AGRIBUSINESS ANALYSIS

SAN ANTONIO MARKET AREA

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Texas Agricultural Market Research and Development Center

in cooperation with

Department of Agricultural Economics and Rural Sociology
The Texas Agricultural Extension Service
The Texas Agricultural Experiment Station
College Station, Texas

THE TEXAS AGRICULTURAL MARKET RESEARCH AND DEVELOPMENT CENTER

An Education and Research Service
of the
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The purpose of the Center is to be of service to Agricultural producers, groups and organizations, as well as processing and marketing firms in the solution of present and emerging market problems. Emphasis is given to research and educational activities designed to improve and expand the markets for food and fiber products related to Texas agriculture.

The Center is staffed by a basic group of professional agricultural and marketing economists from both the Experiment Station and Extension Service. In addition, support is provided by food technologists, statisticians and specialized consultants as determined by the requirements of individual projects.

Robert E. Branson
Coordinator

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REPORT HIGHLIGHTS

1. The Greater San Antonio trade area for the agribusiness study comprises a primary market area of 11 counties and a secondary market area of 47 counties.

2. Analyses indicate that the agriculture-agribusiness sector contribution to the overall Greater San Antonio trade area economy amounted to approximately 2.9 billion dollars in 1973.

3. The 2.9 billion dollars in 1973 from agriculture-agribusiness was responsible for 41 percent of the trade area's economic activity, based on ACOG input-output data. It was 28 percent if one uses State input-output study data.

4. Based on personal income estimates for 1973, agriculture-agribusiness generated 921 million dollars of economic activity, or 15 percent of the total for the area.

5. Military bases, as is well known, also contribute significantly to the economy of the Greater San Antonio trade area. Business activity attributable only to personal income to this segment in 1973 generated 743 million dollars or 12 percent of the area total. This was slightly less than that from agriculture-agribusiness.

6. The total contribution of the military amounts to an estimated 2.5 billion dollars, or 24 percent of the total area business activity based on ACOG input-output factors. This compares with the 41 percent estimate for agriculture-agribusiness.

7. The military contribution to gross San Antonio product amounts to 24 percent of the total area economy, if one uses statewide input-output multipliers to reflect the total impact of military expenditures.

8. Approximately 1,444 business establishments in the trade area are in industry code classifications that have direct or indirect relationship to agriculture. Their total payroll is $521,679,000 per year. Sales totaled 1.2 billion dollars. Of this, an estimated 550 to 743 million dollars, or 45 to 60 percent is estimated to be agriculture-agribusiness related.

9. Food and kindred product processing plants alone total 291 for the trade area and in 1972 had gross sales of 414 million dollars.

10. Farm and ranch cash receipts in 1973 amounted to 718 million dollars. Major revenue was from livestock, grain sorghum and cotton, poultry and poultry products, dairy products and fruits and vegetables.

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SUMMARY

A relatively small amount of labor bolstered by large infusions of capital typify the modern farm/ranch food and fiber production plant today. The proficiency to produce has increased dramatically. As a result of this increased efficiency, more reliance is placed on the marketing system to supply the food and fiber products to the consumer with all the built-in services added to them instead of the primary producer performing these services as they did a century ago. To cope with this change, the expanding marketing system handles an increasing quantity of goods each year. The marketing systems' (the agri-business sector) business activities typically are quite varied. Further, these firms require products and services as inputs to their operation from all other manufacturers in the economic system. The resultant contribution to the gross product of the total economy and, to certain subsectors economy, is substantial especially in Texas where the agricultural production plant is quite large. The San Antonio market area is one of these important market centers in Texas.

The aim of this study was--(1) to describe the nature and scope of the agricultural-agribusiness complex; its economic impact on the San Antonio market area and (2) to identify areas of possible agribusiness expansion alternatives.

The geographic area includes a 47 county area that was designated by the Agribusiness Committee of the Greater San Antonio Chamber of Commerce. Both secondary statistical sources and special data tabulations from various governmental agencies were used in completing this study.

ECONOMIC IMPACT ESTIMATES

Three estimates of the economic impact of the agricultural-agribusinesses in the San Antonio market area were calculated. The first estimate reflects the inputs bought, outputs sold and the interindustry transactions that occur in the normal course of doing business by the various processing-manufacturing firms. The second approximation deals with the estimated gross San Antonio product and those portions of the areas' gross product associated with agricultural-agribusinesses and, the military sector. (Note: The military sector was included in the analysis since the concentration of military establishments in the study area is substantial). The third estimate compares personal income from the farm sector, the agribusiness sector, the military sector and a residual called "other".[1/] Each estimate is summarized below. (Note: A more detailed discussion of each is found in the Agricultural Estimates Sector of this report).

In the normal course of doing business, each agribusiness firm determined the kinds and quantities of products and services to be

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[1/] The reader is cautioned that these estimates need to be interpreted with the assumptions and judgments used clearly in mind. This is the case since no primary or secondary data have been published that will permit a single definitive estimate of the economic impact to be generated on a sub-sector basis.

produced, the organization necessary to accomplish this production, and, the distribution channels to be used to get the product to consumers. The total production processes are complex. They require a wide range of production inputs, e.g. labor, capital, raw materials, equipment, energy, management, transportation, to name a few. Products (output) may be sold to other intermediate users, or to the final consumer depending on the step each firm occupies in the market channel for that product. In any event, for each dollar spent at a given level, it results in other businesses performing the planning, production and marketing steps. In brief, this is the multiplier principle; additional economic activity is created to satisfy demands of other businesses/consumers.

The first estimate described earlier quantifies one way of viewing the agricultural-agribusiness impact. Under the assumptions used in calculating this estimate, the economic impact totals 3.6 billion dollars in the San Antonio market area. Of this sum, 2.1 billion dollars were attributed to the raw product production multiplier effect. Another 1.5 billion was apportioned to the processor-manufacturer sectors multiplier effect. This is to say that the value adding processes that occur as a result of and including primary food and fiber production in the San Antonio market area from the farm/ranch through final consumption have this value. Another way of viewing this 3.6 billion dollar estimate is that this sum would be lost to the economy in the San Antonio market area if all producers and all manufacturers (agribusinesses) ceased operations.

The Gross Product Estimate

The second estimate deals with comparing two methods of estimating the gross product for the San Antonio market area. From these aggregate totals, the agricultural-agribusiness and the military components were estimated. For 1973, the gross product estimates for the study area ranged from 7 to 10 billion dollars. The agricultural-agribusiness component generated an estimated business volume of 2.1 billion dollars in 1972 and 2.9 billion in 1973. This segment of the economy in the study area accounted for 28-41 percent of the two total gross product estimates in 1973 and 22-32 percent in 1972. The former estimate reflects the higher agricultural prices received in 1973 compared with 1972.

The military component has no physical product in the same sense as agriculture or manufacturing, its dollar outlays paid in wages are used since they add to the money flow (purchases for living needs). Assuming that all income was spent in the area, the final impact of the military and civilian employee wages received was 2.3 billion in 1972 and 2.5 billion in 1973. This amounts to between 23-34 percent of the total gross product in 1972 and 24-35 percent in 1973.

Personal Income Estimate

The third view taken of the economic impact in the San Antonio market area deals with personal income flow. As stated earlier, data do not exist that describes the agribusiness component. Consequently, the scope and depth of penetration into the total economy resulting from all the ancillary production and marketing activities in the system generally are overlooked. Nevertheless, the effect of these economic activities may be estimated by applying personal income multipliers to the available personal income data. Multipliers were first applied to agricultural income data. After subtracting out the primary agricultual personal income from this total, the residual is an estimate of the agribusiness income.

The comparisons of personal income flow to the San Antonio market area showed that the agricultural-agribusiness portion accounted for 15 percent or an estimated 921 million dollars in 1972. The military component contributed about 743 million dollars or 12 percent of the total in 1972.

FOOD AND FIBER PRODUCTION

An estimated one-third billion dollars is spent each year to produce the food and fiber products from farms and ranches in the San Antonio market area. Farm receipts for these products produced in the study area amounted to 718 million dollars in 1973.

The top six enterprises, in descending order of their contribution to farm receipts in the study area were as follows: (1) livestock and livestock products, (2) field crops, (3) poultry and poultry products, (4) vegetables, (5) dairy products and (6) fruit and nuts.

The population of the area is approximately 19 percent of the State. Gross sales of food and kindred products totaled 414 million dollars in 1972. There are 291 firms in the study area out of a State total of 1,387 engaged in producing some kind of food and kindred product. Of the manufacturing industries in the study area considered to be related to or directly engaged in the agribusiness classification, gross sales in 1972 amounted to over a billion dollars. Total retail sales of all products in the study area in 1972 was over 4 billion.

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by

Gordon R. Powell, Russell F. McDonald
and Robert E. Branson[1]

INTRODUCTION

The United States is a young country relative to the age of many countries in the world. Its economic growth is unsurpassed in the world today. But this event did not "just happen".

Early policies of the United States during its formative periods emphasized agricultural development. Too, agricultural education supported by scientific research since the early 1900's helped develop a highly efficient agricultural production plant. Most of the labor once needed to produce food and fiber was released to produce all the remaining goods and services now available for consumption. Fortunately for all of us, these early policies provided the basis for allowing the economy of the United States to achieve its current level of development. And the vast agricultural production plant in the United States provides the bulk of the food and fiber consumed by the estimated 210 million

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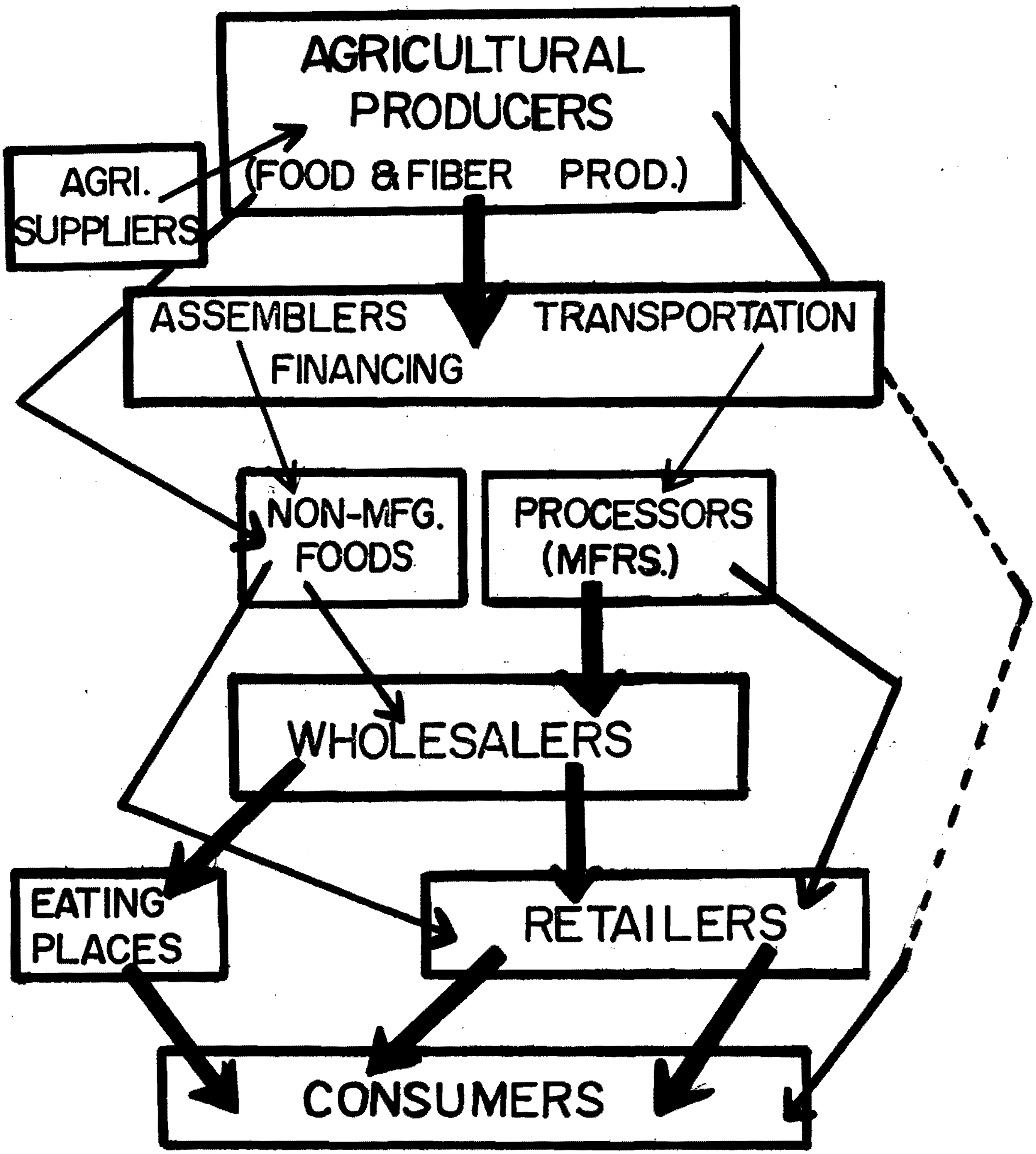
1/ Fruit and Vegetable Marketing Specialist; Economist, Marketing, respectively, Texas Agricultural Extension Service, and, Coordinator, Texas Market Research and Development Center and economist, Texas Agricultural Experiment Station; and all of Department of Agricultural Economics, Texas A&M University.

population. This is being accomplished by about 4.4 million agricultural workers—a ratio of 1 in 47—of which about three-fourths are family workers. As a result of this specialization in production, more reliance is placed on the marketing system to build services into foods and fibers to meet consumer demands.

The marketing system for the food and fiber grown on American farms is big business and very dynamic (Figure 1). The volume of goods handled each year increases. It adds new services continuously and improves in efficiency annually. The expanding contribution to the total (and area) economy is substantial. This is especially true for Texas where agriculture and the resultant agribusiness sector is quite large. Unfortunately in recent years, many people forgot about the food and fiber production and marketing plant in the U.S. Consumers were provided a bountiful supply at very reasonable prices. Not until the recent shortfall in the food and fiber supply, resulting from changing economic conditions in the world, did the consumer once again become concerned—shortages and increasing prices were commonplace.

Texas ranks third nationally in value of agricultural product sales. The two leading states are California and Iowa, respectively. In 1973, the value of agricultural receipts at the farm in Texas is estimated to total about 6 billion dollars. Needless to say, the food and fiber production plant is of great significance to Texas. It also is quite important to the major market centers throughout the State. The San Antonio market area is one of these.

FIG. 1 DIMENSIONS OF THE AGRICULTURAL PRODUCTION-MARKETING PROCESS



specific activity in question.

Research Procedures

The geographic area covered by this study was delineated by the Agribusiness Committee of the Greater San Antonio Chamber of Commerce. It consists of a primary market area of 11 counties and, an additional secondary market area of 36 counties (Figure 2 and Table 1).

The data included in the study were tabulated on a county by county basis for both the primary and secondary market areas. For presentation purposes, the information appears under four major section headings: (1) the primary food and fiber production sector, (2) processor-wholesaler agribusiness sector, (3) the retail sector and, (4) the agribusiness impact estimates.

Although a considerable amount of statistical data are available from various publications, special data tabulations were required of various governmental agencies. Their cooperation was most helpful. Among the information sources used are those listed below:

U. S. Census of Agriculture, Texas, 1959, 1964 and 1969

U. S. Census of Manufacturers for 1967, 1963

U. S. Census of Business

U. S. Census of Wholesale Trade

U. S. Census of Retail Trade

U. S. County Business Patterns

State of Texas, Comptroller of Public Accounts

State of Texas, Department of Agriculture

State of Texas, Department of Public Safety

State of Texas, Department of Human Resources

U. S. Internal Revenue Service, Washington, D.C.

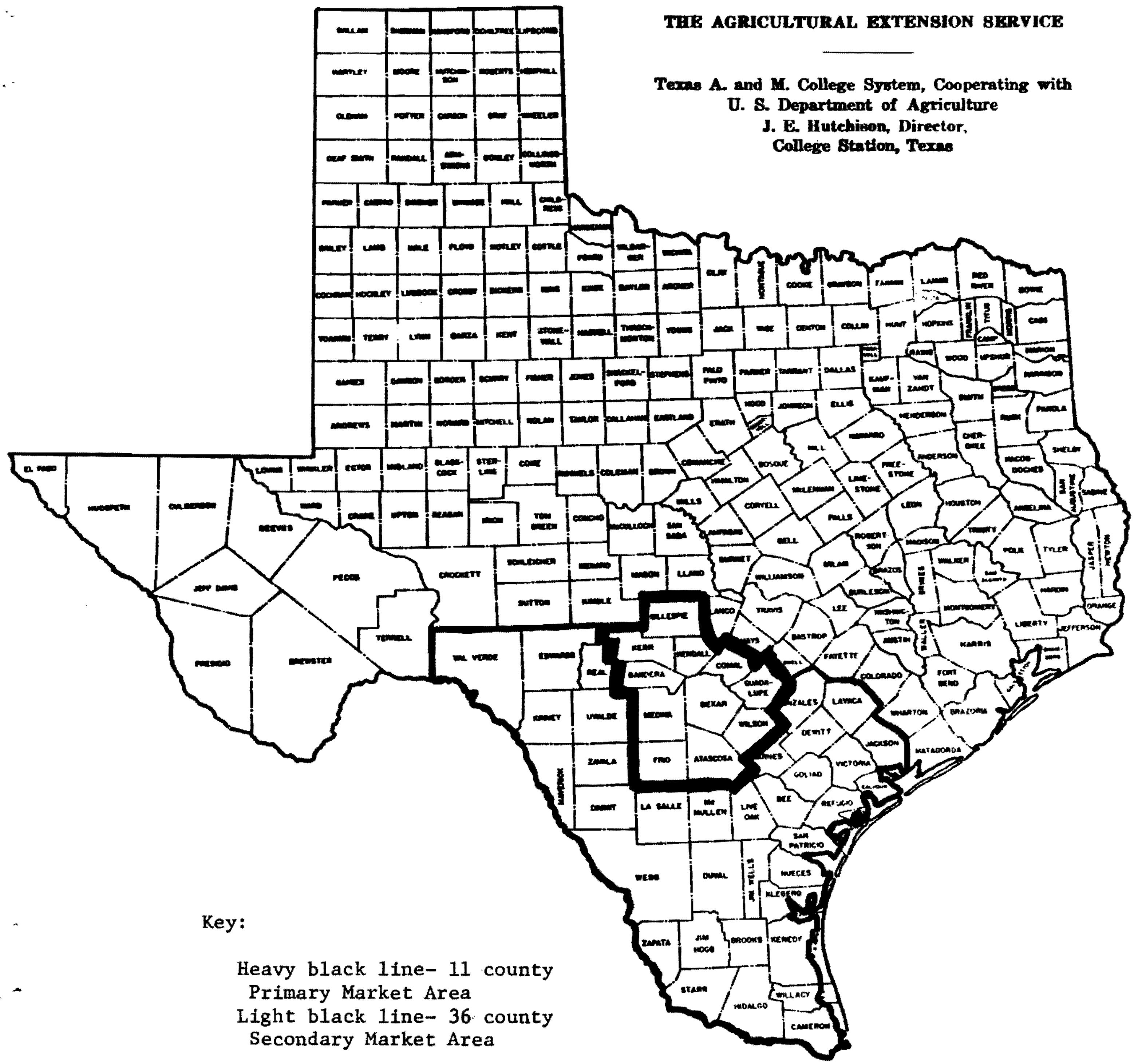
Department of Agricultural Economics, Texas A&M University

U. S. Department of Agriculture, Agricultural Research Service

Texas Citrus Growers and Producers Association

Input-Output Analyses; State of Texas and Alamo Council of Governments

As stated above, these data were tabulated on a county basis for the 11 county primary market area and the 36 county secondary market area. From these arrays, totals were generated and summary tables developed. Some of these totals were used in developing the tables of ratios where the primary and secondary trade areas were compared with totals for the State.



Key:

Heavy black line- 11 county Primary Market Area
Light black line- 36 county Secondary Market Area

Figure 2. Primary and secondary market areas included in the San Antonio Study.

Table 1 Counties in the primary and secondary market area, San Antonio, Texas

Primary Trade Area

Atascosa
Bandera
Bexar
Comal
Frio
Gillespie
Guadalupe
Kendall
Kerr
Medina
Wilson

Secondary Trade Area

Aransas	Jackson	Nueces
Bee	Jim Hogg	Real
Brooks	Jim Wells	Refugio
Calhoun	Karnes	San Patricio
Cameron	Kenedy	Starr
Dewitt	Kinney	Uvalde
Dimmit	Kleberg	Val Verde
Duval	LaSalle	Victoria
Edwards	Lavaca	Webb
Goliad	Live Oak	Willacy
Gonzales	Maverick	Zapata
Hidalgo	McMullen	Zavala

Source: San Antonio Chamber of Commerce Agribusiness Committee

AGRICULTURAL PRODUCTION

Farm Receipts

Primary Area

Farm receipts of agricultural producers increased during the 1959, 1964 and 1969 census periods in both the primary and secondary market areas of San Antonio (Table 4). The total agricultural receipts for the primary trade area in 1959 was slightly over $65 million dollars. In 1964, they were over $83 million, an increase of 28 percent from 1959. The 1969 farm receipts totaled $146 million. This represents an increase of 76 percent above the 1964 farm receipts.

On an enterprise basis during the decade from 1959 to 1969, the livestock and livestock products enterprise increased 181 percent totaling 90 million dollars in 1969. Receipts from vegetables increased from $2 to $5 million or 102 percent. Dairy and dairy products increased 48 percent to $13 million (Table 2). (Note: Recreational income to producers was not reported in the 1959 Census of Agriculture but, in 1964 and 1969 receipts to farmers and ranchers in the primary area amounted to about 1½ million dollars). Receipts from fruit and nuts decreased 10 percent during the 10 year period from $536 to $482 thousand. Receipts from field crops valued at 29 million increased 79 percent.

Forestry products and horticultural specialties increased from just over $1 million in 1959 to almost $2 million in 1969; an increase of 73 percent.

Secondary Trade Area

Aggregate farm receipts for the secondary trade area in 1959 was $324 million, $317 million in 1964 and $423 million in 1969 (Table 2). There was a 31 percent increase in 1969 compared with total receipts for the year 1959.

On an enterprise basis in the secondary trade area, a 16 percent increase in receipts from fruit and nut was attained in 1969 compared with 1959. At the close of this decade, the value of the fruit and nut crop was about 12 million. Poultry and poultry products recorded a 55 percent increase during this same period totaling $31 million in 1969. Vegetable receipts increased 42 percent to 34 million dollars in 1969. Dairy industry receipts were valued at $15½ million. They increased by one-half during the 10 year period. Livestock and livestock products receipts for 1969 were over $199 million. They increased 87 percent between 1959 and 1969 (Table 2). Even though data were not reported for recreational income prior to 1964, the 1964 receipts were $1.3 million. By 1969, they had increased to 2.3 million, an increase of 67 percent. Farm receipts from forestry products and horticultural specialties remained eventually the same during the decade. Field crop farm receipts declined 16 percent.

Total Receipts in SAMA

In 1959, the total producer receipts were $389 million dollars in the San Antonio market area. The total receipts for 1964 were over $400 million. In 1969, the total producer receipts increased to almost $570 million, an increase of 46 percent over 1959 (Table 2). The San Antonio market area contributes 17 percent of the estimated farm receipts of the State of Texas.

There was an increase in producer receipts for all major enterprise groups in 1969 with the exception of field crops. This 155 million dollar enterprise (second largest contributor to farm receipts) declined 7 percent. The largest contributor to the increase in farm receipts in 1969 compared with 1959 was livestock and livestock products. They doubled being valued at about 290 million dollars (Table 2). The third largest increase was 52 percent for the 37 million dollar poultry and poultry products enterprise. Ranking fourth was vegetables which were valued at 39 million, an increase of 47 percent. Fifth ranked dairy products also increased 47 percent to 29 million in 1969 as compared with $19 million in 1959. The sixth largest contributor to farm receipts was the 12 million dollar fruit and nut enterprise. It increased 14 percent over the decade. The 4 million dollar forestry products and horticultural specialties enterprise increased 24 percent. Recreational income was over $3½ million in 1969 which represents an increase of 29 percent over 1964 (Table 2).

Table 2 Farm receipts of agricultural producers and percentage change, by enterprise group, primary and secondary San Antonio market areas, 1959, 1964 and 1969.

Enterprise group	Farm receipts					
	Primary trade area					
	1959	1964	% 1964 is of 1959	1969	% 1969 is of 1964	% 1969 is of 1959
	($ 000)	($ 000)		($ 000)		
Field crops[a]	16,125	22,504	40	28,863[b]	28	79
Fruit and nut	536	949	77	482	-49	-10
Vegetable	2,443	2,901	19	4,924	69	102
Poultry and poultry products	4,044	5,218	29	5,566[b]	7	38
Dairy products	8,853	9,371	6	13,063	39	48
Forestry products and horticultural specialties	1,078	1,306	21	1,860	42	73
Livestock and livestock products[c]	32,103	39,448	23	90,089	128	181
Recreational income	---[d]	1,442	--	1,355	-6	---
TOTAL	65,185	83,143	28	146,204	76	124

[a] Other than fruits and vegetables.
[b] Taken from class 1-5 farms.
[c] Other than poultry and dairy.
[d] Not reported in 1959.

continued

Table 2 (continued)

Enterprise group	Farm receipts					
	Secondary trade area					
	1959	1964	% 1964 is of 1959	1969	% 1969 is of 1964	% 1969 is of 1959
	($ 000)	($ 000)		($ 000)		
Field crops[a]	150,659	157,741	5	126,523[b]	-20	-16
Fruit and nuts	10,160	4,312	-58	11,744	172	16
Vegetable	24,055	24,871	3	34,122	37	42
Poultry and poultry products	20,173	14,183	-30	31,353[b]	121	55
Dairy products	10,530	10,287	-2	15,497	51	47
Forestry products and horticultural specialties	2,279	2,396	5	2,290	-4	1
Livestock and livestock products[c]	106,685	102,053	-4	199,667	96	87
Recreational income	---[d]	1,379	---	2,312	67	---
TOTAL	324,542	317,225	-2	423,512	34	31

continued

Table 2 (continued)

Enterprise group	Farm receipts					
	Total primary and secondary trade area					
	1959	1964	% 1964 is of 1959	1969	% 1969 is of 1964	% 1969 is of 1959
	($ 000)	($ 000)		($ 000)		
Field crops[a]	166,784	180,246	8	155,387[b]	-14	-7
Fruit and nut	10,696	5,262	-51	12,226	132	14
Vegetable	26,498	27,773	5	39,047	41	47
Poultry and poultry products	24,218	19,402	-20	36,920[b]	90	52
Dairy products	19,383	19,658	1	28,560	45	47
Forestry products and horticultural specialties	3,357	3,703	10	4,150	12	24
Livestock and livestock products[c]	138,789	141,501	2	289,756	105	109
Recreational income	---[d]	2,821	---	3,667	30	---
TOTAL	389,728	400,369	3	569,717	42	46
State total	2,355,383	2,353,014	0	3,378,281	44	43
Percent SAMA is of State	17	17	XX	17	XX	XX

[a] Other than fruits and vegetables.
[b] Taken from class 1-5 farms.
[c] Other than poultry and dairy.
[d] No figures available for 1959.

Source: Appendix tables 19-40.

Farm Expenditures

Primary Area

A compilation of farm expenditures made by producers that contribute to the economy is shown in Table 3. For the primary trade area there was a steady increase in expenditures for each of the three census years studied. In 1959, there was over $41 million contributed to the economy by agricultural producers. In 1964 this figure increased to almost $44 million, a 6 percent increase. In 1969 these expenditures increased to $78½ million. This gain amounted to a 80 percent increase when compared to 1964 and 90 percent increase over the decade.

The most significant increase in expenditures in 1969 was the purchase of livestock and poultry. The total amount expended was well over $28 million in 1969 which was an increase of 148 percent over 1959.

The expenditure for feed for livestock and poultry increased by 53 percent over the 10 year period; almost $21 million was expended in 1969. There was also a 53 percent increase in expenditures for seed, bulbs, plants and trees over the decade. Lime and fertilizer purchases of 4½ million dollars increased 72 percent in 1969 as compared to 1964 (Table 3). Agricultural chemical expenditures were not available for 1959 or 1964 but in 1969, 1½ million dollars were expended. The contribution of machine hire, custom and contract work to the economy in 1969 was over 5½ million dollars or an increase of 122 percent over the decade. Gasoline, oil, diesel fuel and lube expenditures increased 37 percent totaling about 6 million dollars in 1969. Labor employed in 1959 totaled \$7½ million and increased to over \$9 million in 1969; a 21 percent increase from 1959 to 1969.

Secondary Area

In this secondary trade area, the expenditure of farmers and ranchers in 1959 was over 156 million dollars but increased to over \$250 million in 1969. This was an increase of 60 percent over the 10 year period (Table 3).

The purchase of livestock and poultry (expenditures) increased 103 percent over the decade amounting to over \$66 million in 1969. Feed for livestock and poultry increased from \$29 million in 1959 to over 53 million in 1969, an 83 percent increase in expenditures. Expenditures for fertilizer and lime increased from \$12 million in 1964 to well over \$18 million in 1969 or an increase of 46 percent. Nearly 8 million was spent for seeds, bulbs, plants and trees in 1969, an increase of 53 percent over the decade. The expenditures for agricultural chemicals in the secondary area was over \$13½ million in 1969. This was as expected due to the large acreages of vegetable crops, grain and cotton in the South Texas area (Table 3). Machine hire, custom and contract work expenditures of \$22 million in 1959 increased to $25 million in 1969 or a 15 percent increase over the decade. Over 19 million dollars were spent for gas, oil, diesel fuel and lubes in 1969, an 18 percent increase. Labor employed in 1959 accounted for over $51 million and decreased to approximately $46 million in 1969 which gives a decrease between 1959 and 1969 of 10 percent (Table 3).

Total Expenditures for SAMA

The total expenditures in 1959 when combining the two trade areas were over $197 million and increased to over $329 million in 1969 or an increase of 67 percent over the 10 year period (Table 3). The two trade areas in 1959 had expenditures of over $44 million for the purchase of livestock and poultry. This figure increased 115 percent to approximately $43 million in 1959 and increased by about three-fourths to almost $74 million in 1969. Purchases of seeds, bulbs, plants and trees were over $7 million in 1959 as compared to almost $11 million in 1969 or a 53 percent increase. About twenty three million dollars were spent for lime and fertilizer in 1969. Gasoline, oil, diesel fuel and lubes purchases rose from $20 million to almost $25 million or an increase of 22 percent over the same period. Machine hire, custom and contract work expenditures increased 26 percent over the 10 year period from $24½ million to $31 million. The expenditures for labor employed dropped from $58½ million in 1959 to $55½ million in 1969 which is a decrease in expenditures of 5 percent (Table 3).

One important factor should be noted; the value of farm machinery, equipment, trucks and automobile purchases are not reported. Obviously, this would represent an additional and sizeable expenditure in the market area. Even though an actual value for this expenditure was not available, numbers purchased by producers are shown in Appendix Tables 43 and 44. Also, vehicle registration with the Department of Public Safety are shown in Appendix Tables 41 and 42. Appendix Tables 41 through 72 give a break-down of actual numbers of various types of equipment purchased by agricultural producers by county and by primary and secondary trade areas.

Of the total farm production expenditures in the combined primary and secondary market areas, in both the 1959 and 1964 census years over 18 percent of the dollars spent by farmers/ranchers in the study area compared with that spent in the state of Texas. In 1969, it declined to about 14½ percent (Table 3).

Number of Farms and On-Farm Labor

In the primary market area, there were 11,329 farms and/or farm operators in 1959; 10,940 in 1964 and 12,308 in 1969 (Appendix Table 73).

The secondary market area had a total of 25,798 farm owners in 1959; 23,028 in 1964 and 26,443 in 1969 (Appendix Table 74).

Table 3 Expenditures for farm production and percentage change, by type, primary and secondary San Antonio market areas, quinquennially, 1959-1969.

Type of expenditure[a/]	Farm production expenditures					
	Primary market area					
	1959	1964	% 1964 is of 1959	1969	% 1969 is of 1964	% 1969 is of 1959
	($ 000)	($ 000)		($ 000)		
Purchase of livestock and poultry	11,415	9,314	-18	28,248	203	148
Feed for livestock and poultry	13,557	14,333	6	20,706	44	53
Lime and fertilizer	---	2,618[b/]	---	4,508	72	---
Seeds, bulbs, plants and trees	2,000	2,302	15	3,060	33	53
Agricultural chemicals[c/]	---	---	---	1,536	---	---
Gasoline, oil, diesel and lubes	4,168	4,775	15	5,691	19	37
Machine hire, custom and contract	2,562	3,230	26	5,676	76	122
Labor employed	7,552	7,163	-5	9,113	27	21
TOTAL	41,255	43,738	6	78,542	80	90

continued

Table 3 (continued)

Type of expenditure[a]	Farm production expenditures					
	Secondary market area					
	1959	1964	% 1964 is of 1959	1969	% 1969 is of 1964	% 1969 is of 1959
	($ 000)	($ 000)		($ 000)		
Purchase of livestock and poultry	32,713	34,827	7	66,474	91	103
Feed for livestock and poultry	29,108	42,020	44	53,245	27	83
Lime and fertilizer	---	12,647[b]	--	18,475	46	---
Seeds, bulbs, plants and trees	5,171	6,775	31	7,890	17	53
Agricultural chemicals[c]	---	---	--	13,536	--	--
Gasoline, oil, diesel and lubes	16,171	18,499	14	19,136	3	18
Machine hire, custom and contract	22,042	16,162	-27	25,392	57	15
Labor employed	51,215	40,931	-20	46,443	14	-9
TOTAL	156,422	171,863	10	250,595	46	60

continued

Table 3 (continued)

Type of expenditure[a]	Farm production expenditures					
	Total primary and secondary market area					
	1959	1964	% 1964 is of 1959	1969	% 1969 is of 1964	% 1969 is of 1959
	($ 000)	($ 000)		($ 000)		
Purchase of livestock and poultry	44,128	44,141	--	94,723	115	115
Feed for livestock and poultry	42,665	56,353	32	73,952	31	73
Lime and fertilizer	---	15,265[b]	--	22,984	51	---
Seeds, bulbs, plants and trees	7,172	9,078	27	10,950	21	53
Agricultural chemicals[c]	---	---	--	15,073	---	---
Gasoline, oil, diesel and lubes	20,339	23,274	14	24,828	7	22
Machine hire, custom and contract	24,604	19,393	-21	31,068	60	26
Labor employed	58,767	48,094	-18	55,556	16	-5
TOTAL[d]	197,677	215,602	9	329,138	53	67
State total	1,052,961	1,181,570	12	2,277,521	93	116
Percent SAMA is of State	18.77	18.24	XX	14.45	XX	XX

a/ Value of purchases of farm machinery, equipment, truck and auto not reported.
b/ Excludes a small amount of lime.
c/ Includes herbicides, pesticides and fungicides.
d/ Totals not additive due to rounding.

Source: Appendix tables 1-18.

When combining the number of farm owners or operators for the primary and secondary market areas, there were 37,127 in 1959; 33,968 in 1964 and 38,751 in 1969.

There were 5,905 farms in the primary market area using hired labor. This labor cost \$7½ million in 1959. Both the number of farms using hired labor and the expenditure for hired labor decreased somewhat in 1964, to 4,906 farms totaling about \$7 million. In 1969, the number of farms employing hired labor had increased to 5,255 and the expenditure had risen to over \$9 million. The three leading counties in expenditures for hired labor in the primary trade area were--(1) Bexar, \$2½ million dollars, (2) Frio, \$2 million, and (3) Atascosa, \$1½ million.

The secondary trade area had quite a variation in number of farms using hired labor. Hidalgo and Cameron counties had the largest expenditures for hired labor of over \$9 million and \$4½ million, respectively. Nueces and San Patricio counties both had well over \$2 million each in hired labor expenditures. Nine other counties had well over \$1 million in hired labor with six of these coming close to the \$2 million expenditure for hired labor.

The total number of farms using hired labor was 23,097 in the combined primary and secondary market area. The number of dollars spent was over \$58½ million in 1959; 19,097 farms had hired labor costs of over \$48 million in 1964 and 19,746 farms spent \$55½ million for hired labor in 1969 (Appendix Tables 17 and 18).

AGRIBUSINESS SECTOR

Data presented in the following section of this report estimates those activities considered to be a part of the agribusiness portion of the primary and secondary areas of the San Antonio market. The major manufacturing group categories included are shown in Table 4. Also included is the Standard Industrial Classification Code (SIC) used to identify the various manufacturing groups. Obviously every dollar's worth of business activity can not be claimed as strictly agribusiness. One estimate of the directness of effect is illustrated in Table 14.

Gross Sales

In the food and kindred products industry group, there were gross sales for 1972 of over $309 million in the primary market area, and over $105 million for the secondary market area. This totals over $414 million for the total market area. The total gross sales in this category in 1972 for the State was almost $2 billion. The San Antonio market area has 21.9 percent of the gross sales for the state in the food and kindred product industry group.

The San Antonio market area has $29 million or 40 percent of the state total gross sales for leather and leather products, 12.7 percent or over $129 million of the stone, clay and glass

Table 4 Manufacturing: Selected types of manufacturing that identify the major categories related to the agribusiness sector, by standard industrial classifications (SIC) code.

SIC code	Major groups
	Group name
20	Food and kindred products
21	Tobacco manufacturers
22	Textile mill products
23	Apparel and related products
24	Lumber and wood products
25	Furniture and fixtures
26	Paper and allied products
27	Printing and publishing
28	Chemicals and allied products
29	Petroleum and coal products
30	Rubber and plastics products
31	Leather and leather products

continued

Table 4 (continued)

SIC code	Major groups Group name
32	Stone, clay and glass products
33	Primary metal industries
34	Fabricated metal products
35	Machinery, except electrical
36	Electrical machinery
37	Transportation equipment
38	Instruments and related products
39	Miscellaneous manufacturing

Source: Standard Industrial Classification Manual, Office of Management and Budget, United States Government Printing Office, 1972.

Note: The above list of manufacturers was selected based on an examination of information describing each SIC grouping.

products, 10.5 percent of the printing and publishing or over $75 million, 7 percent or 129 million dollars of the machinery business, 6 percent of the fabricated metal products or $86 million and about 3 percent or $50 million of the transportation equipment industry (Table 5).

Gross sales of all related manufacturing industries for SIC codes 20-39 in the SAMA primary area was over $818 million, $402 million for the secondary area or approximately $1.2 billion for the total SAMA. This is about 3 percent of the state of Texas.

Food and Kindred Products (SIC 20)

The SIC code grouping for food and kindred products have been tabulated as to the number of establishments in both the primary and secondary market areas for San Antonio. In the primary area there are 97 such firms and 194 in the secondary area giving a total of 291 firms in the total market area. There is a total of 1,387 such firms in the State of Texas. The San Antonio market area has 21 percent of the state total (Table 6).

The San Antonio market area has 35 meatpacking plants or 22 percent of the state total, 17 sausage and other prepared meats or 15.6 percent of the state total, 17 dairy product manufactruing or 17 percent of the state total. Also, 67 or 18 percent of the plants preparing feeds for fowl and animals are found there.

The total market area has 14 canned fruit and vegetable and preserves processing plants but 12 of the 14 are located in the

Table 5 Gross sales of related agribusiness manufacturing industries in the San Antonio primary and secondary market areas, and the State of Texas; percent San Antonio market area is of State, by major SIC code grouping, 1972.

Industry grouping & SIC code		San Antonio Market Area (SAMA)			State of Texas	Percent SAMA is of State
		Primary Area	Secondary Area	Total[a]		
		(........Thousands of dollars			..............)	
Food and kindred products	(20)	$309,403	$105,232	$414,636	$1,896,948	21.9%
Apparel and other textiles	(23)	55,515	26,839	82,354	875,716	9.4
Lumber and wood products	(24)	17,552	10,468	27,991	24,382,879	0.01
Furniture and fixtures	(25)	13,872	2,812	16,684	325,285	5.1
Paper and allied products	(26)	8,434	2,819	11,253	616,995	1.8
Printing and publishing	(27)	56,705	18,301	75,005	712,281	10.5
Chemicals and allied products	(28)	24,697	50,379	75,077	2,435,664	3.1
Leather and leather products	(31)	2,622	26,475	29,097	72,465	40.2
Stone, clay and glass products	(32)	85,282	43,814	129,096	1,020,744	12.7
Primary metal industries	(33)	7,517	23,695	31,212	1,084,903	2.9
Fabricated metal products	(34)	57,249	28,018	86,268	1,379,851	6.3
Machinery (except electrical)	(35)	92,695	37,033	129,729	1,824,463	7.1
Electrical Eqpt. and supplies	(36)	7,938	9,424	17,362	1,378,269	1.3

continued

Table 5 (continued)

Industry grouping & SIC code		San Antonio Market Area (SAMA) Primary Area	Secondary Area	Total[a]	State of Texas	Percent SAMA is of State
		(........Thousands of dollars			.............)	
Transportation equipment	(37)	$ 41,281	$ 9,307	$50,088	$ 1,793,525	2.8%
Instruments and related products	(38)	4,351	1,340	5,691	686,341	0.8
Misc. mfg. industries	(39)	33,312	6,440	39,752	774,513	5.1
TOTAL		$818,425	$402,396	$1,220,821	$41,260,842	XXX
Percent of State		2.0%	1.0%	3.0%	XXX	XXX

[a] Total may not equal parts due to rounding.

Source: State of Texas Comptroller of Public Accounts, Austin 1973.

secondary trade area (Table 6). The state total for such plants is 34 which gives the San Antonio trade area 41 percent of these plants. In the frozen fruits, vegetables, and juices, the primary area has no plants but the secondary trade area has 6. The total number of such plants in Texas is 19, which gives the San Antonio trade areas 31.6 percent of the state total.

The San Antonio market area has the only plants in the state for edible nuts, corn milling, corn oil, vegetable oils, dried and dehydrated fruits and vegetables, cigars, poultry and canned or frozen poultry products. It has 2 of the 3 livestock terminals, one located in each of the trade areas (Table 6).

State Inspected Firms

Information on the number of agribusiness firms registered for inspection with the State and Federal Inspection Service was obtained to ascertain the various types of businesses within specific categories for both the primary and secondary trade areas.

There are 719 permanent retail egg packer/graders that were licensed in the San Antonio market area and 667 egg dealer-wholesalers. There are 3 egg product plants in the primary trade area and 4 in the secondary making a total of 7 in the SAMA. The two trade areas also have 117 cotton gins, 126 grain warehouses, 60 commercial fertilizer plants, 55 cotton gins and warehouses, 17 meat packers, 10 peanut shellers and 247 fruit and vegetable

Table 6 Type and number of food processing and storage facilities in the San Antonio primary and secondary market area and for Texas; percent of San Antonio market area is of State, by 4-digit SIC code, 1972.

Type of Establishment	4-digit SIC code	Number of firms: Primary area	Secondary area	Total in SAMA	Total in Texas	Percent of SAMA of total in Texas
Meatpacking plants	2011	13	22	35	157	22.3
Sausages and other prepared meats	2013	10	7	17	109	15.6
Poultry dressing plants	2016	4	5	9	36	25.0
Poultry and egg processing	2017	3	2	5	25	20.0
Dairy products manufacturing	2020	8	9	17	100	17.0
Fluid milk distributors	2026	0	1	1	12	8.3
Canned specialties	2032	2	0	2	9	22.2
Canned fruits and vegetables and preserves	2033	2	12	14	34	41.2
Dried and dehydrated fruits and vegetables	2034	0	1	1	1	100.0
Pickled fruits and vegetables; sauces, seasonings	2035	2	1	3	28	10.7
Frozen fruits and vegetables, juices	2037	0	6	6	19	31.6
Flour and other grain mill products; ex: corn and rice	2041	4	0	4	18	22.2

continued

Table 6 (continued)

Type of establishment	4-digit SIC code	Number of firms: Primary area	Secondary area	Total in SAMA	Total in Texas	Percent of SAMA of total in Texas
Bottled and canned soft drinks	2086	13	31	44	221	19.9
Seafood; fresh, canned and frozen	2091	0	34	34	88	38.6
Nut and peanut shellers only	2099	4	0	4	13	30.8
Nut and peanut processers, peanut butter, inc.	2099	1	0	1	35	2.9
Sub-total food and kindred products	20--	97	194	291	1,387	20.9
Cigar manufacturing	2121	1	0	1	1	100.0
Rough rice storage	4221	0	5	5	74	6.8
Commercial off-farm grain storage	4221	24	102	126	835	15.1
Nut and peanut storage warehouses	4221	2	0	2	16	12.5
Refrigerated non-food locker warehouse	4222	8	11	19	60	31.7
Special warehouse and storage	4226	0	1	1	3	33.3

continued

Table 6 (continued)

Type of establishment	4-digit SIC code	Number of firms: Primary area	Secondary area	Total in SAMA	Total in Texas	Percent of SAMA of total in Texas
Flour and other; corn mill products only	2041	2	0	2	13	15.4
Wet corn milling (exc.: corn oil)	2046	0	1	1	1	100.0
Wet corn milling; corn oil only	2046	0	1	1	1	100.00
Prepared feeds for animals and fowl	2048	21	46	67	366	18.3
Bread and other bakery products (exc. cookies)	2051	4	4	8	46	17.4
CSOM--cake, meal, linters	2074	0	8	8	35	22.9
Vegetable oil mills--oilseed crushers	2076	0	1	1	1	100.0
Shortening, table oils, margarine	2079	2	0	2	11	18.2
Malt beverages; beer, ale, etc.	2082	2	1	3	6	50.0
Wine and brandy	2084	0	1	1	2	50.0

continued

Table 6 (continued)

Type of establishment	4-digit SIC code	Number of firms				Percent of SAMA of total in Texas
		Primary area	Secondary area	Total in SAMA	Total in Texas	
Groceries; chain store distribution center	5141	4	2	6	43	14.0
Groceries; non-chain store distribution center	5141	8	18	26	152	17.1
Poultry and products--canned or frozen	5144	0	1	1	1	100.0
Poultry and egg produce handlers	5144	1	5	6	30	20.0
Meat and meat products	5147	1	2	3	34	8.8
Groceries and related products wholesale	5149	1	2	3	16	18.8
Freezer and locker provisioners	5422	15	9	24	167	14.4
Livestock terminal	5154	1	1	2	3	66.6
Sub-total		66	159	225	1,435	XXXX
TOTAL		163	353	516	2,822	18.3

Source: Agricultural Stabilization and Conservation Service, State Food Listing, U. S. Department of Agriculture, College Station, Texas 1972.

shippers (Table 7).

Number of Employees and Payroll

Table 8 shows the average number of employees and the annual payroll for all industries and the manufacturing industries in the primary market area. The manufacturing industries are included in the all industries totals. Also these manufacturing industries include those firms categorized in SIC codes 20-39, as identified in Table 4. The number of employees is reported in averages because the number of firms reporting each quarter may change due to new industries starting operations and some firms discontinuing their operation. The total payroll for manufacturing industries in the primary market area was approximately \$260 million for 1972. The payroll for all industries within the primary market area was almost \$1½ billion (Table 7).

The secondary market area had a payroll of almost \$262 million for manufacturing industries and almost \$1½ billion for all industries. It should be noted that the payrolls were approximately the same for all industries and manufacturing industries for the eleven county primary market area and the thirty-six secondary county market area. This relation, of course, was due to the greater concentration of manufacturing in the City of San Antonio and its being located in the primary market area (Table 9).

Table 7 Number and kinds of agribusinesses registered for inspection in primary and secondary counties San Antonio market area, 1972

Kinds of agribusiness	Number		
	Primary	Secondary	Total
Eggs			
Dealer-wholesaler-current license	241	426	667
Permanent retail egg packer/grader license	276	443	719
Egg products plants	3	4	7
Commercial fertilizer plants	15	45	60
Grain supply	6	9	15
Grain warehouses	24	102	126
Cotton gins	4	113	117
Cotton warehouses	0	10	10
Cotton gins and warehouses	3	52	55
Livestock auction markets	5	17	22
Meat packers	4	13	17
Fruit and vegetable shippers	24	223	247
Cold storage warehouses	1	1	2
Peanut shellers	10	0	10
TOTAL	616	1,458	2,074

Source: Texas-Federal Inspection Service, Texas Department of Agriculture, Austin, 1974.

Table 8 Average number of employees and annual payroll all industries sector and the manufacturing sector (SIC codes 20-39), primary San Antonio market areas, 1972.

Primary counties		Average number of employees	Total payroll (thousands of dollars)
Atascosa	Mfg. industries	24	111
	All industries	2,052	10,232
Bandera	Mfg. industries	---a/	---a/
	All industries	675	3,593
Bexar	Mfg. industries	33,267	226,929
	All industries	203,945	1,267,795
Comal	Mfg. industries	2,962	16,839
	All industries	7,055	36,714
Frio	Mfg. industries	17	21
	All industries	1,480	8,100
Gillespie	Mfg. industries	355	1,587
	All industries	2,639	11,230
Guadalupe	Mfg. industries	1,203	7,931
	All industries	5,610	29,338
Kendall	Mfg. industries	---a/	---a/
	All industries	851	3,779
Kerr	Mfg. industries	312	1,878
	All industries	4,581	25,097
Medina	Mfg. industries	656	4,008
	All industries	2,792	13,220
Wilson	Mfg. industries	85	452
	All industries	1,023	4,855
TOTAL	Mfg. industries	---	259,753
	All industries	---	1,413,953

a/Not reported to prevent disclosure of the scope of operation.
Source: Texas Employment Commission, Quarterly Reports, State of Texas, 1972.

Table 9 Average number of employees and annual payroll all industries sector and the manufacturing sector, secondary San Antonio market areas, 1972.

Secondary counties		Average number of employees	Total payroll (thousands of dollars)
Aransas	Mfg. industries	325	2,248
	All industries	2,429	14,508
Bee	Mfg. industries	111	629
	All industries	3,326	17,056
Brooks	Mfg. industries	---	---
	All industries	838	4,704
Calhoun	Mfg. industries	3,116	36,094
	All industries	5,954	55,052
Cameron	Mfg. industries	8,343	44,142
	All industries	33,917	179,360
DeWitt	Mfg. industries	5,484	6,280
	All industries	4,084	19,144
Dimmit	Mfg. industries	---	---
	All industries	3,549	4,325
Duval	Mfg. industries	16	87
	All industries	4,007	5,743
Edwards	Mfg. industries	---	---
	All industries	165	746
Goliad	Mfg. industries	135	233
	All industries	551	2,613
Gonzales	Mfg. industries	805	4,055
	All industries	3,574	14,742
Hidalgo	Mfg. industries	18,222	22,006
	All industries	32,942	163,871

continued

Table 9 (continued)

Secondary counties		Average number of employees	Total payroll (thousands of dollars)
Jackson	Mfg. industries	94	282
	All industries	1,921	10,733
Jim Hogg	Mfg. industries	---	---
	All industries	517	2,387
Jim Wells	Mfg. industries	178	1,201
	All industries	6,266	38,392
Karnes	Mfg. industries	195	1,380
	All industries	2,363	13,050
Kenedy	Mfg. industries	---	---
	All industries	30	263
Kinney	Mfg. industries	---	---
	All industries	309	1,549
Kleberg	Mfg. industries	191	1,019
	All industries	5,804	32,351
LaSalle	Mfg. industries	---	---
	All industries	459	2,821
Lavaca	Mfg. industries	1,409	7,737
	All industries	3,216	15,077
Live Oak	Mfg. industries	41	61
	All industries	878	4,329
Maverick	Mfg. industries	---	---
	All industries	3,426	15,006
McMullen	Mfg. industries	---	---
	All industries	96	746
Nueces	Mfg. industries	9,053	82,464
	All industries	63,805	434,801

continued

Table 9 (continued)

Secondary counties		Average number of employees	Total payroll (thousands of dollars)
Real	Mfg. industries	---	---
	All industries	126	506
Refugio	Mfg. industries	---	---
	All industries	1,586	10,039
San Patricio	Mfg. industries	2,051	17,135
	All industries	7,590	57,398
Starr	Mfg. industries	11	17
	All industries	1,102	4,792
Uvalde	Mfg. industries	416	1,651
	All industries	3,747	18,707
Val Verde	Mfg. industries	---	---
	All industries	3,925	17,808
Victoria	Mfg. industries	2,937	26,314
	All industries	13,849	94,747
Webb	Mfg. industries	1,407	6,380
	All industries	58,944	69,944
Willacy	Mfg. industries	100	445
	All industries	1,216	5,558
Zapata	Mfg. industries	---	---
	All industries	148	609
Zavala	Mfg. industries	32	66
	All industries	758	3,309
TOTAL	Mfg. industries	XXX	261,926
	All industries	XXX	1,336,800

Source: Texas Employment Commission, Quarterly Reports, State of Texas, 1972.

The total number of employees in the total work force, subject to Texas unemployment compensation act in 1972, for the primary market area was 372,225. The manufacturing industry employed 40,515; non-manufacturing employed 304,285 and agriculture 13,045. The three categories of employment will not add up to the total work force due to each category having some unemployment (Table 10). Also, those agricultural workers not covered by the act are excluded from totals.

The secondary trade area had 38,145 employed in manufacturing, 291,920 non-manufacturing and agriculture 63,265. The total available work force for the secondary trade area was 420,520 (Table 11).

RETAIL SECTOR

Population

The population in the combined primary and secondary counties making up the San Antonio market area for 1970 was estimated to be 2.1 million people. This is about 19 percent of the total number of people in the state of Texas. In 1960, an estimated 20 percent of the State's population resided in the San Antonio market area.

Regarding the 1970 population estimates, slightly less than one-half of the 2.1 million people live in the 11 county primary area. The remainder live in the 36 county secondary market area.

Table 10 Estimated number of employees subject to Texas unemployment compensation act, primary counties, San Antonio market area, 1972.

Primary counties	Manu-facturing	Non-manu-facturing	Agriculture	Total work force	% Un-employed
Atascosa	60	3,700	1,250	5,335	6.1
Bandera	165	950	380	1,580	5.4
Bexar	34,155	267,730	3,265	316,630	3.6
Comal	3,025	6,555	675	10,495	2.3
Frio	50	1,855	990	3,145	7.9
Gillespie	375	3,350	700	4,675	5.3
Guadalupe	1,345	7,620	1,685	11,070	3.8
Kendall	150	1,750	605	2,640	5.1
Kerr	250	5,250	565	6,495	6.6
Medina	750	3,575	1,645	6,510	8.3
Wilson	190	1,950	1,285	3,650	6.2
TOTAL	40,515	304,285	13,045	372,225	4.2[a]

[a] Unemployed total is 15,790.
Source: Texas Employment Commission, State of Texas, 1972.

Table 11 Estimated number of employees subject to Texas unemployment compensation act, secondary counties, San Antonio market area, 1972

Secondary counties	Manu-facturing	Non-manu-facturing	Agriculture	Total work force	% Un-employed
Aransas	145	2,440	80	3,005	2.5
Bee	280	5,160	1,040	6,740	3.9
Brooks	170	1,670	390	2,400	7.1
Calhoun	3,045	4,775	385	8,455	3.0
Cameron	6,970	35,740	8,020	54,800	7.4
DeWitt	1,110	4,660	1,720	7,690	2.6
Dimmit	125	1,600	1,050	3,100	10.5
Duval	150	2,450	810	3,560	4.2
Edwards	15	590	375	1,050	6.7
Goliad	20	1,165	790	2,040	3.2
Gonzales	675	3,750	2,030	6,605	2.3
Hidalgo	4,270	39,900	14,660	63,250	7.0
Jackson	35	3,080	2,005	4,235	2.7

continued

Table 11 (continued)

Secondary counties	Manu-facturing	Non-manu-facturing	Agriculture	Total work force	% Un-employed
Jim Hogg	20	1,095	395	1,670	9.6
Jim Wells	340	8,550	1,190	10,610	5.0
Karnes	220	3,230	1,230	4,855	3.6
Kenedy	0	125	370	500	1.0
Kinney	10	550	300	985	12.7
Kleberg	490	7,380	1,150	9,410	4.1
LaSalle	20	1,340	745	2,455	14.3
Lavaca	1,170	3,415	2,455	7,185	2.0
Live Oak	80	1,630	720	2,620	7.3
Maverick	1,220	5,215	970	8,655	14.4
McMullen	5	230	230	480	3.1
Nueces	8,490	81,650	3,210	98,080	4.8
Real	20	585	350	1,040	8.2
Refugio	180	2,340	640	3,250	2.8

continued

Table 11 (continued)

Secondary counties	Manu-facturing	Non-manu-facturing	Agriculture	Total work force	% Un-employed
San Patricio	2,130	8,230	2,050	13,170	5.8
Starr	20	2,185	2,745	6,210	20.3
Uvalde	450	4,045	1,125	6,035	6.9
Val Verde	870	7,310	800	9,600	6.5
Victoria	2,940	16,410	1,270	21,185	2.7
Webb	1,550	23,465	2,400	31,050	11.7
Willacy	180	2,080	4,390	7,150	7.0
Zapata	15	1,050	595	1,860	10.8
Zavala	450	2,830	1,580	5,535	12.2
TOTAL	38,145	291,920	63,265	420,520	6.5[a]

[a]Unemployed total is 27,190

Source: Texas Employment Commission, State of Texas, 1972.

Retail Sales

Retail sales in the San Antonio market area amounted to 4.04 billion dollars in 1972. This expenditure represents 16.7 percent of the total retail sales in the state during 1972 (Table 12). The amount of retail sales in the primary area was 1.86 billion dollars and 2.18 billion in the counties making up the secondary area.

In the primary counties, food purchases were 19.3 percent of total retail sales, general merchandise sales were 20.3 percent, furniture and household appliances were 4.3 percent and automotive, 23.1 percent (Table 12). In the secondary counties, food sales and furniture and household appliance sales, as a percent of total retail sales were 21.5 percent and 4.9 percent, respectively. Expenditures were slightly larger in the secondary area compared with the primary area. On the other hand, general merchandise (14.2 percent) and automotive sales (20.4 percent) were lower in the secondary counties than in the primary counties (Table 13).

Contrasted with the State as a whole, food sales were about one percent below the ratio of food sales to total retail expenditures in the state of Texas in the primary area and 1.3 percent higher in the secondary area. General merchandise sales in the primary area were nearly 4 percent above the state ratio level and 2.2 percent lower in the secondary area. Although these data do not identify why these differences occurred, one might speculate

Table 12 Total retail sales, food, general merchandise, furniture and appliances and automotive equipment sales, primary and secondary counties, San Antonio market area, 1972.

(In thousands of dollars)

Primary counties	Total Retail Sales	Food	General Mdse.	Furn. House Appl.	Automotive
Atascosa	27,018	6,534	1,379	167	6,448
Bandera	5,290	1,630	312	161	583
Bexar	1,567,935	293,491	344,492	71,508	358,389
San Antonio[a/]	1,442,248	257,117	320,168	64,207	351,590
Comal	56,032	10,910	5,189	1,258	15,900
Frio	15,135	3,295	724	639	2,157
Gillespie	28,967	5,857	1,761	659	6,922
Guadalupe	50,584	12,300	5,702	2,647	12,648
Kendall	14,183	3,508	309	48	3,172
Kerr	42,414	10,707	4,901	1,927	10,150
Medina	30,861	6,455	2,067	438	7,920
Wilson	20,094	5,056	650	328	4,851
TOTAL	1,858,513	359,743	367,486	79,780	429,140

[a/] Not included in totals; also military sales of $112,195,000 are not included in total retail sales.

Source: Sales Management: The Marketing Magazine, 633 Third Avenue, New York, July 23, 1973 issue.

Table 12 (continued)

(In thousands of dollars)

Secondary counties	Total Retail Sales	Food	General Mdse.	Furn. House Appl.	Automotive
Aransas	17,495	6,267	298	508	1,725
Bee	40,188	9,280	3,950	2,098	7,996
Brooks	12,835	2,447	1,155	600	2,930
Calhoun	39,399	12,311	3,083	1,189	9,123
Cameron	299,933	59,511	54,210	14,928	54,258
DeWitt	28,159	7,254	1,789	815	5,712
Dimmit	6,122	1,781	282	223	1,431
Duval	11,163	3,740	409	208	2,787
Edwards	2,304	1,039	---	---	141
Goliad	6,883	1,902	406	97	892
Gonzales	43,621	5,583	2,969	872	8,184
Hidalgo	312,987	58,555	49,691	18,985	67,767
Jackson	22,106	6,256	899	909	3,598
Jim Hogg	6,602	1,744	189	148	1,646
Jim Wells	61,550	12,864	6,514	2,507	14,675
Karnes	27,818	6,282	1,220	1,146	5,640
Kenedy	53	---	30	---	---
Kinney	1,974	876	46	---	174
Kleberg	73,940	17,703	4,713	4,026	20,004
LaSalle	7,469	1,813	854	66	1,310

continued

Table 12 (continued)

(In thousands of dollars)

Secondary counties	Total Retail Sales	Food	General Mdse.	Furn. House Appl.	Automotive
Lavaca	36,372	8,967	1,913	1,630	8,443
Live Oak	8,944	2,427	174	79	1,744
Maverick	24,992	4,209	4,674	835	3,001
McMullen	742	186	53	---	253
Nueces	488,319	104,814	82,362	25,588	112,067
Real	2,792	899	237	35	244
Refugio	12,293	3,072	348	167	3,050
San Patricio	97,865	26,831	3,765	3,756	26,720
Starr	21,556	6,294	3,119	978	3,810
Uvalde	46,389	8,790	2,079	1,380	7,573
Val Verde	54,265	12,603	6,575	1,811	13,365
Victoria	117,570	30,496	16,557	6,166	25,275
Webb	212,670	32,757	51,322	13,604	22,961
Willacy	21,539	4,681	1,712	690	5,150
Zapata	3,690	1,528	241	---	---
Zavala	11,958	2,933	1,169	565	1,464
TOTAL	2,184,557	468,686	309,007	106,609	445,113

continued

Table 12 (continued)

(In thousands of dollars)

Secondary counties	Total Retail Sales	Food	General Mdse.	Furn. House Appl.	Automotive
Total secondary area	2,184,557	468,686	309,007	106,609	445,113
Total primary area	1,858,513	359,743	376,486	79,780	429,140
Total SAMA	4,043,070	828,429	658,493	186,389	874,253
State of Texas	24,250,805	4,895,973	3,974,499	1,105,790	5,713,508
Percent SAMA is of State	16.7%	16.9%	17.3%	16.9%	15.3%

Source: Sales Management: The Marketing Magazine, 633 Third Avenue, New York, July 23, 1973 issue.

that the metropolitan areas were a better source for certain kinds of merchandise than in outlaying areas.

The number of dollars, proportionately, spent for automotive equipment in the primary area was only one-half percent below the proportion spent in the state. On the other hand, 3.4 percent less was spent, proportionately, on automotive equipment in the secondary area compared with the state (Table 13).

Military sales in Bexar, Comal and Guadalupe counties represent about 6 percent of total retail sales, or 112 million dollars in 1972, out of a total of 1,858 million dollars expended in the primary area. The level of participation of the military in the total retail sales estimates accounts for about one-fourth of the personal income accruing to military personnel.

ESTIMATES OF THE ECONOMIC IMPACT OF AGRICULTURAL PRODUCTION AND AGRIBUSINESS ACTIVITY ON THE SAN ANTONIO MARKET AREA

Up to this point in the report, agricultural production values were described and the scope of the agribusiness activities were identified. It is the aim in this section of the report to quantify these data to generate estimates of the impact on the economy within the specified San Antonio market area. It must be pointed out that no one single answer can be given. This results from the lack of definitive data being available from individual firms within a given agribusiness sector and among

Table 13 Total retail sales; percentage distribution and total sales of food, general merchandise, furniture and household appliances and automobiles, by specified market area, 1972.

(In thousands of dollars)

Market Area	Total Retail Sales	Food	General Mdse.	Furn. House Appl.	Automotive
Primary	1,858,513	359,743	376,486	79,780	429,140
% of total	(100.0)	19.3%	20.3%	4.3%	23.1%
Secondary	2,184,557	468,686	309,007	106,609	445,113
% of total	(100.0)	21.5%	14.2%	4.9%	20.4%
Total SAMA	4,043,070	828,429	685,493	186,389	874,253
% of total	(100.0)	20.5%	17.0%	4.6%	21.6%
State total	24,250,805	4,895,973	3,974,499	1,105,790	5,713,508
	(100.0)	20.2%	16.4%	4.6%	23.6%

Source: Table 12.

agribusiness sectors (manufacturers) that can be aggregated into a specific total. Therefore, the existing alternative is to calculate the "best estimates" of the economic impact. In calculating these estimates, the analogies drawn were made based on certain assumptions and the results have to be interpreted with these assumptions in mind.

Three estimates of the economic impact of agriculture-agribusiness in the San Antonio market area were calculated. Each will be described briefly later in this section. The first estimate reflects the inputs bought, outputs sold and interindustry transfers that occur in the normal course of doing business by the various processing firms. The second estimate deals with the estimated gross San Antonio product, that portion of the area's gross product associated with agriculture - agribusiness and the military sector. The first two estimates are based on agricultural product values and are used as a starting point. The third estimate deals with personal income comparisons. Farm income, agribusiness income, military income and other, are included in Table 16. For this estimate, farm income and the military income data were given.

None of these estimates are strictly comparable with the others. However, the percentages of the totals as calculated are comparable and are used to show their relative relationships.

Agribusiness Estimates

Typically, basic agricultural production often is considered singly in comparing it as an industry with other industries. This is unfortunate. Few agricultural products are sold without some service being added to it to make it more useful for the consumer. Further, some products have more service added to it than others. As a result, in the absence of primary data on each and every product produced and sold, coupled with all the various input supplies to produce it (and their associated inputs and transactions of these firms and those who process the output of farms), it is necessary to revert to studies that estimate what is called multipliers. Research studies designed to yield these coefficients (multipliers) have been conducted.[1/] Through the use of these multipliers, and specified secondary data, a simulated estimate of the ensuing business activity level can be made. The underlying assumption made is that the San Antonio market area businesses (processors/manufacturers) do not vary significantly from the average for the area included in the input-study used as a basis for making the calculations.

Another assumption deals with the directness or affinity estimated to be representative of a particular industry in its reliance on basic agricultural products. Certain industries have a more viable affinity to basic agricultural products (raw material inputs) than others. For example, the raw material farm/ranch products needed by a fruit and vegetable processor or a saw mill

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[1/] See footnote 'a' in Table 14. Another input-output study, but on a smaller scale, was completed for the Alamo Council of Governments (ACOG).

or leather products processing or a textile mill are quite discernable. One also must be cognizant of those firms that supply the latter firms the necessary machinery, energy, transportation and capital, to name a few, and apportion part of their output to the agribusiness estimate to yield a more representative impact estimate. As stated earlier, data to this degree of specificity do not exist. Therefore, a judgment has to be made. To this end, it was assumed that those industries listed in Table 14 were akin and participants in the agribusiness spectrum. Further, they were categorized into levels or gradations of affinity in their direct dependence on basic agricultural production.

The Agricultural-Agribusiness Economic Impact Estimate

First, the receipts that farmers/ranchers receive were estimated for 1972. For the combined primary and secondary areas included in the study, this amounted to 718 million dollars. To simulate what portion of the total of this value of basic agricultural production would contribute to the San Antonio market area, a multiplier representing all the value adding processes related to farm/ranch raw products was applied. This totaled 2,139.6 million dollars (Table 14).

The same procedure was used in apportioning the estimates of the economy wide impact of all the business activities (procuring inputs, selling outputs and interindustry transfers) of those firms that were judged to represent the agribusiness sector--a multiplier was applied to their gross sales to estimate their contribution (Table 14). The reader will note that these manufacturers are further categorized into levels. The first level was judged to have the greatest affinity to basic agricultural production, the second level was judged to have the next greatest affinity to basic agricultural production, and the third level was not tied as closely to agriculture; but still part of their output (and interindustry transactions) depended on the business activity of those firms in level one and level two and intuitively, on basic agricultural production.

The remaining assumption used in generating this estimate was that 90 percent of the first level, 60 percent of the second and 30 percent of the third level list of firms would be tallied. This judgment was based on an examination and appraisal of the information describing each SIC grouping. The following table shows the portion of each level of manufacturing associated with all those business activities included in purchased inputs, output sold to final users and interindustry transactions.

Level of the manufacturers	Combined total (million dollars)	Percent	Agribusiness impact (million dollars)
First	1,183	90	1,064.7
Second	261.3	60	156.8
Third	1,105.7	30	331.7
SUBTOTAL	2,550.0	XX	1,553.2
Value of basic agricultural production is added			2,139.6
Estimated agriculture-agribusiness economic impact			3,692.8

Table 14: Estimated impact of agriculture and agribusiness activity, primary and secondary areas, San Antonio market, 1972

(Millions of dollars)

Agricultural production and related manufacturing	Primary area	Secondary area	Combined primary & secondary	Economy wide impact [a/] Primary area	Economy wide impact [a/] Secondary area	Economy wide impact [a/] Combined total
<u>Production level</u>						
Est. farm receipts in 1972[b/]	184	534	718	548.3	1,591.3	2,139.6
<u>Agribusiness levels - gross sales in 1972</u>[c/]						
<u>First Level</u>						
Food and kindred products	309	105	415	645.8	219.5	867.4
Apparel and other textiles	56	27	82	117.0	56.4	171.4
Lumber and wood products	18	11	28	37.6	23.0	58.5
Paper and allied products	8	3	11	16.7	6.3	23.0
Leather and leather products	3	27	30	6.3	56.4	62.7
Sub total	394	173	566	823.4	361.6	1,183.0
<u>Second level</u>						
Chemicals, allied products	25	50	75	52.3	104.5	156.8
Transportation equipment	41	9	50	85.7	18.8	104.5
Sub total	66	59	125	138.0	123.3	261.3
<u>Third level</u>						
Furniture and fixtures	14	3	17	29.3	6.3	35.5
Printing and publishing	57	18	75	119.1	37.6	156.8

continued

Table 14: (continued

(Millions of dollars)

Agricultural production and related manufacturing	Primary area	Secondary area	Combined primary & secondary	Economy wide impact[a/] Primary area	Secondary area	Combined total
Stone, clay and glass	85	44	129	177.7	92.0	269.6
Primary metals	8	24	31	16.7	50.2	64.8
Fabricated metals	57	28	85	119.1	58.5	177.7
Machinery, except electrical	93	37	130	194.4	77.3	271.7
Electrical equipment & supplies	8	9	17	16.7	18.8	35.5
Instruments and related products	4	1	5	8.4	2.1	10.5
Misc. mfg. industries	33	6	40	69.0	12.5	83.6
Sub total	359	170	529	750.4	355.3	1,105.7
TOTAL	1,003	936	1,938	2,260.1	2,431.5	4,689.6

a/ Value of multiplier for the production level is 2.98 and 2.09 for the agribusiness level as identified in the input-output analysis by Herbert W. Grubb, The Structure of the Texas Economy, Office of the Governor, March 1973.

b/ Estimated from 1969 Census of Agriculture data updated by Prices received by farmers index published by USDA.

c/ Gross sales data by sic code obtained from Comptroller of Public Accounts, State of Texas, Austin.

Source: Authors calculations from above sources.

In a study similar to this one, researchers at the University of California, Davis, estimated that the value of agricultural production at retail was five times the value of farm receipts. Using this as a base for comparison in this study of the San Antonio market area, it would total 3,590 million dollars (718 million dollars times 5). The data as presented above totals 3,692.8 million dollars as the agricultural-agribusiness economic impact. (Stated another way, the 3,692.8 million dollars would be lost to the economy in the San Antonio market area if all those producers and agribusiness manufacturers ceased operations.) Therefore, given the assumption as described above, this approximation is one way of viewing agriculture-agricultural businesses economic impact on the San Antonio market area.

Gross Product Estimate for the San Antonio Market Area

The second estimate or way of viewing the impact of agriculture-agribusiness in the study area uses an economic base of gross product. (Nationally, the indicator of the overall economic activity is the gross national product (G.N.P.); it is the value of all goods and services produced for a given time period). Two estimates of the gross product were made. One was calculated using the Alamo Council of Governments input-output study for a nine county area in and around San Antonio. This estimate is designated as Base I (Table 15). The second was derived from the gross product for the State of Texas[2/]. This estimate is called Base II (Table 15).

Comparisons with the estimated gross product for the San Antonio market area are made in Table 15 with the agriculture-agribusiness component and the military component. These estimates also are identified Base I and Base II for comparative purposes with the Base I and Base II gross product estimates.

It should be noted that the Base II gross product values used in Table 15 may be biased upward somewhat. Part of the explanation may be in the fact that the industry concentration in Dallas, Fort Worth and Houston is greater than in the San Antonio market area.

Agriculture and agribusiness in the San Antonio trade area generated an estimated business volume of about 2.1 billion dollars in 1972 and 2.9 billion in 1973. This segment of the area's economy, therefore, accounted for between 22.2 and 32.3 percent of the total business activity in 1972 (Table 15). The estimate is 28.5 to 41.4 percent in 1973, reflecting the higher food and fiber prices of that year. These figures are derived from county data as to the cash sales of food, grain, fiber and all other agricultural products sold off farms and ranches in the counties

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[2/] Base II gross product for the study area was calculated by taking the ratio of personal income for the San Antonio market area to personal income for the State of Texas times the estimated gross product for the State of Texas.

that comprise the Alamo city market area. Product sales are then multiplied by the ratio from the input-output study that reflects the amount of food, fiber, grain, livestock, fruits and vegetables, dairy and other products processed and/or additionally serviced within the market area. Obviously, when agriculture and agri-businesses contribute 28.5 to 41.4 percent of the economic muscle of the San Antonio market territory, it must be considered important. Likewise, its future welfare should be a matter of concern to all citizens of this part of Texas.

The military influence in this part of the State has long been a feature of the economy. One may draw some comparisons between that sector of the economy and agriculture. How large is the military component? Since no physical product is produced by the military in the same sense as agriculture or manufacturing, the value of the end product cannot be measured. However, the dollar outlays of the military can be used since they add to expenditures in the market area.

Military bases in the 47 county San Antonio market area were surveyed to obtain the total dollar payroll for both military and civilian personnel for the calendar years 1972 and 1973. These data were adjusted further for local purchases and post exchange sales. The net figures were 728 million in 1972 and 798 million in 1973. Assuming that all the income was spent in the area and using a consumer income multiplier of 3.1, the final impact on the San Antonio market area was 2.258 billion dollars in 1972 and

2.476 billion dollars in 1973 (Table 15). This amounts to between 24.2 and 35.1 percent of the estimated San Antonio market area gross product in 1973 (Table 15). Obviously these estimates are biased upward somewhat since not all of the military personnel payroll will be spent in the area.

The military component in this analysis is slightly less than the agriculture-agribusiness component of the gross product estimates for the San Antonio market area in 1973. However, there is no doubt that given the concentration of military bases around the Alamo City, their contribution to the economic activity there is quite important too.

Personal Income Comparisons

Frequently, conclusions are drawn as to the importance of economic sectors of an overall economy based upon the personal income flowing to each. Estimates of these data for 1970 are provided in Table 16. As stated earlier, the difficulty of assessing the importance of agriculture is that the very important agribusiness component is not separately available. Consequently, the scope of the penetration into the total economy of the multiplier effect of further processing, storage, transportation and all other ancillary marketing service is not included. However, the effect of these economic activities may be estimated by applying income multipliers to the personal income figure for the agriculture

Table 15: Estimated gross San Antonio product, and agriculture-agribusiness, and military contributions, San Antonio market area, 1972 and 1973.

Sector	Base	1972		1973	
		mil. $	percent	mil. $	percent
Gross Product for S.A.M.A.	I	6,625	100.0	7,049	100.0
	II	9,639	100.0	10,251	100.0
Agriculture-agribusiness for S.A.M.A.	I	2,139	32.3	2,920	41.4
	II	2,139	22.2	2,920	28.5
Military for S.A.M.A.	I	2,258	34.1	2,476	35.1
	II	2,258	23.4	2,476	24.2

Source: Calculations by authors.

Table 16: Personal disposable income and percent of totals, primary and secondary market areas, San Antonio, 1970

Type and sector	Personal disposable income		
	Millions of dollars	Percent of sub-totals	Percent of combined total
Primary counties			
Farm income a/	58.0	1.9	
Agribusiness income b/	107.3	3.4	
Military income c/	638.3	20.3	
Other civilian income d/	2,336.0	74.4	
Sub-total	3,139.6	100.0	52.0
Secondary counties			
Farm income a/	265.3	9.2	
Agribusiness income b/	490.8	16.9	
Military income c/	104.9	3.6	
Other civilian income d/	2,036.1	70.3	
Sub-total	2,897.1	100.0	48.0
Combined primary and secondary			
Farm income a/	323.3	5.4	
Agribusiness income b/	598.1	9.9	
Military income c/	743.2	12.3	
Other civilian income d/	4,372.1	72.4	
Total	6,036.7	100.0	100.0

a/ Farm income obtained from source given below.

b/ Estimated as a residual of multiplier effect of farm income.

c/ Includes pay to military personnel and civilians employed on military installations.

d/ Residual of total income (by sector) minus sum of farm, military and agribusiness income.

Source: Computed by authors from data obtained from Department of Commerce, O.B.E., Personal Income by Type and Industrial Source--Texas, 1966-1970, Washington, D.C., 1971.

sector. This yields the third estimate of the agriculture-agribusiness component in relation to other sources of income.

The military payroll including both military personnel and civilian employees is estimated to be 12.3 percent for the total San Antonio market area (Table 16). The combined agriculture and agribusiness personnel income contribution is 15.3 percent (Table 16). Based on these data, the agricultural-agribusiness component is larger than the military component.

Given the structure of the military and the agriculture-agribusiness sectors in the San Antonio market area and their impact on the business community, both deserve continuing support of the community leaders to assure future growth of the area.

RECOMMENDATIONS

The reader is reminded that only general recommendations can be offered in this type of overview analysis. Feasibility studies using primary data will need to be completed to verify the economics of a specific activity being questioned. This is true since in some cases only generalized data are collected and made available while in other instances, no data are collected at all. Further, the changing economic nature of the area in particular, the State and the nation as a whole confounds the problem.

Using the resource base of agricultural production, processing and the consumers in the Greater San Antonio market area, the following areas have surfaced and are presented in short statement form.

Farm/Ranch Level

1. The value of all farm products produced and sold each year in the SAMA amount to over ½ billion dollars. For each dollar of added production, over three dollars are generated in the business sector above the original farm/ranch value. No other industry matches this multiplier effect. This industry needs continued business community support in financing, services and market development.

2. Farm/ranch expenditures to produce are now above the average for the State. This probably is the result of the relatively large fruit and vegetable concentration as well as the more extensive livestock and livestock products enterprises and the small grain sector. These businesses need continued financial support as well as management assistance that the financial community can offer.

Agribusiness Sector

Currently gross sales of the food and kindred product industry coupled with all these allied agribusiness industries combined total slightly under one billion dollars annually. Granting that plant capacity data are not known which could change the final verdict, the following, nevertheless, bears further investigation.

3. Bread and other bakery products industry
4. Canned fruits and vegetables industry
5. Frozen fruits, fruit juices and vegetables industries
6. Food preparations, nut and peanuts, including peanut butter

Ancillary Areas

7. In terms of primary producers being able to find labor, is there a need for developing sectional (localized) clearing house labor centers to help match needs and availability of labor. Seasonal and permanent type personnel need to be differentiated.

8. Develop a source publication to be used by primary producers to locate machines for hire, custom and/or contract work. In addition to listing the name of the person and the type of service offered, the most common rate as well as the range of charges levied would be useful.

9. Who are the horticultural (specialty) suppliers? This includes seeds, bulbs, plants, shrubs and trees used in the area.

10. Enlist the aid of the Texas Department of Agriculture in promoting Texas Agricultural Products (TAP) grown and processed in the locale.