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RESEARCH REPORT
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SAN ANTONIO AGRIBUSINESS FIRMS SURVEY

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In Cooperation with the Department of
Agricultural Economics and the San Antonio
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SAN ANTONIO AGRIBUSINESS FIRMS SURVEY

Robert E. Branson
Mary Lou Price
Elizabeth Posey

Prepared for
Farm and Ranch Division
San Antonio Chamber of Commerce

October 1982

Texas Agricultural Market Research and
Development Center
in Cooperation with
Department of Agricultural Economics
Texas Agricultural Experiment Station
College Station, Texas

THE TEXAS AGRICULTURAL MARKET RESEARCH AND DEVELOPMENT CENTER

An Education and Research Service
of
The Texas Agricultural Experiment Station
and
The Texas Agricultural Extension Service

The purpose of the Center is to be of service to agricultural producers, groups and organizations, and governmental agencies, as well as processing and marketing firms in the solution of present and emerging marketing problems. Primary emphasis is given to research and educational activities designed to improve and expand the markets for food and fiber products of present or prospective interest to Texas agriculture. Analyses are also directed toward an analysis of consumer food and fiber needs.

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

This research

was made possible in part

through a grant from

the San Antonio Chamber of Commerce.

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RESEARCH HIGHLIGHTS

** This report presents the results of a special survey among San Antonio area agribusiness firms. Its purpose is to provide further information as to the products produced and/or marketed, the geographic market areas served, the types of customers served, the sources and kind of inputs used, and views as to how the agribusiness economy of San Antonio can be expanded.

** An analysis of population growth from 1970-1981 was made which reveals the possibility of a large expansion in the food and fiber markets San Antonio can serve.

** Looking to the year 2000, and if the 1970-81 trend holds, the following market population approximate percentage growth is possible:

San Antonio 31%; Houston 55%; Corpus Christi 14%; McAllen and Brownsville both near 60%; and Austin 79%.

** For Texas, New Mexico, Colorado and Oklahoma the individual state growth trend would result in increases ranging from 26% to 38%. This interprets into about 7 million more consumers in the four-state market.

** Compared with 1980, and not allowing for price increases, the Texas retail market for food products may expand by $4.7 billion. San Antonio, Houston and Austin combined may represent half of that gain.

** Apparel markets in Texas during the same period may expand by nearly $2 billion.

** Both the food and apparel market growth will require a substantial expansion of agricultural production, processing, and distribution services. Selected product examples are examined.

** According to 1977 U.S. Census of Business data, the latest available census report, and using the U.S. industrial classification codes as a guide, it appears that San Antonio had about 665 agribusiness, or related, manufacturing and wholesale marketing firms. That is a good basis from which to develop further agribusiness development.

** A total of 340 firms responded to the agribusiness firm survey cooperatively made by the Texas Agricultural Market Research and Development Center and the San Antonio Chamber of Commerce. That was equivalent to approximately a 63 percent survey coverage.

** Customers reported served by San Antonio agribusiness firms included manufacturers, wholesaler and other distributors, retailers and farms and ranches. A few had general public customers.

** This research is not concerned with retail establishment numbers or products because these normally appear as needed. Emphasis is entirely on agricultural production, processing or manufacturing and wholesaling since these firms have a choice as to the city in which they locate.

** The principal kinds of products purchased by San Antonio agribusiness firms were determined as well as the geographic area represented by such purchases. Agricultural farm inputs are also identified.

** A rather wide variety of products were reported, by the agribusinesses, for which a local area supplier would be preferred, since a considerable volume was purchased by the San Antonio firms.

** About two-thirds of the firms responding in the survey felt that the Chamber of Commerce could assist in expanding markets for the San Antonio agribusiness firms.

** Major limitations to business expansion mentioned by responding firms were venture capital, skilled workers, good salesmen and advertising and market analysis support.

** An analysis is presented to compare agribusiness growth, in terms of both number of firms and sales in San Antonio versus the Texas total. The census years of 1967 and 1977 are compared to indicate where San Antonio is keeping pace and where it is falling behind. As soon as 1982 Census of Business data become available a similar comparison should be made.

** The major conclusion from this study is that there appear to be significant opportunities for further development of the agribusiness sector of the San Antonio economy. Likewise, further expansion of farm and ranch production will be needed to support it as the population of Texas and surrounding states continue to show rapid growth.

San Antonio Agribusiness Firms Survey

Robert E. Branson
Mary Lou Price
Elizabeth Posey

PURPOSE OF THE STUDY

The objective of this research is to assist the San Antonio Chamber of Commerce and community business leaders in the further development of the agribusiness sector of the San Antonio trade area economy. The Chamber's Agricultural Division is among the more active ones in the nation and sponsored this special study. Previous research identified agriculture and agribusiness as an important part of the San Antonio economy, despite the presence of several large military bases and numerous industrial enterprises. Given the advantage of a substantial agricultural production, processing and marketing base, a logical goal is to expand that base to its full potential.

RESEARCH PROCEDURE

During a series of conferences with the Chamber's Agricultural Division staff, a decision was reached to conduct a mailed survey of all agribusiness firms in Bexar County (San Antonio) and ten surrounding counties that business leaders consider to be the primary trade territory. Identification of the business firms and their addresses was step one. Two sources were used: the computer files of the Texas Employment Commission and those of the Texas Controller Office. All business firms must report their sales to the Controller's

Office as part of the State's sales tax monitoring and reporting procedure. Listings from the files of the two state agencies were merged and duplications eliminated. Addresses for some proved to be outside home offices. Therefore, it was necessary to determine the addresses of their local area offices through other sources in San Antonio. Lists for surrounding counties were forwarded to the respective County Agricultural Extension Agents for corrections or additions. Final lists were computerized to automate the printing of address labels for the mailed survey questionnaire.

Response rates to mailed surveys, according to research experience, vary with the mail source. Therefore, pre-tests were made which indicated that a Chamber mail-out would achieve a higher reply percentage than one from Texas A&M. After the survey materials and mail addressing labels were prepared by the Market Research Center, they were sent to the Chamber for mailing. Of the 539 questionnaires mailed, 340, or 63%, were returned (Table 1). The returned questionnaires were sent to the Market Research Center for editing, coding and computer analysis.

Table 1 Number of Agribusiness Firms, San Antonio Agribusiness Survey, 1981

	Responding Firms		
Business Class	Number Of Firms	Rate of Return Per Group	Type of Firm Responding
		Percent	Percent
Manufacturers	159	64	47
Wholesalers	142	62	42
Broker	27	*	8
Others	12	*	3
TOTAL	340		100

*Not Separately Tabulated.

Although the Agribusiness firm survey identifies various problems and opportunities related to achieving future agbusiness diversification and growth, these must be viewed in terms of the long-range market area growth potentials.

TRADE AREA MARKET GROWTH PROSPECTS

The San Antonio area has the advantage of rail, air, and highway transportation systems that enable it to conveniently serve a wide geographic market. Although Houston has a seaport advantage and Dallas/Ft. Worth a more central geographic location for the West South Central region, San Antonio has the benefits of an ample labor supply and aggressive business development support. These provide a good basis for growth. We will first examine the market expansion outlook in Texas as measured by population growth prospects and then for the Southwest region. These can be interpreted into growth potentials for specific agricultural production enterprises, food and fiber processing, and marketing firms.

By now most everyone is aware of the substantial national population migration to the so-called "Sun-belt" states. Predominant among the beneficiary states are Florida, Texas, and California. Prospects of long-term energy availability for industry from oil, gas, and coal lend strong support to further Texas industry and population gains. In order to assess the potential growth, population gains from 1970 through 1981 were recorded and statistically projected by computer to the years 1990 and 2000. The outlook for major Texas cities is of key importance. Several data services were obtained and used for forecasting purposes--one from the Sales and Marketing Management publications and others from several U.S. Census and Department of Commerce sources. As a double check, residential building construction

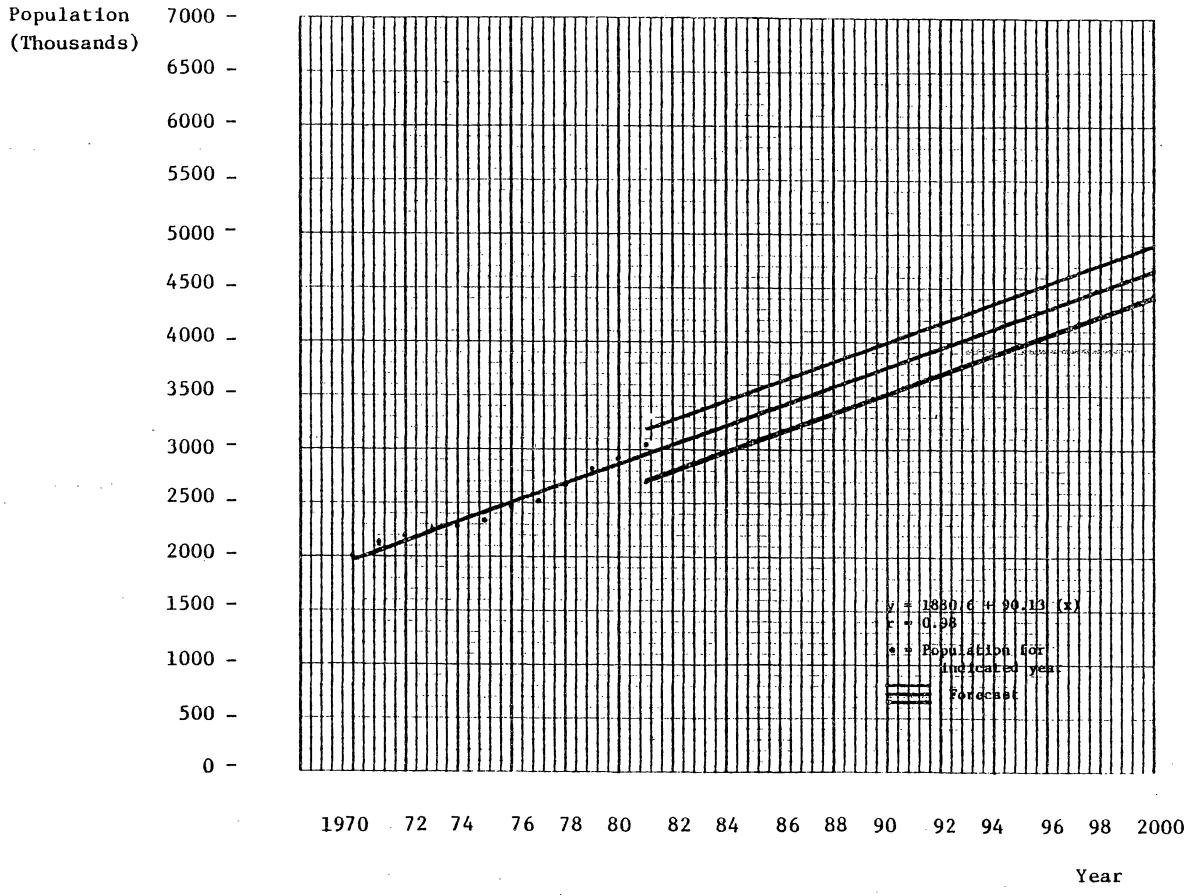
permit data were secured and used as a basis for computing an independent population growth estimate for the key cities and the state as a whole, which we will now consider.

Houston

According to growth trends occurring in the 1970's and early 1980's the Houston SMSA could attain a population of 4.5 to 5.0 million persons by the estimated 2000 level (Figure 1). A statistical, linear regression against time for the 1970-81 period indicated an average growth of 90,130 persons per year. The equation is $y = 1{,}880{,}000 \times 90{,}135'$ and $r^2 = 0.96$, where y is the estimated population and x' is the number of the year where 1970 = year 1 and subsequent years count upward, for example 1980 = year 11. The r^2 value indicates that, on the average, 96 percent of the population growth was related to, but, of course, not caused by, yearly passage of time. This interpretation of the regression equations will apply to the other cities and areas discussed below, but the forecasting equation figures vary, of course, by city and state. Although the year 2000 seems futuristic, it is only eighteen years away. Therefore, business and economic planning should be concerned with both the 1990 and 2000 targets.

The center line noted in the graph of the forecasts represents an extension of the trend regression line for the 1970-81 period. The upper and lower lines represent possible deviations equal to plus and minus two standard deviations from the forecast. These were computer calculated, based upon the observed year to year variations around the basic growth trends during the 1970-81 period. If the general population growth relationships of 1970-81 hold from now to 2000, there is a 95 percent probability that the population of the markets, city or state, will be within

Figure 1
Population Trend and Forecast
Houston, Texas 1970-2000



the limits of the upper and lower trend lines.[1/]

Houston is connected to San Antonio by interstate highway 10, and is about two hundred miles east of San Antonio.

Austin

Austin is eighty miles north of San Antonio on interstate highway 35 and also is a rapidly growing market. As the state capital and home of the University of Texas, Austin's development for a long time was closely related to these two factors. In recent years, however, the city has undergone substantial industrial growth, centered primarily around electronics and service type industries. The city's growth rate is shown in (Figure 2). From its estimated 555,000 population in 1981, it may nearly double by the year 2000, and thereby have a population of one million. According to the forecasting equations noted on Figure 2, the rate of Austin's annual growth is about 17,000 persons.

Like San Antonio, Austin (Travis County) has an appreciable Spanish origin population, though only 17 percent compared to 21 percent in Houston (Harris County) and San Antonio's (Bexar County) 46 percent. These obviously are significant market segments that warrant targeting of production to them. Though growth of this market segment if not considered here, agbusiness firms should give them attention.

Corpus Christi

Corpus Christi, about 145 miles south-southwest of San Antonio, has had a moderate rate of growth. From its 370,000 level as of 1981, it is projected to a population of about 500,000 by the year 2000 -- a growth of 35 percent. The regression trend analysis indicates a population increase of near 7,300 persons per year, (Figure 3). Slightly less than half of its

1/ Theoretical limits are larger; the above is used for simplicity.

Figure 2
Population Trend and Forecast
Austin, Texas 1970-2000

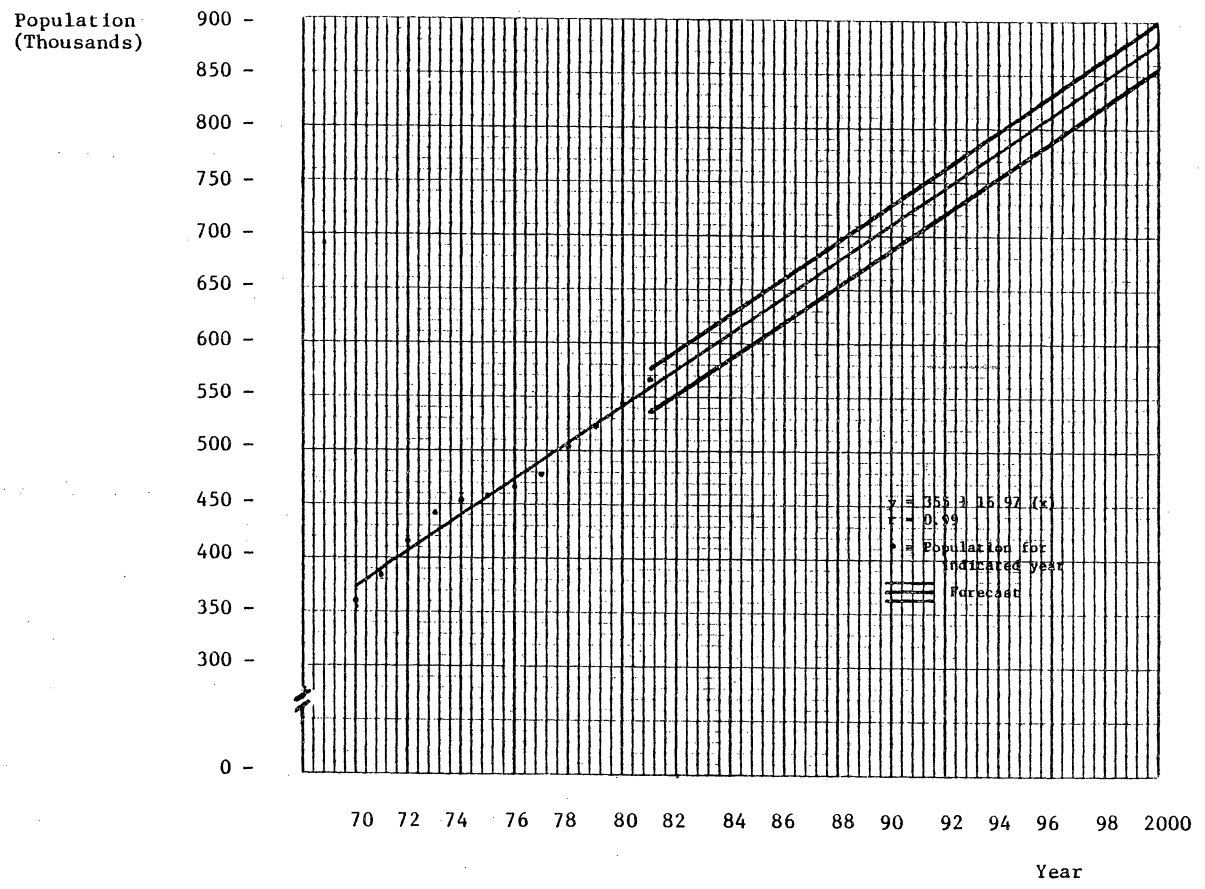
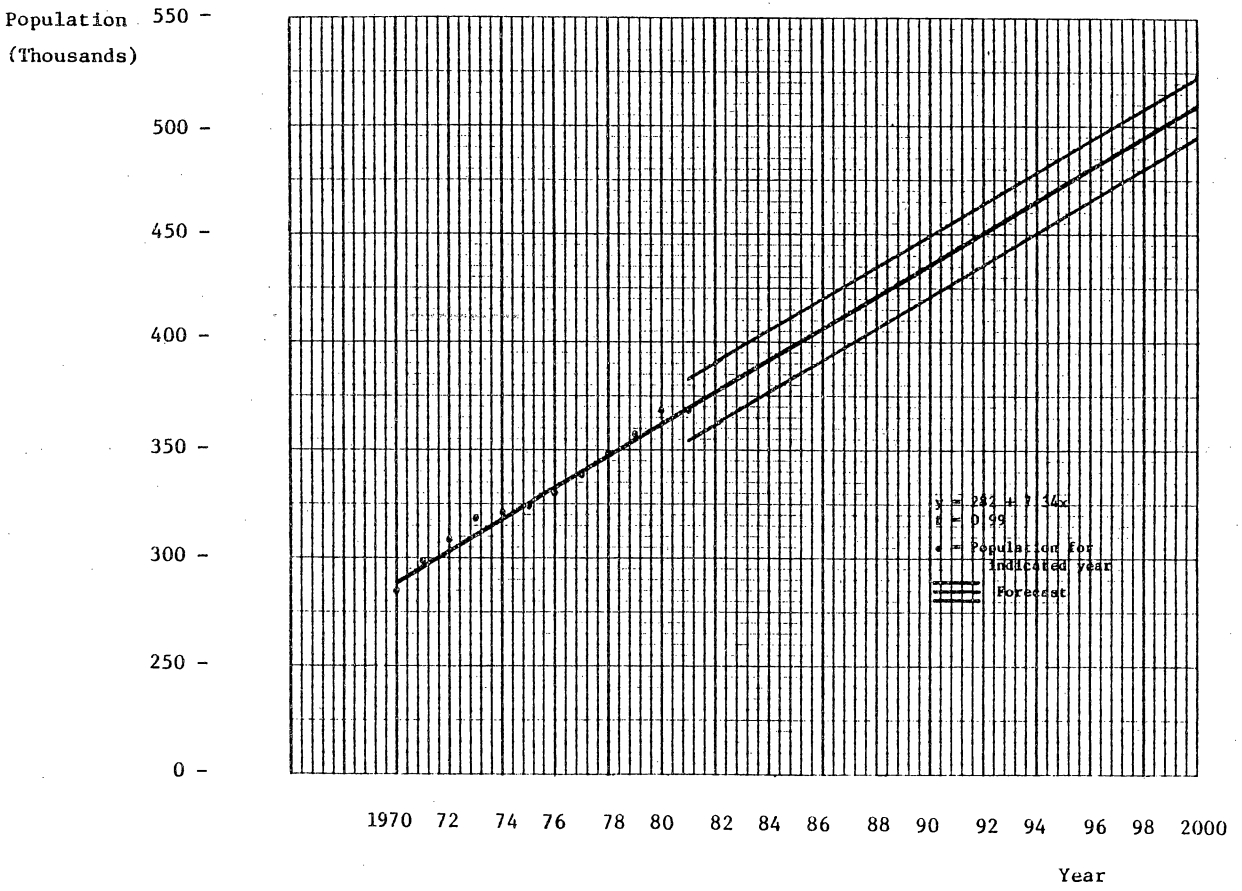


Figure 3
Population Trend and Forecast
Corpus Christi, Texas 1970-2000



households are of Spanish origin.

Brownsville and McAllen

These two cities are the focal points of two separate metropolitan areas (SMSA's) that comprise most of the lower Rio Grande Valley portion of Texas. Brownsville will attain near 300,000 population size and McAllen close to 400,000 by the year 2000 if the 1970-81 trends are maintained. Brownsville has been adding an average of 5,280 persons per year and McAllen 6,800 persons, (Figures 4 and 5).

Total market growth, as represented by these two metropolitan areas, will approximate a 230,000 population gain. Spanish origin individuals comprise 70 to 80 percent of the market.

Altogether, the Houston, Austin, Corpus Christi, and Brownsville-McAllen growth will represent a new market within Texas of 2,500,000 persons by 2000.

San Antonio

We will now center our attention on market growth prospects for San Antonio. The metropolitan area in 1981 had a population of approximately 1.1 million persons, which makes it the third largest metro area in Texas. According to analyses of the population data, and residential construction records for the 1970-81 period, the population growth rate was near 22,500 persons per year. If those rates are maintained, that provides a forecast of 1.5 to 1.6 million people by the year 2000, or a gain of about another half a million persons. Thus within San Antonio itself, major growth opportunities appear to be available for agbusiness firms, (Figure 6).

Rather than to consider each other major Texas city individually, it is preferable to now overview the total state market expansion prospects. Then we will consider other adjoining states.

Figure 4
Population Trend and Forecast
Brownsville, Texas 1970-2000

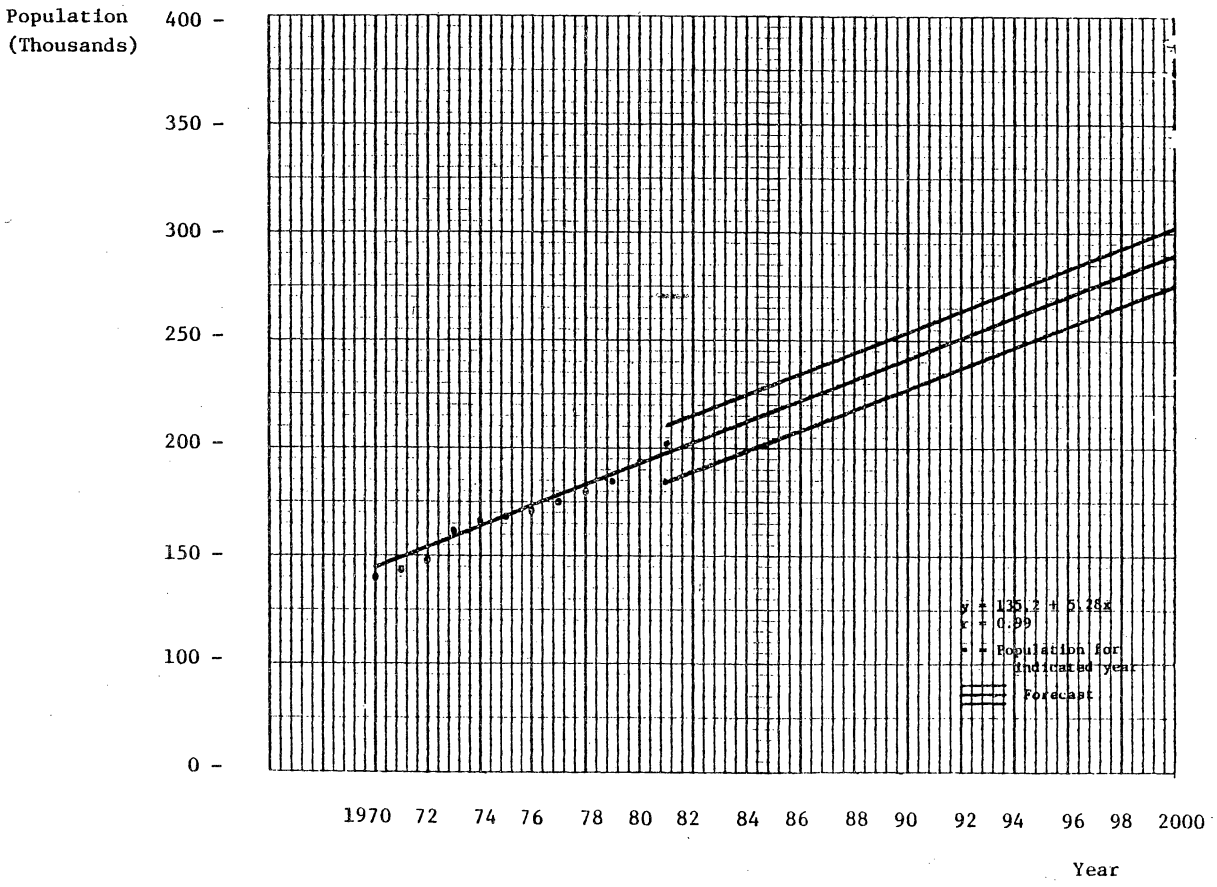


Figure 5
Population Trend and Forecast
McAllen, Texas 1970-2000

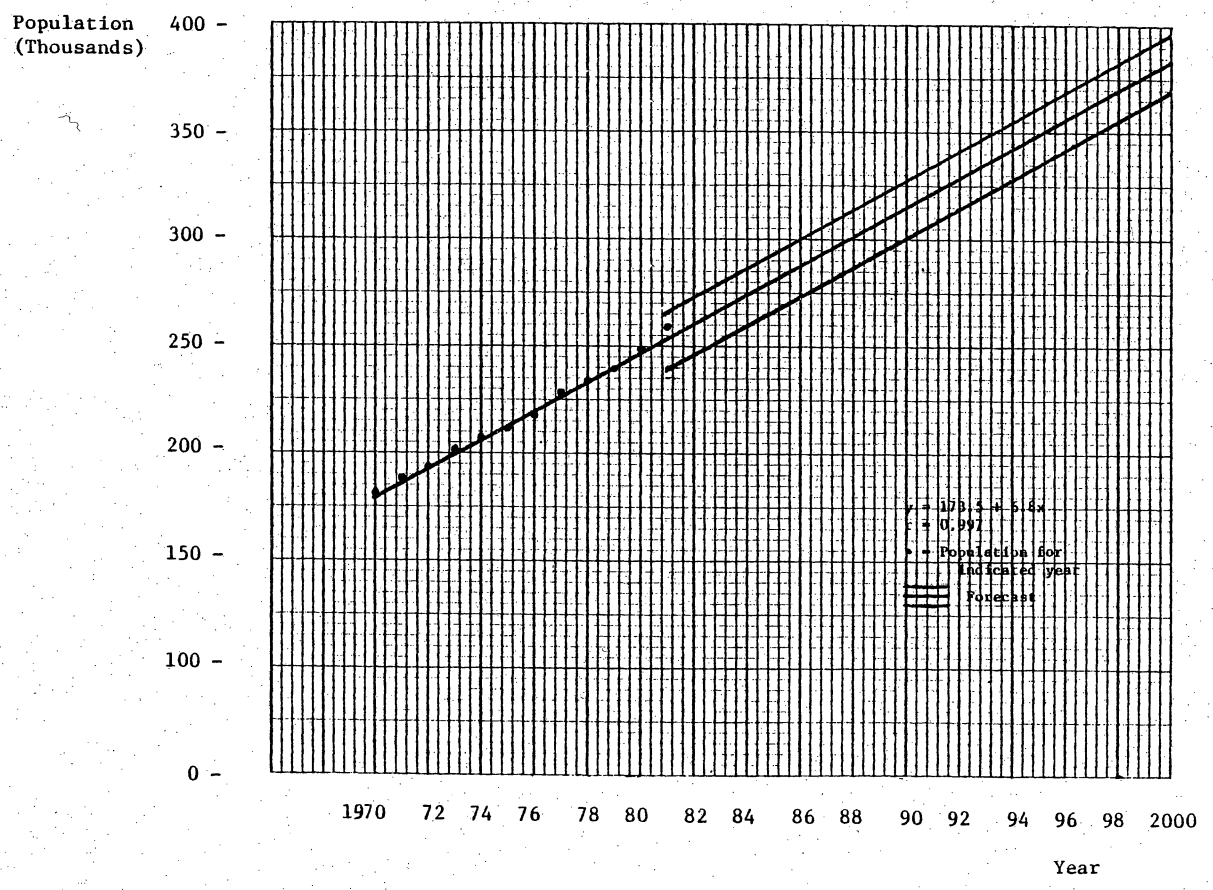
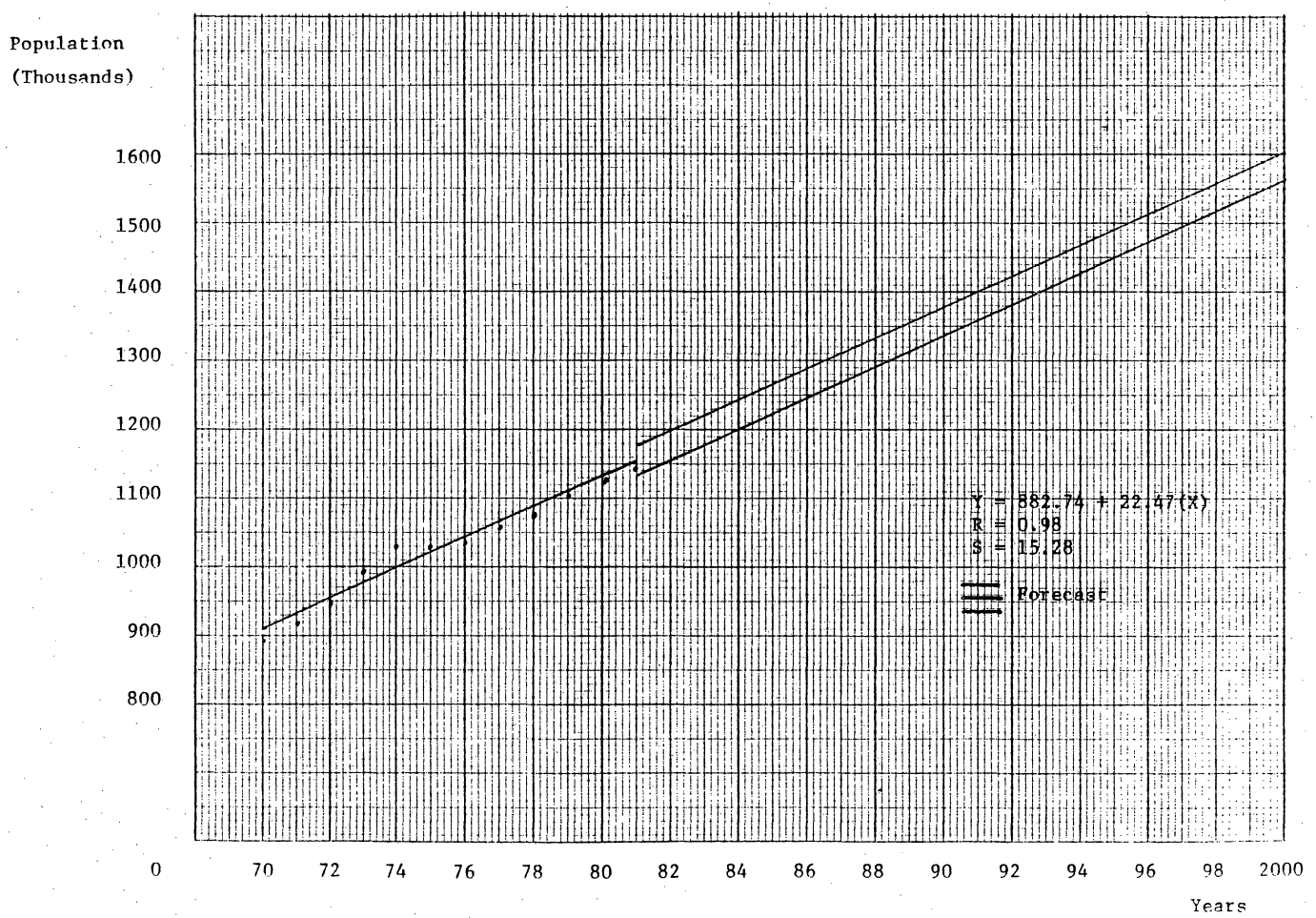


Figure 6
Population Trend and Forecast
San Antonio
1970-2000



Texas

As already noted, Texas is one of the main states benefiting from the population migration to the sun-belt portion of the nation. It now ranks third nationally in total population and may become second only to California by overtaking New York by or before the year 2000. Population totaled nearly 15 million in 1981 and, on the basis of recent growth rates, may reach 20 million by 2000, (Figure 7). The Texas 2000 Commission has forecast a population of 22 million by that time, which may well be achieveable. Our estimate is based upon a growth rate of around 300,000 persons per year.

Southwestern States

For purposes of this market analysis, the S.W. states are Texas, New Mexico, Oklahoma, and Colorado. Graphs of population forecasts are shown for the additional states in (Figures 8 through 10). Projected increases for these states are noted in (Table 2). Overall, 7.5 million consumers will be added to this nearby market over the next nineteen years, for a gain of 34 percent over the 1981 level.

MARKET GROWTH PROSPECTS FOR AGBUSINESS PRODUCTS

Comprehension of the coming expansion in food and fiber markets is helped by considering the figures shown in (Tables 3, 4, and 5). At recent prices, food sales in Texas will increase by nearly $2.2 billion by 1990 and $4.7 billion by 2000. Men's and boy s' apparel by over $700 million by the year 2000 and the women's and girls' clothing market will be up by nearly $1.3 billion. In each case that amounts to a 37 percent market expansion. It is clear also that a large part of that market opportunity lies within San Antonio and Houston.

Figure 7
Population Trend and Forecast
Texas
1970-2000

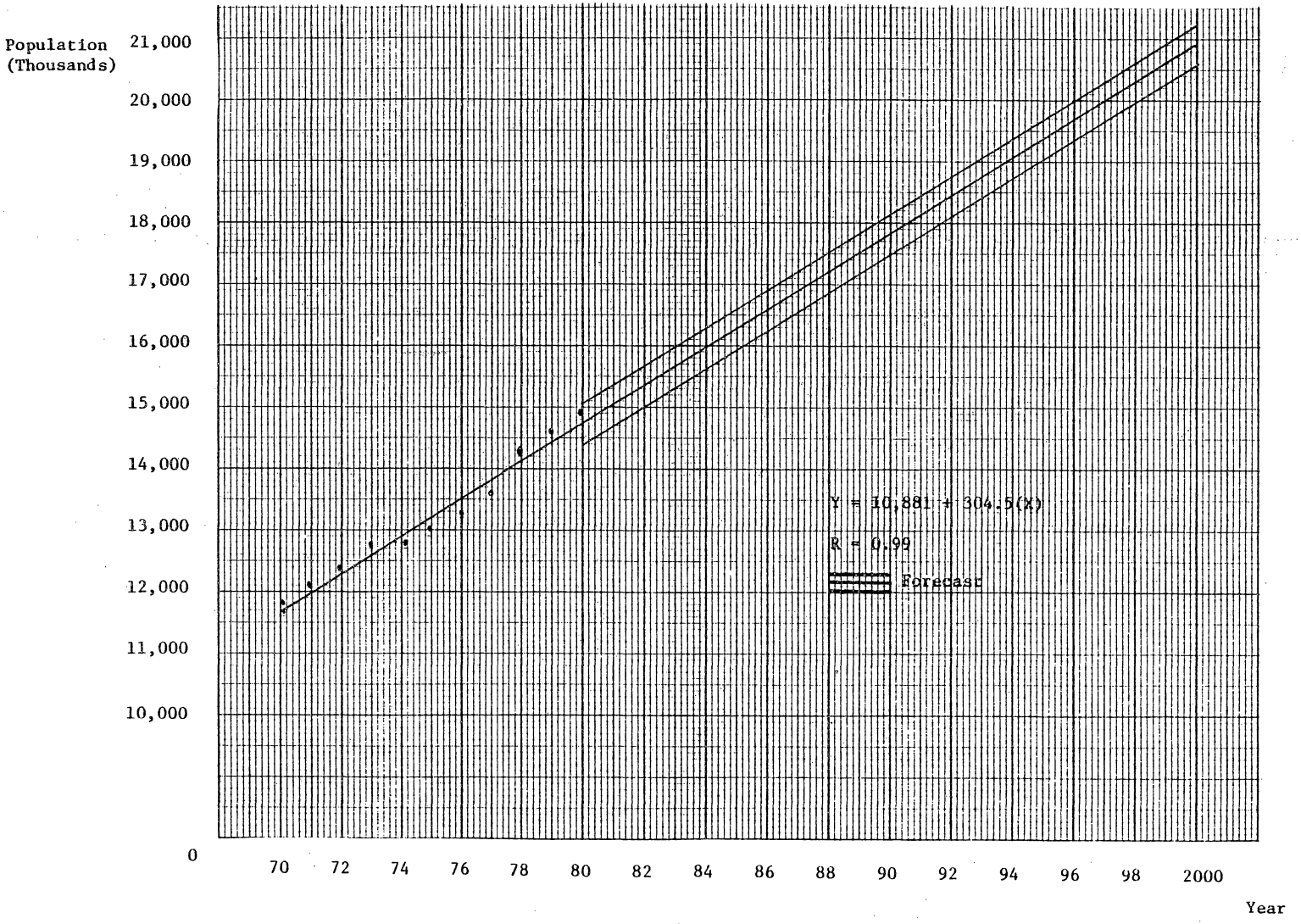


Figure 8
Colorado
Population Projection
1970-2000

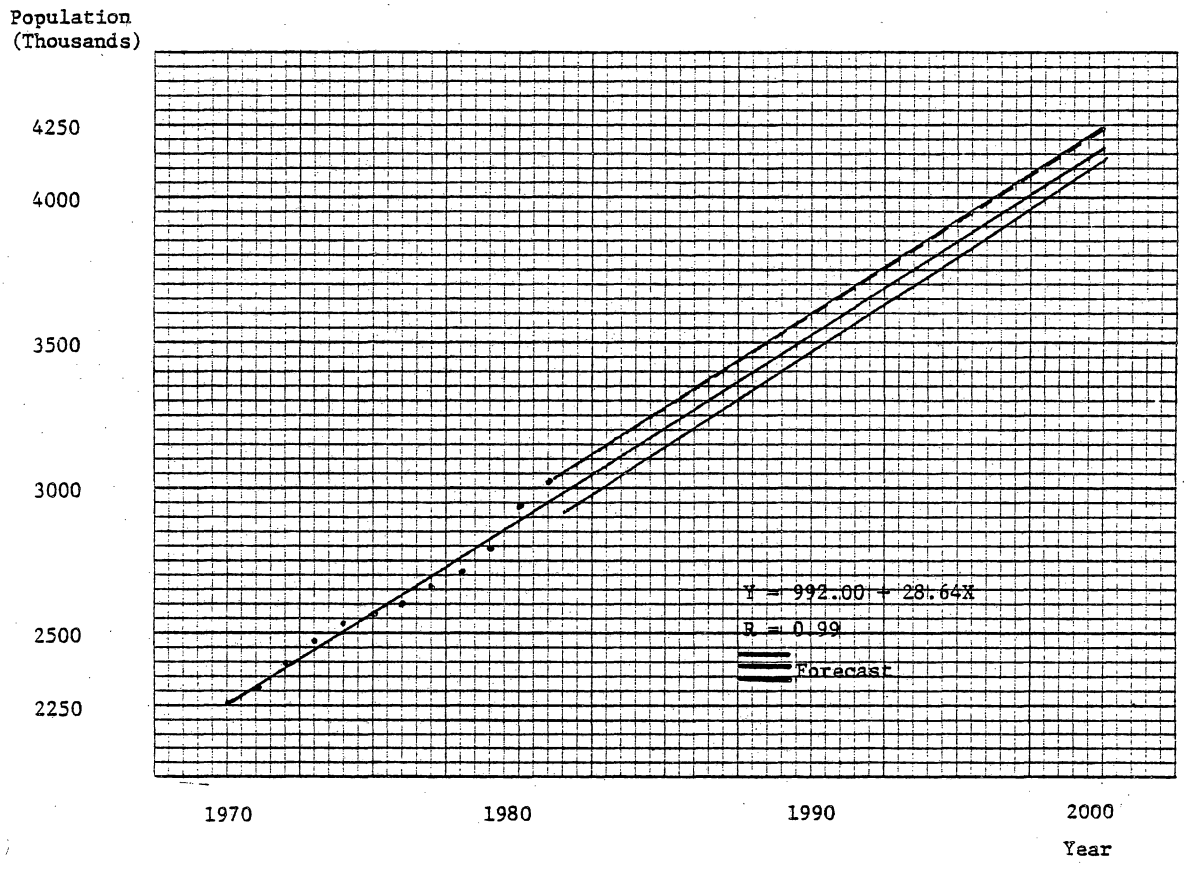


Figure 9
Oklahoma
Population Projection
1970-2000

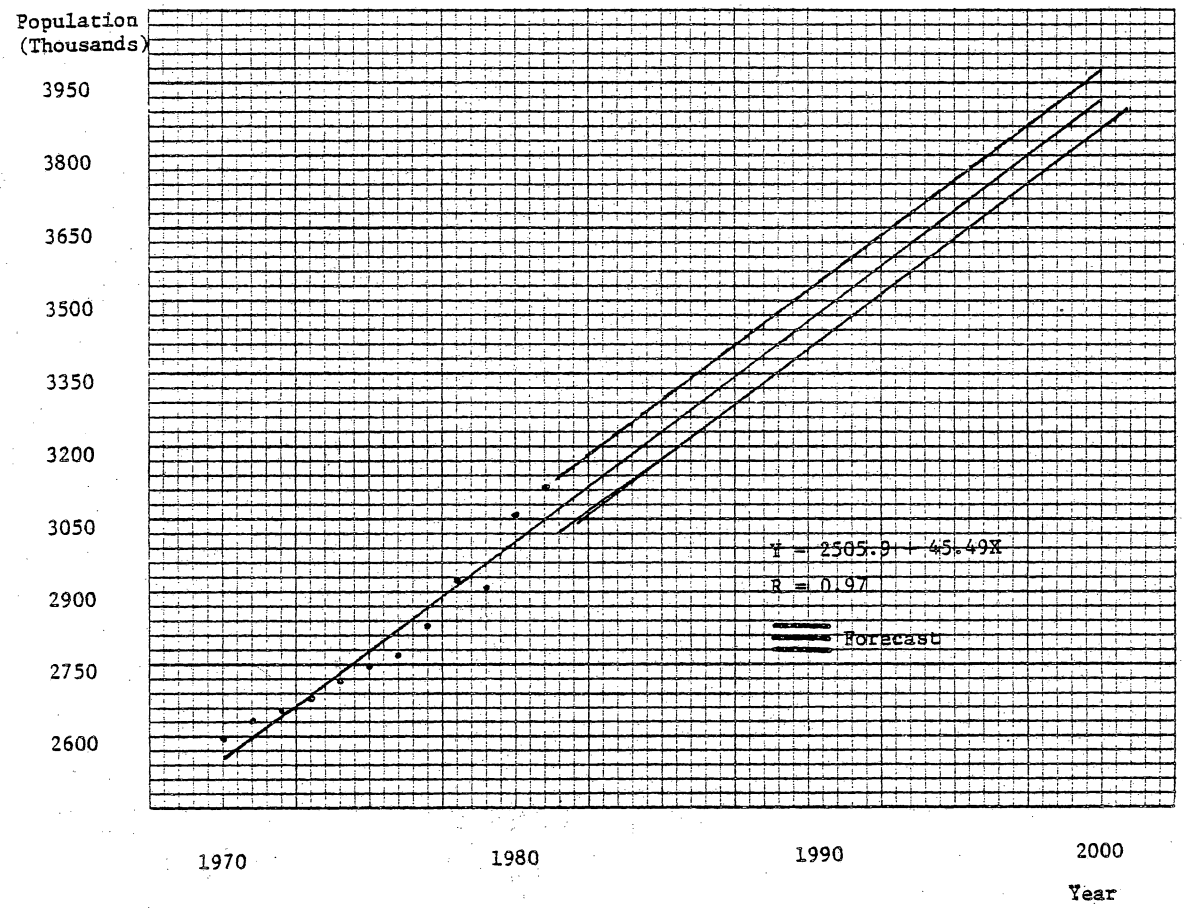


Figure 10
New Mexico
Population Projection
1970-2000

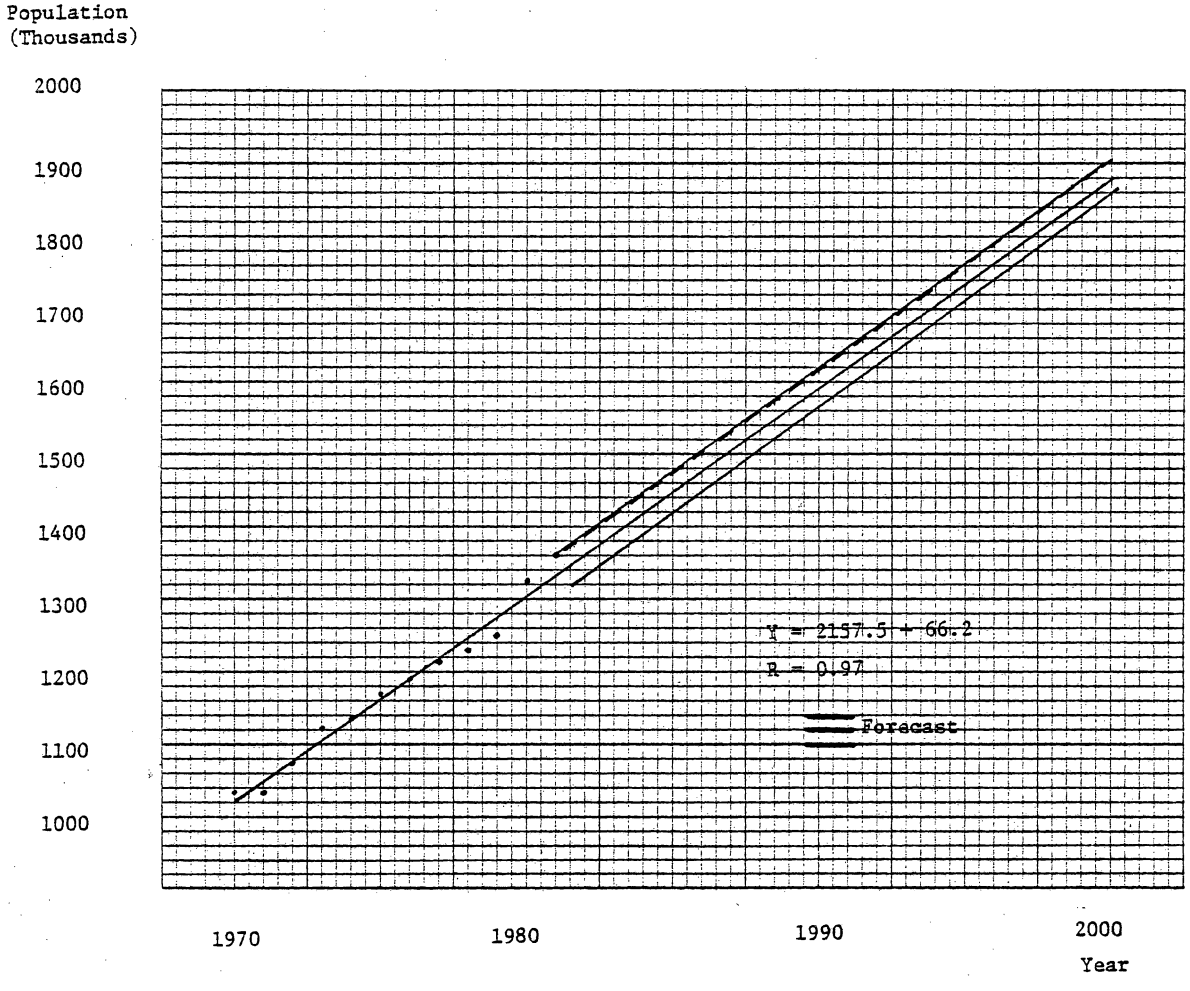


Table 2 Population for Indicated Areas for San Antonio Chamber of Commerce Agribusiness Study

Area	1981 1/ (Thousands)	1990 2/ (Thousands)	% change from 1981	2000 2/ (Thousands)	% change from 1981
San Antonio SMSA	1,103	1,259	+14	1,444	+31
Houston SMSA	3,073	3,815	+24	4,757	+55
Corpus Christi	333	349	+ 5	378	+14
McAllen SMSA	303	380	+25	484	+59
Brownsville SMSA	222	285	+28	361	+62
Austin SMSA	568	778	+37	1,017	+79
Texas	14,798	16,980	+15	19,925	+35
New Mexico	1,360	1,593	+17	1,880	+38
Oklahoma	3,114	3,461	+11	3,961	+26
Colorado	3,019	3,534	+17	4,175	+38
S.W. States	22,291	25,568	+15	29,895	+34

1/ Source: S&MM Survey of Buying Power, 1971-1982

2/ Predicted population using linear regression. General linear Model.

Table 3 Market Growth Productions of Food Product Sales by Geographic Market Area, 1990 and 2000.

Market Area	Market Estimate 1980	FOOD SALES Projected Increase Over 1980 1990 1/	Projected Increase Over 1980 2000 1/
		million $	
San Antonio SMSA	$ 784	$ 124	$ 257
Houston SMSA	2,943	828	1,760
Corpus Christi SMSA	269	15	39
McAllen SMSA	233	70	153
Brownsville SMSA	167	54	113
Austin SMSA	446	184	377
Texas	12,499	2,163	4,706

1/ Calculated from 1990 & 2000 projected populations based on Sales Management series and constant price basis.

Table 4 Market Growth Projections for Men's and Boys' Clothing by Geographic Market.

Market Area	Market Estimate 1980	MEN'S & BOY'S CLOTHING Projected Increase Over 1980 1990 1/	Projected Increase Over 1980 2000 1/
		million $	
San Antonio SMSA	$ 140	$ 22	$ 46
Houston SMSA	555	156	332
Corpus Christi SMSA	37	2	5
McAllen SMSA	48	14	32
Brownsville SMSA	30	10	20
Austin SMSA	78	32	66
Texas	2,063	357	777

1/ Calculated from 1990 and 2000 projected populations based on Sales Management Series and constant price basis.

Table 5 Market Growth Projections for Women's and Girls' Clothing by Geographic Market, 1990 and 2000

Market Area	WOMEN'S & GIRLS' CLOTHING Market Estimate 1980	Projected Increase Over 1980 1990 1/	Projected Increase Over 1980 2000 1/
		---million $---	
San Antonio SMSA	$ 252	$ 40	$ 83
Houston SMSA	900	253	538
Corpus Christi SMSA	63	4	9
McAllen SMSA	70	21	46
Brownsville SMSA	48	16	33
Austin SMSA	139	57	118
Texas	3,411	590	1,284

1/ Calculated from 1990 & 2000 projected populations based on Sales Management series and constant price basis.

Figures presented in Table 2 are based on projections from the population data in the Survey of Buying Power publications of Sales Management, rather than the residential construction data that formed the base of the population forecasts shown in the preceding graphs. Both bases are presented in this report in order to show their similar results. Several systems of population estimation can be and are used. Therefore, it is important to compare their outcomes.

Market Projections have more relevance to individual classes of business, if they are placed on an individual product basis. Those interpretations are made next.

MARKET GROWTH VIEWED IN SPECIFIC PRODUCT TERMS

Agricultural product market growth prospects cited here should be considered only as examples. For that reason only some of the more important ones that are also produced within Texas are considered. Information about other products can be provided upon request. Three market perspectives are taken: San Antonio, Texas, and the Southwest region. Quantities shown are based upon the average U.S. per capita consumption as indicated by the so called "disappearance estimates" of the U.S. Department of Agriculture. Disappearance figures are calculated by taking beginning inventories and adding the production for the year in question and then subtracting exports and ending inventories to determine the amount apparently consumed during the course of the year. Whereas these estimates have some degree of error, they are nonetheless good indicators of the quantities consumed. Many processed foods are not reported separately in disappearance estimates. Potato chips, for example, is a product for which production and inventory data are not kept by the USDA. In such instances, the per capita usage rate is calculated from consumer food use surveys.

The potential market expansion by 1990 for some representive food examples is presented in (Table 6). These figures are processed foods' weight That means that they indicate the product volume that must be produced by the relevant kind of agribusiness firm. These figures have to be converted to raw agricultural product equivalents so that farmers and ranchers perceive that market implications for their own business planning. First we will consider meat products.

Table 6 Examples of Potential Market Growth for Individual Food Products, San Antonio, 1990 and 2000.

Product	Market per Capita 1/	1981 Estimated Market	Market Volume 1990	Increase By 2000
	Pounds		--million pounds--	
Beef	85.0	94.0	14.0	30.0
Pork	40.0	44.0	9.0	20.0
Lamb, Mutton, Goat	2.4	2.6	0.2	0.5
Chicken	40.0	44.0	7.0	16.0
Turkey	8.0	9.0	1.5	3.0
Fresh Vegetables	112.0	123.0	16.0	35.0
Grapefruit, fresh	6.0	15.0	1.2	2.6
Oranges, fresh	12.0	27.0	2.0	4.0
Frozen Vegetables	5.9	6.0	19.0	43.0
Peanut Butter	4.5	5.0	0.7	1.5
Potato Chips	3.4	3.7	0.5	1.1
Milk, whole	13.6 gal.	21.0	3.0	6.0
Milk, low fat	10.8 gal.	12.0	1.8	4.0
Ice Cream	3.6 gal.	4.0	0.6	1.3

1/ Estimated from 1978 Food Consumption Study, Western Region, USDA

Beef

By 1990, another 14 million pounds of beef products will be needed in the San Antonio market including that in processed meats. The Texas market will be 190 million pounds larger, the Southwest (4-state) region 286 million pounds larger. In terms of live cattle, that means respectively 25,000, 345,000, and 520,000 head of cattle. One begins to see the significance of the prospective market growth when we talk of needing another half million head of cattle per year to serve the 4-state area. The agbusiness

opportunities lie not only in growing and feeding those cattle, but also in processing, further processing, and wholesale distribution.

Pork

The estimates of the pork needs may be somewhat overstated because we are using national consumption rates per person. Texas usually is below average in pork usage. Nonetheless, the added production requirements of pork and pork products noted in Table 7 convert into 54,000 and 1,155,000 additional hogs per year over recent production levels.

Chicken

Broiler production must expand considerably to meet the 1990 level of consumer demand. Again, we are considering all forms in which poultry is used. Table 7 market expansion estimates convert to 2.6 million more head per year for the San Antonio market, 39 million for Texas, and 58 million for the 4-state market.

Turkey

The turkey market in San Antonio will likely increase by the equivalent of 100,000 birds per year by 1990. An increase of 1.4 million will be needed state-wide and 2.1 million for the 4-state market. Remember we are talking about increases over the present market and not the total market demand.

Dairy Products

Expansion in the dairy product market is shown in Table 7. When whole fluid milk and low-fat fluid milk needs are added together, we get an indication of the further production required. On the basis of the average milk production per cow for Texas in recent years, the market for milk pro-

ducts will call for another 4 thousand dairy cows to meet San Antonio's demand. Texas will need the output of another 55 thousand cows and the 4-state market 82 thousand cows.

Product-wise, the state agbusiness firms must increase capacity to provide another 71 million gallons of fluid milk, 8.5 million gallons of ice cream and 10 million pounds of cottage cheese. The question is how much of this shall we produce ourselves and how much should be imported from other states? Also, from which states should these importations be made?

Citrus Fruits and Products

By 1990, the San Antonio local area will require 50,000 more 40-pound cartons of fresh oranges per year. That is equivalent to 400,000 bags of oranges packed 5 pounds to the unit. Grapefruit marketing will expand by about 240,000 of the 5-pound bags. The Texas market will increase by 675,000 of the 40-pound cartons or 5.4 million consumer 5-pound bags.

Frozen orange juice markets will increase by about 100,000 gallons in San Antonio, or the equivalent of 2,666,000 6-ounce cans. State-wide, the total will be 40,470,000 6-ounce cans. If this market is supplied totally from within Texas it interprets into 121,649 more orange trees in the Rio Grande Valley for frozen concentrated orange juice production.

Vegetables

Population growth by 1990 will require another 52 million pounds of vegetables in San Antonio, or about another 1.5 million bushels. Texas use will expand by 741 million pounds, about equally divided among the fresh, frozen and canned vegetable market. Land area-wise, this translates to about 35,000 to 50,000 more acres in vegetable production. Actual

acreage would vary depending upon which crops are produced. Texas has not been competitive in canned and frozen vegetable production because crop yields are below those in the Ohio Valley region. New developments may occur to change that situation.

Snack Foods

Potato chips, peanut butter, and honey to a considerable extent may be called snack foods. Growth of these markets and business opportunities associated therewith will keep pace with those already discussed.

Another 200 thousand pounds of potato chips annually will be added to the San Antonio market, and 2.6 million pounds for Texas by 1990, Table 7. If shoestring potatoes are included, the San Antonio market growth amounts to 640 thousand pounds and Texas 8.9 million pounds, or the equivalent of 284 million of the half ounce personal size packages of potato chips.

Peanuts are grown in Texas and some processing lines in food plants are already in place. The 1990 outlook is for adding 300,000 pounds to the San Antonio market and 3.9 million to the Texas market. For a processing plant that means almost 3.5 million of the standard 18-ounce jars.

Honey usage will be up by 200 thousand pounds, or 260,000 12-ounce jars. For Texas, the increase is 2.6 million pounds or 3.5 million jars.

Sugar consumption will rise by 15 million pounds in San Antonio, or 3 million 5-pound sacks. The Texas total increase will take 40 million of those sacks.

All of these examples are given to portray the significance of the market growth that Texas and the San Antonio area have before them. Clearly individual feasibility analyses are necessary or advisable before launching into any of the prospective agbusinesses.

Table 7 Market Growth by 1990, Selected Products by Indicated Market Area

Product	San Antonio	Texas	Southwest
	---million pounds---		
Meats			
Beef	14.0	190.0	286.0
Pork	9.0	129.0	194.0
Chicken	7.0	105.0	157.0
Turkey	1.5	21.0	31.0
Dairy Products			
Fluid whole milk (gal)	3.3	46.0	68.0
Fluid low-fat milk (gal)	1.8	25.0	38.0
Ice Cream (gal)	0.6	8.5	13.0
Cottage cheese	0.7	10.0	15.0
Fruits, fresh			
Oranges	2.0	27.0	41.0
Grapefruit	1.0	17.0	25.0
Peaches	0.9	13.0	19.0
Orange Juice (gal)			
Frozen (gal)	0.1	1.9	2.9
Canned (gal)	1/	0.5	0.8
Chilled (gal)	0.1	0.8	1.3
Vegetables			
Fresh	16.0	225.0	338.0
Canned	17.0	238.0	358.0
Frozen	19.0	278.0	417.0
Potato Chips[1]	0.2	2.6	4.0
Peanut Butter[1]	0.3	3.9	6.0
Honey	0.2	2.6	4.0
Sugar	15.0	204.0	306.0

...[1] 38,000 gallons

SIZE OF SAN ANTONIO AGBUSINESS INVOLVEMENT

According to the 1977 U.S. Census of Business, San Antonio already has a good agbusiness base, since 665 agbusiness firms were reported in the area (Table 8). These were about equally divided between manufacturing and market distribution. Of the processing or manufacturing group, 59 percent were in various food product lines and 28 percent in apparel or textiles. Others were in millwork or other miscellaneous-related agricultural products (Table 9).

Within the wholesaling category, food distribution dominates and accounts for 193 out of a total 292 establishments. Others are in wine and beer, apparel, farm products (especially livestock), and farm and garden machinery distribution, (Table 10). These figures should be updated with each Census of Business and the next should provide 1982 information.

The agbusiness mailed questionnaire survey had 340 total respondents. Of those, 159 firms, or 47 percent, were involved in manufacturing, 142 firms, or 42 percent, were wholesalers, and most of the rest were brokers. Some insight as to the kinds of products being manufactured is provided by Table 11. Foods, fabrics, and leather goods were the leading ones. Eight firms were either in or serving agricultural production.

Table 8 Number of Agribusiness Firms, San Antonio SMSA. U.S. Census of Business, 1977

Business Class	Number of Firms	Percent of Firms
Manufacturing	373	56
Wholesaler, Broker and Other	292	44
TOTAL	665	100

Table 9 Agribusiness Manufacturing Firms, By Product Class, San Antonio SMSA, Census of Business, 1977

Product Class	Number	Percent
Meat Products	22	9
Dairy Products	6	2
Processed Fruits & Vegetables	10	4
Grain Mill Products	8	3
Bakery Products	18	7
Beverages	16	6
Miscellaneous Foods & Products	66	28
Food Sub-Total	146	59
Apparel & Textiles	52	21
Men & Boys' Clothing	6	2
Women & Girls' Clothing	12	5
Miscellaneous Products	19	8
Millwork	12	5
Non-Food Sub-Total	101	41
TOTAL	247	100

Source: US Census of Business, Manufacturing - Texas, 1977

Table 10 Agribusiness Product Wholesalers, San Antonio SMSA, U.S. Census of Business, 1977

Product Line	Number	Percent
Foods		
General grocery	18	6
Confectionary	12	4
Frozen foods	10	3
Dairy foods	9	3
Poultry Products	5	2
Sea foods	1	--
Meats & Products	29	10
Fresh Fruits & Vegetables	58	20
Other	51	18
Sub-Total	193	66
Wine, Beer	28	10
Apparel		
Piece goods	7	2
Notions	3	1
Men's & boys'	9	3
Women's & children's	3	1
Footwear	5	2
Sub-total	27	9
Farm Products		
Cotton	1	--
Grain	2	1
Livestock	12	4
Tobacco	3	1
Other	1	--
Sub-total	19	6
Farm and Garden Machinery	25	9
TOTAL	292	100

Source: U.S. Census of Wholesaling, Texas, 1977

Table 11 Summary of Principal Lines of Products Marketed By Classes of Firms, San Antonio Agribusiness Survey, 1981

Product Line	Number of Firms	Percent of Firms
Agriculture		
Production	7	6.9
Services	1	1.0
Manufacturing		
Food	41	40.1
Fabrics	14	13.7
Wood Products	9	8.8
Paper Products	5	4.9
Chemicals	6	5.9
Plastics	1	1.0
Leather Products	12	11.8
Metal Products (Ag. related kinds)	6	5.9
TOTAL	102	100.0

KINDS OF CUSTOMERS SERVED AND PRODUCTS SOLD

A broad spectrum of clientele are served by present San Antonio agbusiness firms, (Table 12). These have demonstrated the ability to provide supplies to other manufacturers, to wholesalers, retailers, farmers and ranchers, and the general public. Because of the multiple types of customer clientele, it was difficult to establish clearly distinct categories. Sixteen percent of the firms sold to manufacturers totally, or in part, 29 percent to wholesalers, and 14 percent to retailers. Significantly, 24 percent of the agbusiness firms reported that farms and ranches are all or part of their customers. A somewhat more detailed customer classifica-

Table 12 Principal Kind of Customer Served By Agribusiness Survey Firms, San Antonio, 1981

Clientele Served	Number of Survey Firms	Percent
Manufacturers	14	4.1
Manufacturers & Others 1/	20	5.9
Sub-Total	34	10.0
Wholesalers and Distributors	30	8.8
Distributors and Retailers	49	14.4
Retailers	50	14.7
Sub-Total	129	37.9
Retailers and General Public	7	2.1
Farmers & Ranchers	34	10.0
Farmers, Ranchers and Others	48	14.1
Builders/Contractors	8	2.4
Sub-Total	97	28.6
Others and Other Combinations	80	23.5
TOTAL	340	100.0

1/ Manufacturer's that distribute and/or retail

tion is provided in Table 13.

Products marketed by the manufacturing and agricultural firms represented a rather wide variety of goods. The principal lines are reported in Table 14. Manufactured foods, fabrics, and leather goods are three dominant established areas that can be built upon for future growth plus the development of others.

Table 13 Principal Kinds of Customers Served By Agribusiness Survey Firms, San Antonio, 1981

Kind of Customer	Number of Survey Firms	Percent of Firms
Manufacturers	14	4.1
Wholesalers	19	5.6
Brokers	2	0.6
Dealers	3	0.9
Distributors, General	6	1.8
Retailers	50	14.7
Farmers & Ranchers	34	10.0
Builders/Contractors	8	2.4
General Public	4	1.2
Manufacturers & Distributors	10	2.9
Manufacturers, Distributors and Retailers	10	2.9
Distributors & Retailers	49	14.4
Retailers & General Public	3	0.9
Farmers, Ranchers and Others	48	14.1
Others	25	7.3
Other Combinations	55	16.2
TOTAL	340	100.0

EXTENT OF GEOGRAPHIC MARKET AREA SERVED

Answers from the 340 reporting survey firms show the major market concentration to be in Texas. National market coverage ranks second and the Southwestern states are third in importance (Tables 15-17). Manufacturers are more national-market oriented than other businesses, but some wholesalers also have national coverage.

Table 14 Principal Lines of Products Marketed by Indicated Classes of Firms, San Antonio Agribusiness Survey, 1981

PRODUCT LINE	Number of Firms	Percent of Firms
A. Agricultural Production Firms		
Crops	1	14.3
Livestock	5	71.4
Poultry products	1	14.3
Total	7	100.0
B. Agricultural Services		
Veterinary	1	100.0
Total	1	100.0
C. Manufactured Foods		
Meat products	8	19.5
Dairy products	1	2.4
Preserved fruits and vegetables	7	17.1
Grain milling	5	12.2
Bakery products	4	9.8
Confectionary products	2	4.9
Beverages	6	14.6
Other foods	8	19.5
Total	41	100.0
D. Manufactured Fabrics		
Weaving mills	2	14.3
Miscellaneous textile goods	4	28.7
Mens' & boys' apparel	1	7.1
Mens' & boys' furnishings	3	21.5
Women's and children's undergarments	1	7.1
Hats, caps, millinery	1	7.1
Children's apparel	1	7.1
Other fabricated textile products	1	7.1
Total	14	100.0

(Cont.)

Table 14 (Cont.)

PRODUCT LINE	Number of Firms	Percent of Firms
E. Wood Products Manufactured		
Partitions and fixtures	4	44
Misc. furniture and fixtures	5	56
Total	9	100
F. Paper Products Manufactured		
Paperboard containers and boxes	5	100
G. Chemicals Manufactured	6	100
H. Plastics Manufactured	1	100
I. Leather Products Manufactured		
Leather tanning and finishing	4	33.3
Footwear (except rubber)	3	25
Luggage	1	8.3
Handbags	1	8.3
Other leather products	3	25
Total	12	100.0
J. Manufactured Metal Products (ag related kinds)		
Metal cans	1	16.67
Cutlery, tools, hardwear	1	16.67
Farm & garden machinery	4	66.66
Total	6	100.0
Grand Total	102	

Table 15 Geographic Market Area Served, San Antonio Agribusiness Survey Firms, 1981

Area	Number of Survey Firms	Percent of Firms
San Antonio Only	41	12.1
Central and South Texas	130	38.2
Texas	36	10.6
Southwest	23	6.8
Southwest with Other Regions	11	3.2
South Only	6	1.8
Midwest	1	0.3
United States	73	21.5
United States & Other	8	2.3
Other	11	3.2
Total	340	100.0
Mexico	31	9.1
Mexico Not Served At All	309	90.9
TOTAL	340	100.0

Table 16 Geographic Market Area Served by San Antonio Agribusiness Firms, 1981

Market Area	Manufacturer	Wholesaler	Broker	Total
	--Percent of Firms Serving--			
Texas	45	74	89	62
Southwest	10	10	11	10
Other Regions	4	1	--	2
United States	40	10	--	23
Other	1	5	--	3
TOTAL	100	100	100	100
Number of Firms	159	142	27	340

Table 17 Class of Business and Geographic Market Area Served, San Antonio Agribusiness Survey, 1981

Geographic Market Area Served	CLASS OF BUSINESS							
	Manufacturer		Wholesaler		Broker		Other	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
San Antonio	17	10.7	23	16.2	-	-	1	8.3
Central & South Texas	30	18.9	72	50.7	22	81.5	6	50.1
Texas	24	18.9	10	7.0	2	7.4	-	-
Southwest	9	5.7	11	7.8	2	7.4	1	8.3
S.W. & Other Regions	7	4.4	2	1.4	1	3.7	1	8.3
South Only	5	3.1	1	0.7	-	-	-	-
Midwest	1	0.6	-	-	-	-	-	-
United States	58	36.5	13	9.2	-	-	2	16.7
U.S. & Other Regions	6	3.8	1	0.7	-	-	1	8.3
Other	2	1.3	9	6.3	-	-	-	-
TOTAL	159	100.0	142	100.0	27	100.0	12	100.0

KINDS OF INPUT MATERIALS PURCHASED

Agricultural crops or livestock were purchased by 36 percent of the firms replying to the agbusiness survey, (Table 18). Food products led the list with nearly half of the firms using these. Fiber products were important to about one-sixth of the businesses. A more detailed view of the items in these categories is presented in Table 19. The extent and variety of products is worthy of note, again exhibiting the diversity already present in the agbusiness sector of the San Antonio business community.

An indication of the variety of foods, processed or semi-processed, bought by the manufacturing and wholesale distribution sector of the economy is provided in Table 20. Also reported are fiber products, (Table 21). A summary listing the food and fiber, including leather, input products is in Tables 22 and 23. For paper products see Table 24. Miscellaneous apparel industry inputs are noted in Table 25.

Table 18 Summary of Classes of Raw Materials Purchased By All Types of Firms, San Antonio Agribusiness Survey, 1981.

Item	Number of Firms Reporting	Percent
Agriculture		
Field Crops	61	22.6
Fruits & Vegetables	22	8.1
Livestock	14	5.2
Food Products	132	48.9
Fiber Products	41	15.2
TOTAL	270	100.0

Table 19 Major Farm and Ranch Products Purchased by San Antonio Agribusiness Survey Firms, 1981

Item	Number Mentioning	Percent
Field Crops		
Corn	16	26.2
Grains (in general)	10	16.4
Seed	7	11.5
Peanuts	6	9.8
Milo	4	6.6
Cotton	4	6.6
Hay	3	4.9
Rice	2	3.3
Soybeans	2	3.3
Oats	2	3.3
Potatoes	2	3.3
Wheat	1	1.6
Barley	1	1.6
Broomcorn	1	1.6
Total Responses	61	100.0
Fruits & Vegetables		
Vegetables	11	50.0
Fruits	7	31.8
Pecans & Tree Nuts	4	18.2
Total Responses	22	100.0
Livestock		
Cattle	3	21.5
Hogs	2	14.3
Sheep & Goats	1	7.1
Livestock (in general)	1	7.1
Turkeys	1	7.1
Wool & Mohair	3	21.5
Eggs	2	14.3
Raw Milk	1	7.1
Total Responses	14	100.0

Table 20 Processed and Semi-processed Food Products Purchased By San Antonio Agribusiness Survey Firms, 1981

Item	Number of Firms	Percent
Food Products		
Groceries, general	3	3.8
Meats & Products		
Beef	8	10.0
Pork	7	8.8
Lamb	1	1.2
Prepared meats	2	2.5
Poultry	2	2.5
Meats, general	6	7.5
Frozen food	2	2.5
Lard	1	1.2
Vegetable Cooking & Oil	9	11.3
	41	51.3
Dairy Products		
Milk	3	3.8
Butter	1	1.2
Cheese	5	6.3
	9	11.3
Mexican Foods		
Mexican Food/Chili	3	3.8
Tomato Sauce	2	2.5
Dry Onions	1	1.2
Spices, Seasonings	7	8.8
Tortillas	1	1.2
Beans	3	3.8
	17	21.3
Grain Products		
Wheat Bran	1	1.2
Flour	11	13.7
Barley Malt	1	1.2
	13	16.1
TOTAL	80	100.0

Table 21 List of Fiber Product Inputs Used By San Antonio Agribusiness Survey Firms, 1981

Item	Number	Percent
Fiber Products		
Fabric	15	36.7
Cotton Fabric	5	12.3
Synthetic & Silk Fabric	6	14.7
Knit Fabric	1	2.4
Cotton & Polyester Webbing	1	2.4
Hosiery	1	2.4
Nylon Tricot	1	2.4
Mop Yarns	1	2.4
Fiberglass Yarns	2	4.9
Polyester Yarns	1	2.4
Thread	3	7.4
Vinyl Material	1	2.4
Upholstery Supplies	1	2.4
Dacron Cushion Wrap	1	2.4
Textile Waste	1	2.4
Total Responses	41	100.0

Table 22 Summary of Food Products Purchased as Raw Materials, San Antonio Agribusiness Survey, 1981

Item	Number Mentioning	Percent
Groceries (in general)	3	2.3
Meat Products	27	20.5
Dairy Products	9	6.8
Canned & Preserved Fruits and Vegetables	9	6.8
Grain Products	32	24.3
Sugar & Confectionery Products	13	9.8
Fats and Oils	10	7.6
Beverages	9	6.8
Miscellaneous	18	13.6
Tobacco Products	2	1.5
TOTAL RESPONSES	132	100.0

Table 23 Finished Goods Purchased by Apparel and Leather Wholesalers, San Antonio Agribusiness Survey, 1981

Item	Number Mentioning	Percent
Apparel:		
Clothing (in general)	3	27.2
Women's Clothing	3	27.3
Linens	2	18.2
Burlap	1	9.1
Canvas Material	2	18.2
TOTAL	11	100.0
Leather:		
Leather	8	38.0
Leather Scraps	1	4.8
Skins	4	19.0
Leather Boot & Shoe Cut Stock & Findings	3	14.3
Boots	1	4.8
Athletic Shoes	1	4.8
Saddles, Tack	3	14.3
TOTAL	21	100.0

Table 24 Principal Items Purchased by Paper Product Firms, San Antonio Agribusiness Survey, 1981

Item	Number Mentioning	Percent
Paper Products:		
Paper Products (in general)	13	27.7
Cartons, Boxes, and Packing Material	20	42.4
Paperboard	3	6.4
Corrugated Material	1	2.1
Fiber Containers & Fiber Drums	1	2.1
Paper Plates, Cups, and Food Containers	2	4.3
Napkins	2	4.3
Bags (in general)	3	6.4
Tape	2	4.3
TOTAL RESPONSES	47	100.0

Table 25 Apparel Industry Inputs, San Antonio Agribusiness Survey, 1981

Item	Number	Percent
Feathers	2	50.0
Buttons	1	25.0
Sewing Notions	1	25.0
TOTAL RESPONSES	4	100.0

FARM AND RANCH AGRIBUSINESS FIRM INPUTS

No survey was made of farms and ranches, per se. What is reported here are replies from individual or corporate firms in San Antonio that are engaged in agricultural production enterprises

Table 26 Selected Major Farm Inputs, San Antonio Agribusiness Survey, 1981

Item	Number Listing	Percent
Agricultural Chemicals & Fertilizers	26	30.9
Health Products (for Animals)	6	7.0
Sulfates	1	1.2
Potash	1	1.2
Salt	3	3.6
Milk Stabilizers	1	1.2
Farm Machinery & Equipment	22	26.1
Material Handling Equipment	1	1.2
Dairy Equipment	1	1.2
Cotton Ginning Equipment	1	1.2
Engines	3	3.6
Forklifts	1	1.2
Hand Wick Applicators for Herbicides	1	1.2
Irrigation Fittings	1	1.2
Plastic Pipe	2	2.4
Nails	3	3.6
Staples	2	2.4
Fencing	2	2.4
Wire	3	3.6
Baling Wire	1	1.2
Steel Strapping	1	1.2
Weights	1	1.2
TOTAL LISTINGS	84	100.0

FIELD CROPS USED BY AGRIBUSINESS FIRMS

A total of fourteen field crops was listed as being bought by San Antonio firms. These, of course, were only the major ones since only the principal ones were to be reported by firms surveyed (Table 27).

Table 27 List of Field Crops Bought by San Antonio Survey Firms, 1981

Item	Number of Replies
Field Crops	
Seeds	7
Grains	10
Wheat	1
Rice	2
Corn	16
Soybeans	2
Milo	4
Oats	2
Barley	1
Cotton	4
Peanuts	6
Broomcorn	1
Hay	3
Sub-Total	59
Fruits & Vegetables	
Vegetables	11
Fruits	7
Pecans	4
Sub-Total	22

SOURCES OF SUPPLIES PURCHASED

Geographic areas from which supplies are obtained were analyzed as to whether they are crops or livestock, food products, fabrics, clothing or leather. Dependence upon outside sources is to be expected. It is clear that present firms are able to obtain their needs from within Texas and therefore a raw material supply base is present. The question raised by this study is to what extent dependence upon outside areas may be reduced by bringing in new firms to the local area, (Table 28). Those established, or brought, must be on the basis of demonstrable economic soundness with respect to costs of operations including product transportation costs.

Raised, by this line of reasoning, is the question of what felt needs are currently evident?

TYPES OF PRODUCTS FOR WHICH LOCAL SUPPLIES ARE DESIRED

A summary overview of the classes of products for which needs may justify development of local supply firms are noted in Table 29. Fifty-nine firms cited agriculturally related items -- either raw agricultural products, grocery products, clothing or leather goods. Of course a buyer's impression of a quantity that is sufficient to justify a local source may not key with the amount required for a firm to be competitive. Thus, each case must be closely examined on its own merits.

Other product categories listed in Table 29 reflect non-agricultural inputs required by agribusiness firms. In these cases, a new firm may have other markets among the non-agribusiness sector of San Antonio business.

Further detail regarding products needed locally, that are now bought elsewhere, is provided in Table 30. The variety of products is extensive -- 72 items or classes of items. However, only the generic name is indicated

Table 28 Sources of Raw Material or Finished Products Purchased by Agribusiness Firms, San Antonio, 1981

Area	KINDS OF PRODUCT					
	Agricultural Inputs		Food Products	Clothing	Fabrics	Leather
	Crops	Livestock				
	-- Percent of Firms --					
San Antonio	8	--	31	18	11	10
San Antonio and Parts of Texas	29	46	18	18	6	20
Texas-wide	20	31	17	9	19	5
Sub-Total	57	77	66	45	36	35
Texas and Outside Areas	28	--	7	18	9	5
Outside Texas	15	23	27	37	55	60
TOTAL	100	100	100	100	100	100
NUMBER OF FIRMS	79	13	125	11	47	20

and in each case further specifics are required of the firm regarding specifications for the item desired. It is assumed that the respondents have used reasonable judgment in saying that a sufficient quantity is purchased to warrant establishing a local supplier.

Table 29 Summary of Types of Products for Which a Local Supplier is Preferred, San Antonio Survey, 1981

Item	Number of Firms Mentioning	Percent of Firms Mentioning
Agricultural Raw Materials	15	12.0
Grocery Products	36	28.8
Clothing	1	0.8
Leather Products	7	5.6
Rubber & Plastic Products	17	13.6
Primary Metal Products	18	14.4
Fabricated Metal Products	17	13.6
Machinery, Except Electrical	10	8.0
Miscellaneous Items	4	3.2
TOTAL	125	100.0

FACTORS LIMITING MARKET AREA SERVED BY SAN ANTONIO FIRMS

The survey was directed to the management of the agribusiness establishments. That provided the opportunity to obtain judgments as to what factors were limiting firm growth through market expansion. Apparently only about a fourth (24 percent) of the companies involved felt that no problem existed, or else it was not a significant concern. Some mentioned as many as five factors, but most stated only one or two, (Table 31). Need of venture capital

Table 30 Products Bought in Large Enough Supply that a Local Supplier is Preferred, San Antonio, Texas, 1981

Item	Number of Firms Mentioning	Percent of Firms Mentioning
Raw Materials:		
Corn	4	26.7
Grain (in general)	3	20.0
Seed	1	6.7
Rice	1	6.7
Milo	1	6.7
Vegetables	1	6.7
Fruit	1	6.7
Hogs	1	6.7
Wool, Mohair	1	6.7
Raw Milk	1	6.7
Category Total	15	100.0 1/
Grocery Products:		
Groceries (in general)	1	2.8
Beef	5	13.9
Pork	3	8.3
Lamb	1	2.8
Cheese	1	2.8
Mexican Food/Chili	1	2.8
Tomato Sauce	2	5.5

1/ Total does not equal 100 due to rounding of figures

(Cont.)

Table 30 (Cont.)

Item	Number of Firms Mentioning	Percent of Firms Mentioning
Dry Onions	1	2.8
Frozen Vegetables	1	2.8
Flour	3	8.3
Corn Starch	1	2.8
Feed	6	16.7
Sugar	2	5.5
Candy	2	5.5
Cooking Oils, Oleo, Shortening	1	2.8
Barley Malt	1	2.8
Flavorings	1	2.8
Beans	1	2.8
Tobacco Products	2	5.5
Category Total	36	100.0
Clothing:		
Clothing (in general)	1	100.0
Category Total	1	100.0
Leather Items:		
Leather	4	57.1
Skins	2	28.6
Saddles, tack	1	14.3
Category Total	7	100.0

Table 30 (Cont.)

Item	Number of Firms Mentioning	Percent of Firms Mentioning
Rubber & Plastic Items:		
Tires	1	5.9
Rubber Hose	1	5.9
Fire Hose	1	5.9
Plastic (in general)	1	5.9
Plastic Containers	5	29.2
Packing Material	2	11.8
Foam Plastic, Polyurethane foam	1	5.9
Plastic Ware	1	5.9
Plastic Pipe	1	5.9
Plastic Laminate	1	5.9
Plastic Linings	1	5.9
Structural Plastic	1	5.9
Category Total	17	100.0
Primary Metal Products:		
Steel	6	33.1
Stainless Steel	2	11.1
Steel Tubing	1	5.6
Steel Plate	1	5.6
Wire	1	5.6
Nails	1	5.6
Brass, Copper, Etc.	1	5.6

Table 30 (Cont.)

Item	Number of Firms Mentioning	Percent of Firms Mentioning
Aluminum	5	27.8
Category Total	18	100.0
Fabricated Metal Products:		
Steel Products (in general)	1	5.9
Metal Containers	2	11.8
Hardware	5	29.2
Steel Brackets (Gussetts)	1	5.9
Bolts, Nuts, Screws, Rivits, Washers	2	11.8
Machine Parts, Metal Parts	2	11.8
Valves	1	5.9
Irrigation Fittings	1	5.9
Fencing	1	5.9
Weights	1	5.9
Category Total	17	100.0
Machinery:		
Engines	2	20.0
Farm Machinery & Equipment	4	40.0
Metalworking Machinery & Equipment	1	10.0
Pumps & Pumping Equipment	2	20.0
Motors	1	10.0
Category Total	10	100.0

(Cont.)

Table 30 (cont.)

Item	Number of Firms Mentioning	Percent of Firms Mentioning
Miscellaneous Items:		
Office and/or School Supplies	1	25.0
Candles	1	25.0
Fire Extinguishers	1	25.0
Fiberglass Fence Posts	1	25.0
Category Total	4	100.0

and lack of skilled workers were the two leading deterants to business and market expansion, (Table 32). Together these accounted for slightly more than half of the reasons cited.

Table 31 Number of Factors Cited By Firms as Limiting Size of Market Served, San Antonio Agribusiness Survey, 1981

Number of Factors	Number of Firms	Percent of Firms
No Answer	81	23.8
1 Factor	164	48.2
2 Factors	71	20.9
3 Factors	20	5.9
4 Factors	2	0.6
5 Factors	2	0.6
TOTAL	340	100.0

Table 32 Factors Limiting Size of Market Served, San Antonio Agribusiness Firms, 1981

Factors	Number Reporting	Percent Reporting
Skilled Workers	108	27.6
Good Salesmen	49	12.6
Middle Management Personnel	38	9.7
Venture Capital for Expansion	115	29.4
Advertising & Market Analysis Support	47	12.0
Other	27	6.9
Do Not Know	7	1.8
TOTAL	391	100.0

Ranking third and fourth, but of almost equal concern, were lack of good salesmen and requisite advertising and market analysis support. Another missing component was adequate availability of middle management personnel. All of the above factors are ones that should be assessed in more detail and for which remedial action can be taken.

PRODUCTS FOR WHICH LARGER MARKET DESIRED

In Table 33 is a summary by product class, and in Table 34, a more detailed statement of products for which a larger market is desired. A total of 63 products or categories were reported. One possibility is that there is undue stickiness in the business information system. Buyers may not be fully aware of what supplies are available in the San Antonio metro area. The Chamber of Commerce obviously is of great assistance in providing information and may need to remind area businesses of the Chamber's possible business services in this regard.

Utilization of the Chamber's help requires knowledge of its availability to them. In this regard, the managers surveyed were asked if they know of the Agribusiness Committee. Two-thirds said they did not, (Table 35). Name confusion may be involved since the existing committee was designated as the Farm and Ranch committee. One question that should be addressed is whether a committee for agribusiness should be formed as a spearhead for the further development of that sector of the economy, (Table 36).

A large majority of the managers felt that the Chamber of Commerce can be important in efforts to expand markets, (Table 37). A third of the firms covered in the survey said that a member of their staff would attend meetings to aid market development. No effort was made to obtain reasons why half of the firms would not. Other factors, including Chamber membership, may have been felt to be a barrier for some reason.

Table 33 Summary of Classes of Products or By-Products for Which a Larger Market is Desired, San Antonio Survey, 1981

Item	Number of Firms Mentioning	Percent of Items Mentioned
Agricultural Raw Materials	18	19.8
Grocery Products	31	34.0
Clothing	5	5.5
Leather Products	8	8.8
Rubber & Plastic Products	2	2.2
Primary Metal Products	1	1.1
Fabricated Metal Products	12	13.2
Machinery, Except Electrical	11	12.1
Miscellaneous Items	3	3.3
TOTAL	91	100.0

Table 34 Products or By-Products for which a Larger Market is Desired, San Antonio Chamber of Commerce Survey, 1981

Item	Number of Firms Mentioning	Percent of Items Mentioned
Agricultural Raw Materials:		
Seed	1	5.6
Grain (in general)	1	5.6
Wheat	1	5.6
Corn	2	11.0
Milo	1	5.6
Oats	1	5.6
Peanuts	1	5.6
Peanut Hulls	3	16.6
Fruit	2	11.0
Wool, Mohair	3	16.6
Livestock (in general)	1	5.6
Chicken Litter	1	5.6
Category Total	18	100.0
Grocery Products:		
Beef	3	9.7
Smoked Sausage	1	3.2
Hides	1	3.2
Beef Jerky	1	3.2

Table 34 (Cont.)

Item	Number of Firms Mentioning	Percent of Items Mentioned
Grocery Products (con't):		
Dairy Products (in general)	1	3.2
Mexican Food/Chili	4	12.9
Canned Sauces	3	9.7
Bread & Other Bakery Products	2	6.5
Cookies	3	9.7
Candy	1	3.2
Brewers Grain	1	3.2
Soft Drinks	1	3.2
Spices/Seasonings	1	3.2
Tortillas	1	3.2
Yeast	1	3.2
Pet Food	1	3.2
Feed	5	16.3
Category Total	31	100.0
Clothing:		
Clothing (in general)	1	20.0
Women's Clothing	1	20.0
Ladies' Lingerie	1	20.0
Mops	1	20.0
Canvas Material	1	20.0
Category Total	5	100.0

Table 34 (cont.)

Item	Number of Firms Mentioning	Percent of Items Mentioned
Leather Products:		
Leather	1	12.5
Leather Scraps	1	12.5
Skins	3	37.5
Boots	1	12.5
Leather Goods	1	12.5
Saddles, Tack	1	12.5
Category Total	8	100.0
Rubber & Plastic Items:		
Junk Tires	1	50.0
Plastic Cabinet Tops	1	50.0
Category Totals	2	100.0
Primary Metal Products:		
Cast Iron	1	100.0
Category Total	1	100.0
Fabricated Metal Products:		
Steel Products (in general)	2	16.7
Metal Containers	2	16.7
Wrought Iron Products	1	8.3
Metal Buildings	1	8.3

Table 34 (cont.)

Item	Number of Firms Mentioning	Percent of Items Mentioned
Fabricated Metal Products (con't):		
Bolts, Nuts, Screws, Rivets, Washers	1	8.3
Earth Screw Anchors	1	8.3
Machine Parts, Metal Parts	2	16.7
Fencing	2	16.7
Category Total	12	100.0
Machinery, Except Electrical:		
Farm Machinery & Equipment	3	27.2
Used Farm Equipment	1	9.1
Cattleguards	1	9.1
Handwick Applicators for Herbicides	1	9.1
Metalworking Machinery & Equipment	1	9.1
Mexican Food Processing Equipment	1	9.1
Pumps & Pumping Equipment	1	9.1
Automatic Demineralizer System	1	9.1
Employee Time Keeping Systems	1	9.1
Category Total	11	100.0
Miscellaneous Items:		
Frames for Crafts	1	33.3
Brooms	1	33.3
Souvenirs, Novelties	1	33.4
Category Total	3	100.0

Table 35 Familiar With Chamber of Commerce Agribusiness Committee, San Antonio Agribusiness Survey, 1981

Answers	Number of Firms	Percent of Firms
Yes	82	24.1
No	229	67.4
No Anwer	29	8.5
TOTAL	340	100.0

Table 36 Would Attend Committee Meetings for Market Area Development, San Antonio Agribusiness Survey, 1981

Answers	Number of Firms	Percent of Firms
Yes	123	36.2
No	170	50.0
Do Not Know	5	1.5
No Anwer	42	12.3
TOTAL	340	100.0

Table 37 Can the Chamber of Commerce Assist in Expanding Markets? San Antonio Agribusiness Survey, 1981

Answers	Number of Firms	Percent of Firms
Yes	224	65.9
No	56	16.5
Do Not Know	15	4.4
No Answer	45	13.2
TOTAL	340	100.0

PAST GROWTH RATES AND LEAD AND LAG AREAS OF DEVELOPMENT

Some guidance as to areas of strength versus possible underdevelopment in the San Antonio agribusiness economy is provided by comparing the area with the state. Rates of increase or decrease over the 1967-1977 decade are shown for manufacturing in Table 38, and for wholesaling in Table 39. Figures are presented regarding the number of firms and the volume of total sales.

Progress was made, especially in expanding food processing and women's and misses' apparel as compared to the overall state experience from 1967 to 1977. Based on the market projections stated at the outset of this report, these are among the business lines that can be further expanded toward the years 1990 and 2000.

Wholesaling showed strength in apparel, frozen foods, meat products, and distilled beverages. Farm and garden equipment lagged as did fresh produce. Also, dairy products did not keep pace.

The extent to which the San Antonio agribusiness structure is ahead or lagging is also evident in Table 40 and 41 for manufacturing and wholesaling respectively. A comparison is made between the number of existing firms and what represents an equal share for San Antonio versus the state, based on population ratios for 1977, the date of the last available U.S. Census of Business. Many other factors than population are involved, so this is a very macro overview. Figures in parentheses indicate that pro-rata targets were exceeded as of 1977. Other figures show San Antonio is lagging and identify sectors that should be examined for development opportunities.

Table 38 1967/1977 Comparison of Growth Rates in State vs. San Antonio Manufacturers

Item	State Change			San Antonio Change		
	Firms		Sales	Firms		Sales
	Number	Percent	Percent	Number	Percent	Percent
All Industries, Total	5385	42	250	309	49	204
Food & Kindred Products	-213	-12	197	5	4	111
Meat Products	-7	-2	308	4	22	89
Dairy Products	-41	-29	90	-7	-54	65
Canned, Cured & Frozen Foods	-36	-28	113	2	25	123
Grain Mill Products	-13	-6	120	-6	-43	120
Bakery Products	-29	-16	135	0	0	152
Beverages	-71	-28	302	0	0	92
Food Preparations, not elsewhere classified	35	20	259	10	53	657
Apparel, Other Textile Products	313	51	176	17	49	254
Men's & Boys' Furnishings	30	30	137	1	20	600
Women's & Misses' Outerwear	173	97	280	8	200	110
Misc. Fabricated Textile Products	85	39	241	4	27	444

Source: U.S. Census of Manufacturing, Texas, 1967 and 1977

Table 39 1967/1977 Comparison of Growth Rates in State vs. San Antonio Wholesalers

Item	State Change			San Antonio Change		
	Firms		Sales	Firms		Sales
	Number	Percent	Percent	Number	Percent	Percent
Wholesale Trade - Total	7234	38	267	339	31	152
Farm, Garden Machinery & Equipment	807	690	611	17	213	300
Apparel, Piece Goods, Notions	231	77	211	14	108	340
Groceries & Related Products	-65	-3	161	-5	-3	144
Groceries, general line	31	21	163	4	29	122
Frozen Foods	8	9	200	3	43	317
Dairy Products	-36	-16	90	-2	-18	58
Meat & Meat Products	-39	-13	209	6	26	249
Fresh Fruits & Vegetables	-31	-8	166	-13	-18	144
Not Elsewhere Classified	6	1	174	3	6	128
Farm Products - Raw Materials	-72	-7	163	0	0	41
Beer, Wines, Distilled Beverages	-2	-1	130	11	65	158
Tobacco & Tobacco Products	-17	-14	92	-2	-40	4

Source: U.S. Census of Wholesaling, Texas, 1967 and 1977

Table 40 Agribusiness Manufacturing Firms for Indicated Areas, 1977

Industry	State Total	San Antonio SMSA Total	San Antonio Market Share	San Antonio Market Share Target 1/	San Antonio, Brownsville, McAllen Market Target 1/
Food & Kindred Products	1507	126	112	(14)	(34)
Meat Products	315	22	23	(1)	13
Dairy Products	98	6	7	(1)	5
Preserved Fruits & Vegetables	93	10	7	(3)	(16)
Grain Mill Products	201	8	15	7	14
Bakery Products	156	18	12	(6)	(1)
Beverages	180	16	13	(3)	(4)
Misc. Foods & Kindred Products	338	37	25	(12)	0
Food Preparations, not elsewhere classified	208	29	15	(14)	(6)
Apparel & Other Textile Products	925	52	69	17	26
Men's and Boys' Suits & Coats	19	6	1	(5)	(4)
Women's & Misses' Outerwear	351	12	26	14	27
Misc. Fabricated Textile Products	46	19	3	(16)	(14)
Millwork	113	12	8	(4)	0
Leather	144	*	*	*	*

* Not Available 1/ Figures without parentheses indicate amount behind target; with parentheses is ahead of target share.

Source: U.S. Census of Manufactures - Texas.

Table 41 Number of Wholesalers By Geographic Area and Development Targets.

	State Total	San Antonio SMSA Total	San Antonio SMSA Market Share	San Antonio Market Share Target 1/
Wholesale Trade	26,370	1,450	1,978	528
Farm & Garden Machinery and Equipment	924	25	69	44
Apparel, piece goods, notions	532	27	40	13
Piece goods (woven)	149	7	11	4
Notions, etc.	47	3	4	1
Women's, childrens clothing	177	3	13	10
General line groceries	182	18	14	(4)
Frozen Foods	96	10	7	(3)
Dairy Products	196	9	15	6
Poultry & Poultry Products	113	5	8	3
Fish & Seafood	95	1	7	6
Meat & Meat Products	260	29	20	(9)
Fresh Fruits & Vegetables	371	58	28	(30)
Farm Product Raw Materials	983	19	74	55
Cotton	127	1	10	9
Grain	502	2	38	36
Livestock	253	12	19	7
Tobacco	3	3	0	(3)
Hides, skins, pelts	17	--	--	--
Wine, Beer	491	28	37	9
Wool, wool tops, mohair	25	--	--	--
Farm Supplies	1,484	40	111	71

1/ Figures in parentheses indicates ahead of target share

APPENDIX

Appendix Table 1: Guide To Sampling Errors Associated With The San Antonio Agribusiness Survey, 1981.

Number of Firms Answering the Survey Question	Percentage of Firms Making the Indicated Response to the Relevant Survey Question								
	5	10	20	30	40	50	60	70	80
	--Probable Sampling Error in Percentage Points--								
340	1.4	2.0	2.6	3.0	3.2	3.3	3.2	3.0	2.6
300	1.5	2.1	2.8	3.2	3.4	3.5	3.4	3.2	2.8
250	1.7	2.3	3.1	3.5	3.8	3.8	3.8	3.5	3.1
200	1.9	2.6	3.4	3.9	4.2	4.3	4.2	3.9	3.4
150	2.2	3.0	4.0	4.5	4.8	5.0	4.8	4.5	4.0
100	2.6	3.6	4.8	5.6	5.9	6.1	5.9	5.6	4.8
50	3.7	5.1	6.8	7.9	8.4	8.6	8.4	7.9	6.8
25	5.2	7.3	10.3	11.1	11.9	12.1	11.9	11.1	10.3

Sampling error calculated by formula $P_{se} = 1.65\sqrt{\frac{PQ}{n}(1 - \frac{n}{N})}$ is

equivalent to a 90 percent confidence level when the figures in the report tables have the appropriate error figure added to and subtracted from them. For example, if a table with a base of 340 firms reporting shows 20 percent of the firms giving an indicated answer, that answer can be considered, with a 90 percent probability, as being correct within plus or minus of the 2.6 percentage points sampling error shown. Therefore the answer for the total universe of firms combined (those surveyed plus those not covered) is estimated to lie between 20% $\pm$ 2.6 or 17.4% and 22.6%. For the purpose of calculating the sampling errors, it was assumed that the number of agribusiness firms within the San Antonio area totaled 750 in 1981, compared with the 665 reported in the 1977 U.S. Census of Business.

Texas Agricultural Market Research and Development Center
Texas A&M University
College Station, Texas 77843

GREATER SAN ANTONIO CHAMBER OF COMMERCE
SURVEY ON BUSINESS OPPORTUNITIES

1. Are you mostly a:

___ manufacturer ___ retailer

___ wholesaler ___ broker

___ other (specify: _____)

2. What principal line or lines of products are you marketing?

_____ _____ _____

_____ _____ _____

_____ _____ _____

3. To which of the following kinds of customers do you sell your product(s)? (If more than one type, indicate approximate percentage of sales to each.)

___ retailers ___ wholesalers

___ brokers ___ manufacturers

___ dealers ___ farmers and ranchers

___ others

4. What geographic market area do you serve?

___ San Antonio only ___ Southwestern region

___ Central & South Texas ___ South

___ Texas ___ West Coast

___ Mexico ___ Midwest

___ United States

5. What major raw materials or finished products do you buy?

a. _____ d. _____

b. _____ e. _____

c. _____ f. _____

6. Which of the above do you buy from the following sources?

Area	Material or Product a	b	c	d	e	f
San Antonio						
Outside of San Antonio but in Texas						
From sources in the Southwest						
From other U.S. Sources						

7. What materials or products do you buy in large enough quantities that you would prefer a local supplier?

_____

_____

_____

8. In your opinion, what presently limits the size of the markets served by most businesses from San Antonio?

Unavailability of:

___ Skilled workers

___ Good salesmen

___ Middle management personnel

___ Venture capital for expansion

___ Advertising and marketing analysis support

9. Do you have a product or a by-product from your business for which you would like to have a market or a larger market service area?

Yes _____ No _____

Name or kind of product(s):

_____

_____

_____

_____

10. Do you think the Chamber of Commerce, through trade trips and campaigns to outside cities, can assist in expanding markets for San Antonio business firms?

Yes _____ No _____

11. How would you suggest that the Chamber of Commerce give assistance?

_____

_____

_____

_____

12. Are you familiar with the Chamber's Agribusiness Committee?

Yes _____ No _____

13. Would you be interested in attending committee meetings of the Chamber of Commerce directed toward expanding the San Antonio market service area and assisting local businesses achieve this goal?

Yes _____ No _____

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