OF CHILLED CARCASSES

Item	Live animal	Chilled carcass	
	263 kgs. at farm 244 kgs. in Manila Dressed wt., 122 kgs.	263 kgs. at farm 259 kgs. at plant Dressed wt., 126 kgs.	Cost
	<u>Pesos/head</u>	<u>Pesos/carcass</u>	
Transport:			
To highway	—	—	—
To corral or plant	—	10.00	-10.00
To dock	10.00	1.20	8.80
Tong	—	—	—
Loading	0.52	1.00	-0.48
Ship transport	21.48	12.70	8.78
Feed enroute	1.74	—	1.74
Convoy	2.22	—	2.22
Unloading	1.26	0.60	0.66
Delivery	2.52	1.20	1.32
Fees, permits	4.26	—	4.26
Shrinkage*	38.26	22.15	16.11
Chilling, storage, 2 da.	—	2.40	-2.40
TOTAL COST	82.26	51.25	31.01
Cost/kilogram, Manila			
Live weight	0.34	—	—
Dressed weight	0.67	0.41	0.26

A chilled carcass should weigh, upon arrival in Manila, approximately 4 kgs. more than the carcass of a comparable animal shipped live to Manila. If this weight gain was conservatively applied to half the approximately 37,300 cattle that arrived in Manila by ship and/or

*Shrinkage saving projected at 42% of the live animal shrinkage cost.

railway (shown in table 2), a total weight gain of 74,600 kgs. should be possible. At a wholesale price of, say, ₱4/kg., this should have a value of nearly ₱300,000 — not an insignificant amount.

Further benefits that should arise from processing cattle in the producing or shipping areas are: (1) blood meal, bone meal and meat scraps would be available locally for feeding other animals rather than being shipped back to the areas from Manila, (2) locally grown feed grain could be used to fatten the animals and achieve higher weights, and (3) processing costs should be lower in distant areas than in Manila. All these are “plus” factors that should make local processing and shipping of chilled carcasses worthwhile.

CONCLUSION

Regulations pertaining to antemortem and postmortem inspection of animals and meat are essential to assure wholesome meat for consumers. The so-called public-order regulations with attendant fees and permits are of little or no value, and simply serve as restraints to the marketing of livestock and meat.

Commonwealth Act No. 655, if operative and properly modified, should facilitate the free flow of meat, and meet the requirements of a national meat inspection program. So would Republic Act 3865 if its provisions were extended nationwide. However, the fees charged for inspections, under either act, serve to restrain the full development of the livestock industry. Fees and taxes should be levied on activities that the country wishes to reduce in importance, as imported meats; they should not be imposed on those activities that the country wishes to develop, as the livestock and meat industry. In other words, the cost of providing a national meat inspection service should be paid from funds obtained from sources other than charges for performing the various inspection services.

A national meat inspection program should lead to the development of livestock processing plants in distant production areas, and the marketing of chilled carcasses rather than live animals. The potential savings from such a change in marketing livestock and meat are substantial as this study has shown — and should prove to be of major benefit to both producers and consumers, and stimulate growth of the livestock industry — a national goal.

RECOMMENDATIONS

Based on this study, the following recommendations may be made:

1. All public-order rules and regulations must be rescinded.
2. A national meat inspection system must be provided by:
 - a. Activating the general provisions of Commonwealth Act No. 655, or
 - b. Extending the general provisions of Republic Act 3865 to a nationwide basis.
3. All fees, permits and related items that are collected for the performance for various services related to marketing live animals must be eliminated.
4. The cost of providing inspection services must be paid from special funds obtained from sources other than the domestic livestock and meat industry.
5. Studies must be undertaken to establish- as soon as possible- appropriate locations for processing plants in the different livestock-producing areas, and the desirable capacities of such plants. This work must be based upon present livestock numbers and future production potentials, and the plants must have a high degree of flexibility in terms of the kind of livestock to be processed.
6. Every effort must be exerted to reduce the shipping of live animals from long distances to the market, and facilitate the shipment of chilled carcasses.