



# Some History and Trends of Agriculture on Guam: Data from the U.S. Census of Agriculture and Other Sources, 1920-2007

Christine Bucayu-Laurent and James R. Hollyer  
College of Natural & Applied Sciences, University of Guam

## Abstract

This factsheet shows some trends in agricultural production on Guam from 1920 to 2007. Data from this publication emanated from the US Census of Agriculture and Guam Annual Economic Reviews. The trends show that the number of farms, market value of agricultural products sold, tree crop, field crop, and livestock and poultry production continue to decrease.

## Table of Contents

What is a Farm? .....	2
Farms Reporting .....	3
A. Tree Crops .....	3
B. Field Crops .....	5
C. Vegetables and Melons .....	5
D. Livestock and Poultry .....	7
E. Fish .....	7
Land Use .....	7
Acreage and Production .....	8
A. Tree Crop Production .....	8
B. Field Crop Production .....	8
C. Vegetable and Melon Production .....	8
D. Livestock and Poultry Production .....	10
E. Fish and Other Aquaculture Production .....	10
Market Value of Agricultural Products Sold .....	14
Socio-Demographic Profile of Farmers .....	15
Age .....	15
Race .....	15
Sex .....	15
Main Occupation .....	15
Miscellaneous Agricultural Statistics for Guam .....	16
Summary .....	16
References and More Sources .....	16
Appendices .....	17

## List of Tables

1 Farm Distribution in Guam .....	3
2 Farms Reporting Tree Crops in Guam .....	4
3 Copra Export from Guam (pounds) .....	5
4 Farms Reporting Field Crops in Guam .....	6
5 Farms Reporting Vegetables and Melons in Guam .....	6
6 Farms Reporting Livestock and Poultry in Guam .....	7
7 Farms Reporting Fish and Aquaculture in Guam .....	8
8 Tree Crop Production in Guam .....	9
9 Field Crop Production in Guam (pounds) .....	9
10 Vegetable and Melon Production in Guam (pounds) .....	11
11 Livestock and Poultry Production in Guam (number) .....	12
12 Fish and Aquaculture Production in Guam, 1960-1996 .....	12
13 Market Value of Agricultural Products Sold in Guam .....	14
14 Market Value of Agricultural Products Sold in Guam, 1960-2001 .....	13
15 Number of Farms by Value of Sales .....	14
16 Age of Farmers in Guam, 1975-2007 .....	15
17 Number of Operators by Race and Sex in Guam .....	15
18 Number of Operators by Main Occupation .....	16

## Introduction

The U.S. Census of Agriculture is conducted to obtain agricultural statistics for the whole nation, including territories. The first U.S. Agricultural Census was performed in 1840 and Guam was included for the first time in 1920 under a special census authorized by the Secretary of Commerce. The Agricultural Census was conducted every 10 years through 1960 and then shifted into a five-year census starting in 1964. In order to adjust the data-reference year to coincide with other economic censuses, Congress authorized the Census of Agriculture to be taken for 1978 and 1982. The Agriculture Census reverted to a five-year cycle for years ending in 2 and 7 after 1982. The U.S. Department of Commerce, Bureau of the Census conducted the Agricultural Census for more than 150 years; however, the U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS) took over the responsibility in 1998 through the Appropriations Act of 1997. Data emanating from the Agricultural Census have been used to identify trends, design and evaluate surveys, provide a more effective production and distribution system for the community, and justify claims of farmers who may suffer damages and losses due to natural disasters such as typhoons, among other outcomes. The production of field and tree crops, livestock, fish, and vegetables in Guam are explored in this factsheet for the years 1920 to the last year any reliable production data is available for Guam, the 2007 Census of Agriculture. In addition, local data sourced out from the Guam Annual Economic Reviews also show trends in agricultural production from 1960 through 2001. The data from these reviews emanated from the Guam Department of Agriculture. Available publications start in 1969 through 2001. Although publications for 1977, 1978, and 1995 are not available, data for these specific years have been reflected in the subsequent years. The USDA's National Agricultural Statistics Service reported to the authors that the 2012 Census of Agriculture for Guam was not performed due to budgetary constraints at the time.

## What is a Farm?

The definition of *farm* changed as the Agricultural Census has matured. There was no definition of farm for the 1920 census (and before). Farm started to be defined in 1930 as, "all the land directly farmed by one person, either by his own labor alone or with the assistance of members of his household or hired employees." By 1940, the definition of farm included crops and was later expanded in 1960 by including livestock, or five or more poultry. Vegetables, fruits, and nuts were added in 1964 and the quantity for this commodity was specified in 1970 indicating that there should be a combined total of 10 or more fruit/nut trees, or plants. Fruit trees were deleted from the Census in 1974 and the specified number of poultry increased to 15. After four years, fruits were again included in the definition of farm. Beginning in 1987, the market value of agricultural products was taken into consideration. In that year, farm was defined as, "any place from which \$100 or more of agricultural products were sold or normally would have been sold during the census year." The 1998 Census changed the required value of a farm to \$1,000. As of 2007, farm was defined as, "any place from which \$1,000 or more of agricultural products were sold or normally would have been sold during the census year."

On Guam, the highest number of farms was reported in the 1964 census: 2,529 (Fig.1). By 1982, the total (reporting) farms had dwindled to 297. Based on the 1982 census, comparability of data had been slightly affected by improvements in the coverage of the operators' list and improved techniques of training enumerators. Since then, the numbers of farms on Guam have been consistently reported to be less than 400.

### Farms Reporting

The term “farms reporting” represents the number of farms in which the specified commodity was reported to the census takers. For instance, if there were 100 farms in a village and only 50 have avocado trees in production, and those farms participated in the Census, then the number of farms reporting would be 50.

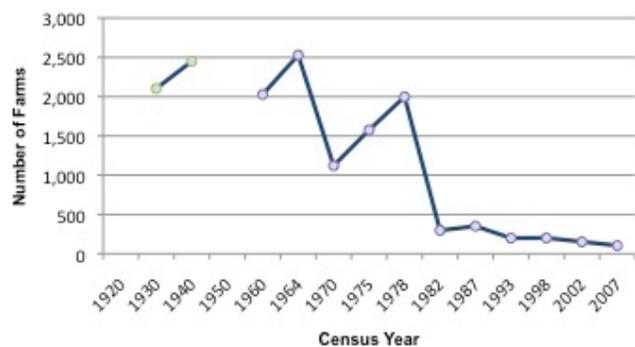


Fig. 1. Number of Farms in Guam, 1920-2007.

### A. Tree Crops

The list of tree crops combined for all census years include alligator pears, anonas, avocados, bananas, betelnuts, breadfruits, cacao, coconuts, coffee, custard apple, grapefruit, guavas, kapok, lemon and limes, mangoes, oranges, papayas, pineapples, soursops, starfruits, sweetsops, tangerines, other fruits, nuts, tree crops, and nursery crops including ornamental plants. Figure 2 shows that the highest number of tree

farms reported was in 1940 with a total of 15,731. This was the only year that cacao, coffee, and kapok were reported. The lowest data recorded was in 2002 with only 200 farms reporting.

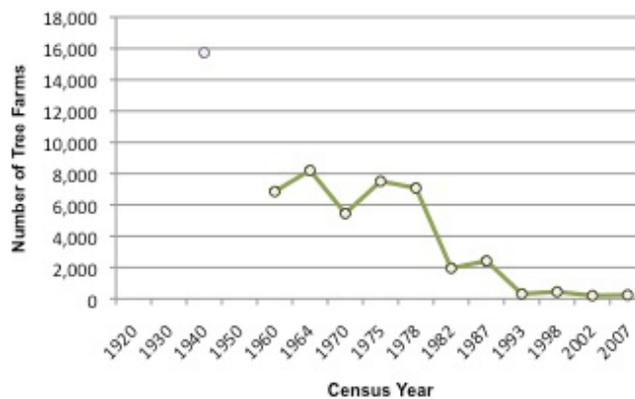


Fig. 2. Number of Farms Reporting Tree Crops in Guam, 1920-2007.

Although tropical fruits were not produced for export from Guam, copra was the chief product for export since 1915. Copra is the dried meat, or dried kernel, of the coconut used to extract coconut oil (Wikipedia). Copra exports to the United States and Japan were recorded from 1915-1940 and Philippines from 1931-1940. Figure 3 shows that the highest copra export was in 1930 with a total of 3,436,800 pounds delivered to the United States.

Table 1. Farm Distribution in Guam.

AREA DISTRIBUTION	YEAR														
	1920	1930	1940	1950	1960	1964	1970	1975	1978	1982	1987	1993	1998	2002	2007
Total no. of farms	-	2,104	2,450	-	2,028	2,529	1,121	1,576	1,999	297	351	199	201	153	104
Total no. of crop-land areas	-	-	2,094	-	1,360	1,425	1,016	1,391	1,778	287	339	186	194	143	97
Total no. of pastureland areas	-	-	2,280	-	348	676	203	261	430	36	75	46	13	16	10
Farm acreage (acres)	-	-	-	-	32,109	30,100	26,159	29,766	28,620	17,787	13,134	1,919	2,144	1,648	1,000
Ave. size per farm (acres)	0	0	0	0	16	12	23	19	14	59.9	37.4	9.6	10.7	10.8	9.6

Sources: Census of Agriculture, US Department of Commerce (1920-1992), Census of Agriculture, US Department of Agriculture (1998-2007).

**Table 2. Farms Reporting Tree Crops in Guam.**

FRUIT TREE	YEAR														
	1920	1930	1940	1950	1960	1964	1970	1975	1978	1982	1987	1993	1998	2002	2007
Alligator pears	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anonas	-	-	-	-	46	21	-	-	-	-	-	-	-	-	-
Avocados	-	-	1,486	-	474	759	535	675	571	137	190	19	21	6	16
Bananas	-	-	1,992	-	1,740	2,009	751	1,051	1,074	187	254	45	52	51	31
Betelnuts	-	-	-	-	161	220	251	345	329	115	147	24	32	15	16
Breadfruits	-	-	1,595	-	513	374	212	322	272	111	156	12	26	5	14
Cacao	-	-	77	-	-	-	-	-	-	-	-	-	-	-	-
Coconuts	-	-	2,078	-	882	795	683	940	145	140	214	31	34	8	17
Coffee	-	-	994	-	-	-	-	-	-	-	-	-	-	-	-
Custard apple	-	-	-	-	11	72	-	-	-	-	-	-	-	-	-
Grapefruit	-	-	132	-	76	87	69	116	91	45	58	6	7	-	4
Guavas	-	-	-	-	177	164	320	476	405	108	145	14	31	8	7
Kapok	-	-	964	-	-	-	-	-	-	-	-	-	-	-	-
Lemons and Limes	-	-	2,056	-	602	970	574	698	698	162	223	29	40	26	21
Mangoes	-	-	1,190	-	498	639	484	524	606	144	205	24	36	9	15
Oranges	-	-	1,132	-	407	499	248	279	230	95	105	8	10	1	4
Papayas	-	-	562	-	417	440	378	567	481	102	112	21	27	25	25
Pineapples	-	-	949	-	165	219	117	101	139	62	58	10	8	1	4
Soursops	-	-	-	-	182	148	131	215	128	97	112	8	21	5	12
Starfruits	-	-	-	-	81	192	218	357	285	83	97	13	19	5	3
Sweetsops	-	-	-	-	-	-	-	199	115	78	96	9	22	11	13
Tangerines	-	-	524	-	422	598	352	322	311	122	159	14	20	2	12
Other fruits, nuts, and tree crops	-	-	-	-	-	-	132	323	99	45	52	10	10	6	4
Nursery crops (in- cluding ornamental plants)	-	-	-	-	-	-	-	-	1,102	121	36	13	28	16	22
<b>TOTAL</b>	-	-	15,731	-	6,854	8,206	5,455	7,510	7,081	1,954	2,419	310	444	200	240

Source: Census of Agriculture, US Department of Commerce (1920-1992), Census of Agriculture, US Department of Agriculture (1998-2007).

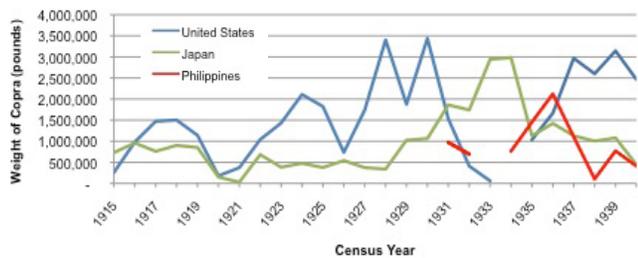


Fig. 3. Copra Export from Guam, 1915-1940.

**Table 3. Copra Export from Guam (pounds).**

YEAR	COUNTRY OF DESTINATION		
	United States	Japan	Philippines
1915	259,360	731,180	-
1916	982,610	958,958	-
1917	1,472,576	761,474	-
1918	1,502,218	902,681	-
1919	1,140,924	851,680	-
1920	180,000	152,400	-
1921	372,800	28,800	-
1922	1,040,200	682,800	-
1923	1,432,400	384,200	-
1924	2,110,000	476,800	-
1925	1,824,400	377,800	-
1926	735,800	541,200	-
1927	1,740,200	374,800	-
1928	3,402,400	339,400	-
1929	1,877,000	1,026,200	-
1930	3,436,800	1,065,400	-
1931	1,531,657	1,862,164	970,558
1932	411,352	1,742,364	693,535
1933	59,186	2,941,451	-
1934	-	2,984,510	764,427
1935	1,036,811	1,129,077	1,453,022
1936	1,665,318	1,422,215	2,120,936
1937	2,968,196	1,129,595	1,104,177
1938	2,600,440	1,003,127	103,978
1939	3,143,493	1,079,801	769,355
1940	2,466,058	444,204	409,128

Source: Census of Agriculture, US Department of Commerce, various years.

**B. Field Crops**

Field crops reported for various census years include cassava (tapioca), ginger, rice, sugarcane, sweet potatoes, taro, tobacco, yams, gado, and other crops. Figure 4 shows that the highest number of farms

reporting field crops was in 1940 with a total of 4,679. This is the only year tobacco was reported. Census year 2007 had the lowest recorded data with a total of 40 farms reporting.

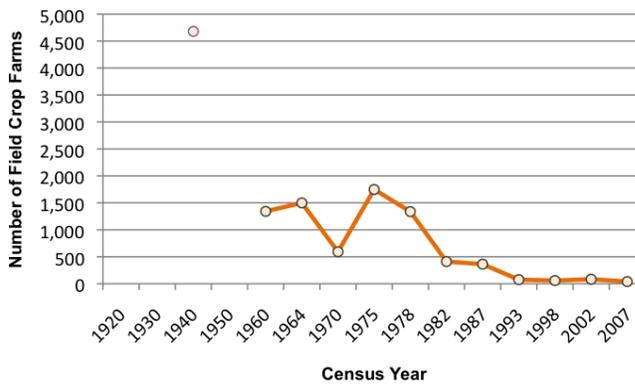


Fig. 4. Number of Farms Reporting Field Crops in Guam, 1920-2007.

**C. Vegetables and Melons**

The list of vegetables and melons for all census years include alfalfa or bean saprounts, arrowroots, green beans, yard long beans, other beans, bittermelons, Chinese cabbage, head cabbage, cantaloupes, corn, cucumbers, eggplant, lettuce, mungo bean, muskmelons and pepinos, okra, green onions, peppers (hot and sweet), pumpkins and squash, radishes, tomatoes, watermelons, and other vegetables and melons.

Arrowroots were only reported in 1939. Figure 5 shows that the highest number of farms reporting vegetables and melons was in 1978 with a total of 3,201. The lowest was in 2007 with a total of 260 farms reporting.

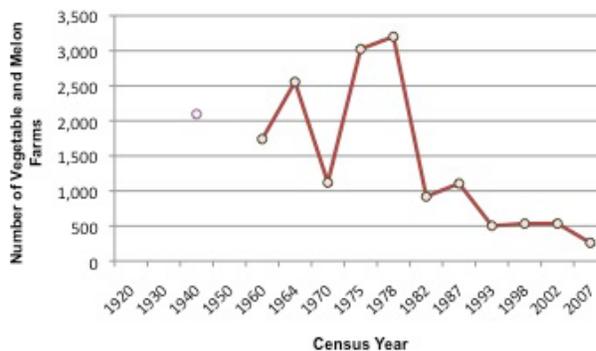


Fig. 5. Number of Farms Reporting Vegetables and Melons in Guam, 1920-2007.

**Table 4. Farms Reporting Field Crops in Guam.**

PRODUCT	YEAR														
	1920	1930	1940	1950	1960	1964	1970	1975	1978	1982	1987	1993	1998	2002	2007
Cassava (tapioca)	-	-	755	-	244	272	77	379	320	84	81	15	8	15	7
Ginger	-	-	-	-	-	-	-	-	-	-	-	-	5	-	1
Rice	-	-	209	-	2	-	-	-	-	-	-	-	-	-	-
Sugarcane	-	-	175	-	-	-	-	-	-	-	-	-	-	-	-
Sweet potatoes	-	-	751	-	160	253	88	217	248	78	63	20	18	25	8
Taro	-	-	1,500	-	501	513	237	541	399	117	105	21	23	30	10
Tobacco	-	-	126	-	-	-	-	-	-	-	-	-	-	-	-
Yams	-	-	970	-	301	297	142	304	225	78	62	14	5	11	9
Gado	-	-	193	-	134	164	48	89	77	19	21	2	-	3	3
Other crops	-	-	-	-	-	-	-	218	69	35	31	4	-	-	2
<b>TOTAL</b>	-	-	<b>4,679</b>	-	<b>1,342</b>	<b>1,499</b>	<b>592</b>	<b>1,748</b>	<b>1,338</b>	<b>411</b>	<b>363</b>	<b>76</b>	<b>59</b>	<b>84</b>	<b>40</b>

Source: Census of Agriculture, US Department of Commerce (1920-1992), Census of Agriculture, US Department of Agriculture (1998-2007).

**Table 5. Farms Reporting Vegetables and Melons in Guam.**

PRODUCT	YEAR														
	1920	1930	1940	1950	1960	1964	1970	1975	1978	1982	1987	1993	1998	2002	2007
Alfalfa and/or bean sprouts	-	-	-	-	-	-	-	-	-	-	-	-	6	2	2
Arrowroots	-	-	517	-	-	-	-	-	-	-	-	-	-	-	-
Beans, green	-	-	-	-	240	495	169	284	324	104	165	-	-	-	-
Beans, yard long	-	-	-	-	-	-	-	-	-	-	-	63	68	55	25
Beans, all other	-	-	-	-	-	-	-	-	-	-	-	20	11	23	11
Bittermelons	-	-	-	-	-	-	-	142	195	40	52	26	38	31	17
Cabbage, Chinese	-	-	-	-	95	133	77	181	144	47	55	18	20	22	5
Cabbage, head	-	-	-	-	-	-	-	54	72	24	22	5	1	1	1
Cantaloups	-	-	-	-	-	-	-	34	80	45	33	12	6	3	5
Corn	-	-	1,580	-	202	135	51	100	93	30	37	9	10	8	4
Cucumbers	-	-	-	-	110	157	83	180	172	91	119	40	54	51	22
Eggplant	-	-	-	-	370	591	232	363	552	108	150	77	89	85	44
Lettuce	-	-	-	-	7	9	-	-	-	-	-	-	-	-	-
Mungo bean	-	-	-	-	4	12	-	-	-	-	-	-	-	-	-
Muskmelons and pepinos	-	-	-	-	84	47	-	39	59	23	28	11	13	1	1
Okra	-	-	-	-	-	-	-	-	-	-	-	-	18	35	19
Onions, green	-	-	-	-	106	127	85	252	255	54	63	23	14	22	9
Peppers (hot and sweet)	-	-	-	-	149	329	168	405	455	95	145	61	48	56	32
Pumpkins and squash	-	-	-	-	115	250	111	292	260	67	73	25	33	34	10
Radishes	-	-	-	-	54	74	38	127	55	22	10	7	8	20	9
Tomatoes	-	-	-	-	106	116	94	283	293	85	76	42	46	44	27
Watermelons	-	-	-	-	99	80	-	70	123	50	47	26	28	19	7
Other vegetables and melons	-	-	-	-	-	-	12	218	69	35	31	38	22	23	10
<b>TOTAL</b>	-	-	<b>2,097</b>	-	<b>1,741</b>	<b>2,555</b>	<b>1,120</b>	<b>3,024</b>	<b>3,201</b>	<b>920</b>	<b>1,106</b>	<b>503</b>	<b>533</b>	<b>535</b>	<b>260</b>

Source: Census of Agriculture, US Department of Commerce (1920-1992), Census of Agriculture, US Department of Agriculture (1998-2007).

**D. Livestock and Poultry**

Livestock and poultry enumerated for all census years include carabaos, cattle, chickens, ducks, geese, goats and kids, hogs and pigs, horses, mules, and colts, pigeons, roosters and pullets, fighting roosters, and other poultry such as guineas. Figure 6 shows that the highest number of farm reporting livestock and poultry was recorded in 1940 with a total of 6,845 and the lowest in 2007 with a total of 70.

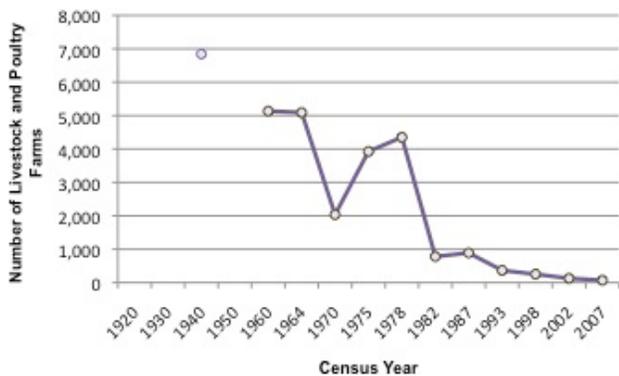


Fig. 6. Number of Farms Reporting Livestock and Poultry in Guam, 1920-2007.

**E. Fish**

Figure 7 shows that fish and other aquaculture farms were first reported in the 1974 census with the highest total of 13 fish farms. The lowest was in 1993 with only two farms recorded.

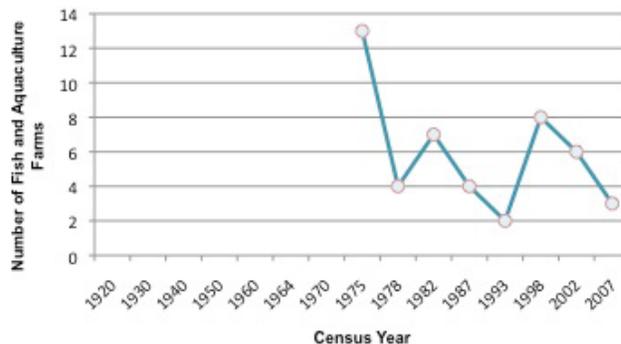


Fig. 7. Number of Farms Reporting Fish and Aquaculture in Guam, 1920-2007.

**Land Use**

Land in farms is categorized according to the way it was used. The land uses presented in this factsheet were divided into cropland and pastureland.

*Cropland areas* include all lands from which any crop was harvested, field crops that were grazed, land in non-bearing fruit or nut trees and plants, places that were used for pasture, and lands where there was a total crop failure due to natural disasters, insects, fires, and other causes. It does not include land in roads, streams, or swamps.

**Table 6. Farms Reporting Livestock and Poultry in Guam.**

LIVESTOCK	YEAR															
	1920	1930	1940	1950	1960	1964	1970	1975	1978	1982	1987	1993	1998	2002	2007	
Carabaos	-	-	740	-	293	194	45	93	53	17	21	9	4	8	4	
Cattle	-	-	1,321	-	1,021	1,006	284	333	270	62	56	24	18	12	13	
Chickens	-	-	2,223	-	1,879	2,187	888	986	1,028	183	206	82	42	26	8	
Ducks	-	-	84	-	159	130	-	274	346	48	66	28	25	11	2	
Geese	-	-	-	-	-	-	-	8	11	15	27	-	-	-	-	
Goats and kids	-	-	335	-	456	251	75	152	165	54	63	19	19	6	10	
Hogs and pigs	-	-	2,024	-	1,220	1,228	598	1,064	1,343	178	195	85	75	34	22	
Horses, mules, and colts	-	-	67	-	36	32	16	31	20	12	10	2	1	1	2	
Pigeons	-	-	-	-	71	63	-	123	95	29	33	12	10	1	1	
Roosters and pullets	-	-	-	-	-	-	-	861	997	172	203	67	32	17	6	
Fighting roosters	-	-	-	-	-	-	-	-	-	-	-	31	20	11	2	
Other poultry (guineas)	-	-	51	-	-	-	130	-	25	11	8	6	6	-	-	
<b>TOTAL</b>	-	-	<b>6,845</b>	-	<b>5,135</b>	<b>5,091</b>	<b>2,036</b>	<b>3,925</b>	<b>4,353</b>	<b>781</b>	<b>888</b>	<b>365</b>	<b>252</b>	<b>127</b>	<b>66</b>	

Source: Census of Agriculture, US Department of Commerce (1920-1992), Census of Agriculture, US Department of Agriculture (1998-2007).

**Table 7. Farms Reporting Fish and Aquaculture in Guam.**

LIVESTOCK	YEAR															
	1920	1930	1940	1950	1960	1964	1970	1975	1978	1982	1987	1993	1998	2002	2007	
Farm number	-	-	-	-	-	-	-	13	4	7	4	2	8	6	3	
Quantity sold (pounds)	-	-	-	-	-	334,000*	151,000*	6,880	4,300	166,300	92,000	D	110,820	192,700	D	

Source: Census of Agriculture, US Department of Commerce (1920-1992), Census of Agriculture, US Department of Agriculture (1998-2007).  
 \* Agricultural Development Plan for the Territory of Guam, College of Agriculture & Business, University of Guam. March 1978.  
 D - withheld to avoid disclosing data for individual farms.

*Pastureland areas* refer to all land used for pasture or grazing. It includes all woodland where livestock pastured or grazed except cropland even though cattle or other livestock may have grazed on it, lands covered in woods or forests, and other lands such as house and other building lots, lanes, roads, ditches, and land area of ponds and wasteland.

Figure 8 shows that pastureland areas were higher than croplands only in the 1940 census. Cropland areas were commonly higher than pasturelands from 1960 through 2007 (refer to Table 1).

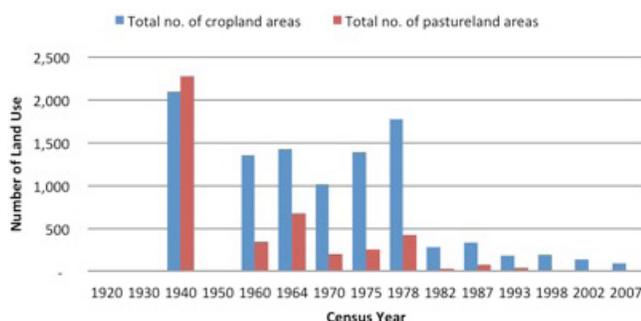


Fig. 8. Numbers of Croplands and Pasturelands in Guam, 1920-2007.

**Acreage and Production**

The data for land area were shown in terms of hectares and acres in different censuses. From 1920 to 1940, farmland area was measured in acres and was changed into hectares during the census years 1950 through 1978. The following census year (1982), the land unit of measurement switched back to acres. In this factsheet, census years with values shown in hectares were converted to acres. From 1960 to 2007, farm sizes ranged from 9.6 to 59.9 acres (refer to Table 1).

**A. Tree Crop Production**

Units of measurement for tree crops in the census years 1919 to 1949 were recorded in pieces. This unit

of measurement was changed into pounds from 1959 to 2007. The tree species that were consistently listed from 1919 to 2007 are avocados, bananas, betelnuts, breadfruits, cacao, coconuts, coffee, custard apple, grapefruit, guavas, kapok, lemons and limes, mangoes, oranges, papayas, and pineapples. Alligator pears were only reported in 1919. Some of the tree crops were only reported for two to three consecutive censuses such as cacao, custard apple, and kapok.

**B. Field Crop Production**

Figure 9 show that there was an increase in field crop production from 1919 to 1939 however, there was a massive decline in 1949 when rice, sugarcane, and tobacco were no longer produced. Cassava, sweet potatoes, taro, and yam are the consistently listed crops since 1919.

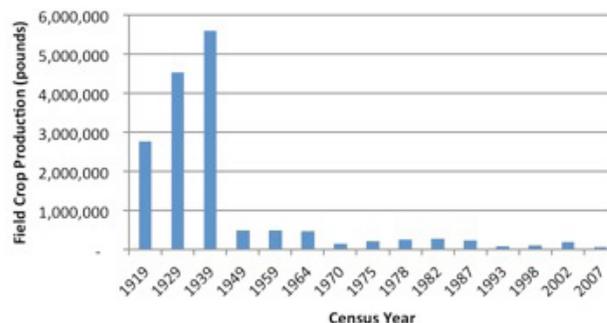


Fig. 9. Field Crop Production in Guam, 1919-2007.

**C. Vegetables and Melon Production**

Figure 10 shows that there was a large decrease in production of vegetables and melons starting in 1949. This declination was because data for arrowroots was no longer available. However, production increased at its highest peak in 1998 with some of the vegetables and melons doubling the quantity in production such as yard long beans, bittermelons, cucumbers, muskmelons and pepinos, watermelons, radishes, corn, eggplant, and Chinese cabbage.

**Table 8. Tree Crop Production in Guam.**

FRUIT TREE	YEAR														
	1919 (no.)	1929 (no.)	1939 (no.)	1949 (no.)	1959 (lbs.)	1964 (lbs.)	1970 (lbs.)	1975 (lbs.)	1978 (lbs.)	1982 (lbs.)	1987 (lbs.)	1993 (lbs.)	1998 (lbs.)	2002 (lbs.)	2007 (lbs.)
Alligator pears	5,832	5,832	-	-	-	-	-	-	-	-	-	-	-	-	-
Anonas	-	-	-	-	3,423	-	-	-	-	-	-	-	-	-	-
Avocados	-	287,991	959,881	67,064	41,931	18,154	32,291	139,834	25,940	37,270	38,855	40,602	5,900	1,280	7,770
Bananas*	117,298	196,327	301,264	65,266	660,966	283,191	192,721	468,613	182,174	123,700	168,075	71,723	49,575	194,800	238,246
Betelnuts	-	-	-	-	37,583	65,610	15,874	18,154	14,577	11,905	14,612	4,990	11,416	6,825	4,100
Breadfruits	1,003,700	1,003,700	2,855,606	-	315,406	103,971	33,751	78,589	27,560	23,050	22,485	3,720	3,890	2,430	9,650
Cacao	182	182	562	-	-	-	-	-	-	-	-	-	-	-	-
Coconuts	7,643,200	7,643,200	20,849,546	-	1,113,967	225,163	255,844	441,197	20,934	62,557	81,905	15,610	16,947	3,530	20,200
Coffee	19,553	54,718	42,686	2,465	120	-	-	-	-	-	-	-	-	-	-
Custard apple	-	-	-	-	565	3,179	-	-	-	-	-	-	-	-	-
Grapefruit	1,392	8,036	19,726	975	4,775	1,795	3,907	9,958	2,606	2,439	3,200	429	690	-	4,200
Guavas	-	-	-	-	10,689	7,046	6,636	19,031	4,983	6,069	4,987	292	980	1,175	7,390
Kapok	-	-	18,283	-	-	-	-	-	-	-	-	-	-	-	-
Lemons and Limes	293,100	1,109,982	1,241,923	62,928	53,774	23,579	58,229	73,487	28,403	29,548	29,859	4,684	10,955	17,490	9,760
Mangoes	32,652	1,184,248	1,933,761	428,072	145,835	4,602	40,407	77,744	21,918	14,473	39,633	17,740	80,100	2,125	18,150
Oranges	394,700	393,047	365,073	25,003	34,481	6,453	9,716	26,027	6,234	10,648	6,613	2,070	385	D	130
Papayas	15,288	96,712	78,153	10,504	76,136	16,263	22,089	101,346	31,884	12,771	10,867	5,220	33,510	70,635	51,330
Pineapples	29,928	118,233	87,025	10,726	48,950	10,680	6,229	6,539	4,462	248,221	241,772	100,100	30,475	D	17,570
Soursops	-	-	-	-	15,656	8,937	13,645	11,626	2,552	7,260	6,610	1,166	1,304	295	1,850
Starfruits	-	-	-	-	7,776	11,195	7,040	21,878	9,729	4,045	5,633	2,152	1,885	990	275
Sweetsops	-	-	-	-	-	-	-	7,423	1,419	2,449	4,808	1,010	1,836	11,290	1,280
Tangerines	-	-	647,719	74,713	68,447	4,701	32,801	54,748	13,225	28,036	20,291	1,680	2,471	D	11,110
Other fruits, nuts, and tree crops	-	-	-	-	-	-	3,223	21,838	3,017	5,110	6,645	6,798	3,290	825	436

Source: Census of Agriculture, US Department of Commerce (1920-1992), Census of Agriculture, US Department of Agriculture (1998-2007).  
D - withheld to avoid disclosing data for individual farms. \* - bananas were measured in bunches from 1919-1949.

**Table 9. Field Crop Production in Guam (pounds).**

PRODUCT	YEAR														
	1920	1930	1940	1950	1960	1964	1970	1975	1978	1982	1987	1993	1998	2002	2007
Cassava (tapioca)	103,513	195,511	472,657	15,710	95,497	95,815	13,581	379	73,308	34,910	30,580	15,110	12,000	18,360	7,750
Ginger	-	-	-	-	-	-	-	-	-	-	-	-	6,815	-	D
Rice	37,360	245,760	651,600	-	7,525	-	-	-	-	-	-	-	-	-	-
Sugarcane	24,200	496,000	408,000	-	-	-	-	-	-	-	-	-	-	-	-
Sweet potatoes	683,550	587,895	756,415	107,044	67,519	83,915	13,293	43,277	56,112	65,019	25,955	25,961	50,220	128,360	18,800
Taro*	1,281,861	1,824,967	2,447,909	280,742	169,800	153,232	72,783	111,580	75,177	56,970	28,055	19,150	38,070	42,225	13,000
Tobacco	36,261	27,965	20,260	-	-	-	-	-	-	-	-	-	-	-	-
Yams	605,200	1,160,280	840,015	87,283	97,753	76,828	33,672	47,225	44,725	47,327	1,524	19,890	2,340	0,710	23,000
Gado and other crops	-	-	-	-	59,025	56,450	18,521	15,005	16,462	74,440	124,622	6,563	-	700	4,100
<b>TOTAL</b>	<b>2,771,945</b>	<b>4,538,378</b>	<b>5,596,856</b>	<b>490,779</b>	<b>497,119</b>	<b>466,240</b>	<b>151,850</b>	<b>217,466</b>	<b>265,784</b>	<b>278,666</b>	<b>230,736</b>	<b>86,674</b>	<b>109,445</b>	<b>200,355</b>	<b>66,650</b>

Source: Census of Agriculture, US Department of Commerce (1920-1992), Census of Agriculture, US Department of Agriculture (1998-2007).  
\* - it was measured by piece in 1919. D - withheld to avoid disclosing data for individual farms.

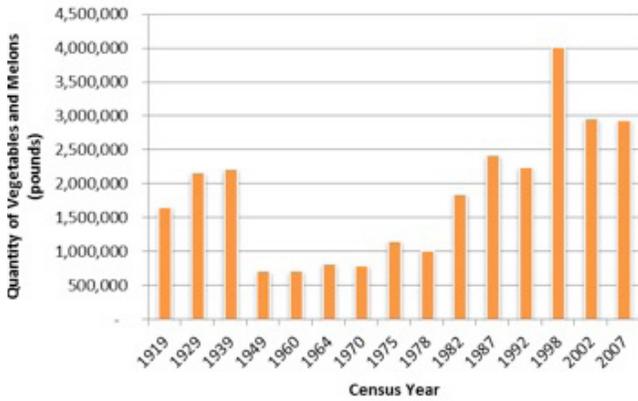


Fig. 10. Vegetable and Melon Production in Guam, 1919-2007.

**D. Livestock and Poultry Production**

Figure 11 shows that livestock and poultry increased significantly in 1940 due to increased production of chicken, hogs, and pigs. It decreased in 1950, but increased again in 1974, with the production of geese, roosters, and pullets. In 1982, all livestock decreased except for carabaos. The following census year, data increased due to higher production of ducks, roosters, and pullets but continuously decreased until 2007 that last year data was available.

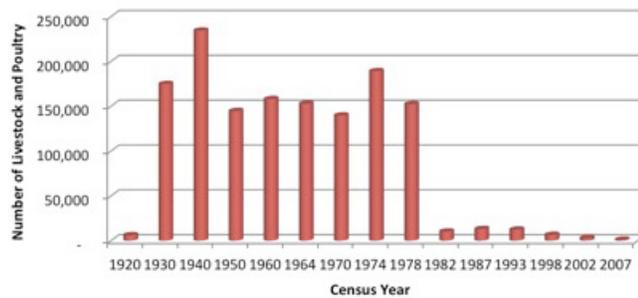


Fig. 11. Livestock and Poultry Production in Guam, 1920-2007.

**E. Fish and Other Aquaculture Production**

Figure 12 shows that Census data on fish production started in 1974 and increased all the way to 1987 with a total of 4,300 pounds sold. It decreased in 1998 and increased again in 2002 with a total of 192,700 pounds sold. In 1993 and 2007, information was withheld to avoid disclosing data for individual farms (refer to Table 7).

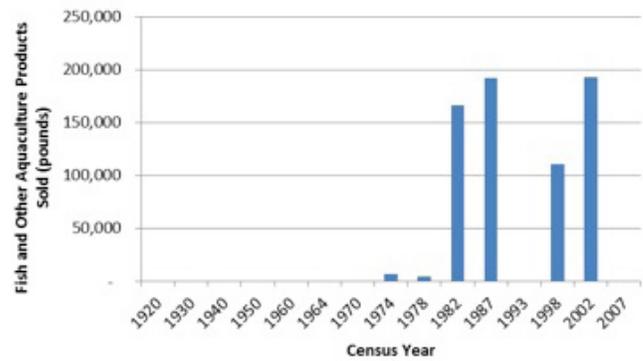


Fig. 12. Fish and Aquaculture Production in Guam, 1920-2007.

Figure 13 shows another set of data from the Department of Agriculture, Government of Guam and College of Agriculture & Life Sciences, University of Guam; GADTC, Department of Commerce, Government of Guam. Aquaculture products include freshwater prawn, marine shrimp, tilapia, carp, catfish, milkfish, mullet, and ornamental carp. The highest production was in 1963 with a total of 567,000 pounds.

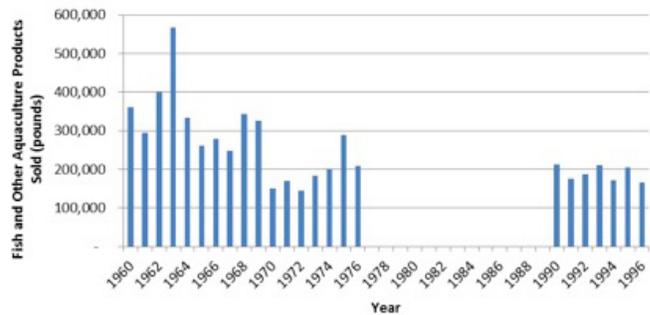


Fig. 13. Fish and Aquaculture Production in Guam, 1960-1996.

**Table 10. Vegetables and Melon Production in Guam (pounds).**

PRODUCT	YEAR														
	1920	1930	1940	1950	1960	1964	1970	1975	1978	1982	1987	1993	1998	2002	2007
Alfalfa and/or bean sprouts	-	-	-	-	-	-	-	-	-	-	-	-	388,700	95,950	D
Arrowroots	34,256	48,836	136,640	-	-	-	-	-	-	-	-	-	-	-	-
Beans, green	-	-	3,271	33,072	49,911	94,730	171,805	72,618	89,396	116,548	303,804	-	-	-	-
Beans, yard long	-	-	-	-	-	-	-	-	-	-	-	150,424	428,118	59,400	126,203
Beans, all other	-	-	-	-	-	-	-	-	-	-	-	78,143	12,725	47,800	9,020
Bittermelons	-	-	-	-	-	-	-	30,801	29,635	57,665	98,425	79,025	218,205	173,245	73,950
Cabbage, Chinese	-	-	-	615	45,180	30,720	45,026	83,806	20,432	58,577	41,711	11,045	90,505	72,740	4,930
Cabbage, head	-	-	-	-	-	-	-	12,545	23,421	76,996	40,231	34,014	D	1,000	D
Cantaloupe	-	-	-	-	-	-	-	21,103	59,473	126,310	124,745	127,095	79,550	24,000	66,000
Corn	1,621,032	2,110,416	1,033,528	571,413	99,600	104,439	29,315	39,696	19,354	13,166	56,176	28,273	46,580	80,300	123,250
Cucumbers	-	-	25	20,475	167,675	125,538	245,182	212,959	118,819	623,296	587,131	430,499	840,929	673,460	1,354,320
Eggplant	-	-	295	2,869	65,529	121,125	110,979	143,605	74,127	76,688	86,326	79,516	294,463	426,545	164,959
Lettuce	-	-	-	-	787	-	-	-	-	-	-	-	-	-	-
Mungo bean	-	-	-	-	316	412	-	-	-	-	-	-	-	-	-
Muskmelons and pepinos	-	-	36,840	61,764	81,601	51,215	-	19,475	21,944	32,453	50,760	44,750	143,795	D	D
Okra	-	-	-	-	-	-	-	-	-	-	-	-	16,735	49,445	36,229
Onions, green	-	-	-	-	22,487	18,611	24,536	31,082	17,543	11,010	17,498	16,253	5,330	14,605	5,210
Peppers (hot and sweet)	-	-	55	3,686	15,189	20,358	42,345	36,028	34,710	29,067	70,619	54,410	25,696	25,610	41,078
Pumpkins and squash	-	-	-	-	43,330	79,491	20,904	82,044	62,812	32,708	41,032	49,094	33,117	118,495	45,350
Radishes	-	-	-	-	9,464	9,191	18,204	23,862	4,471	32,190	5,495	6,874	16,940	19,280	12,340
Tomatoes	-	-	3,530	13,628	30,827	33,170	82,559	92,906	30,569	87,954	142,699	124,870	97,246	68,480	86,425
Watermelons	-	-	-	-	77,225	124,743	-	115,066	387,923	400,295	632,605	865,375	1,147,262	736,300	772,000
Other vegetables and melons	-	-	-	-	-	-	1,082	31,119	18,511	68,820	117,734	66,890	28,618	71,195	9,525
<b>TOTAL</b>	<b>1,655,288</b>	<b>2,159,252</b>	<b>2,214,184</b>	<b>707,522</b>	<b>709,121</b>	<b>813,743</b>	<b>791,937</b>	<b>1,148,715</b>	<b>1,013,140</b>	<b>1,843,743</b>	<b>2,416,991</b>	<b>2,246,550</b>	<b>4,014,514</b>	<b>2,957,850</b>	<b>2,930,789</b>

Source: Census of Agriculture, US Department of Commerce (1920-1992), Census of Agriculture, US Department of Agriculture (1998-2007).  
D - withheld to avoid disclosing data for individual farms.

**Table 11. Livestock and Poultry Production in Guam (number).**

LIVESTOCK	YEAR														
	1920	1930	1940	1950	1960	1964	1970	1975	1978	1982	1987	1993	1998	2002	2007
Carabaos	6,149	3,253	1,560	679	984	726	149	223	290	328	269	44	60	97	12
Cattle and calves	73	6,948	5,845	2,847	5,860	5,891	2,650	2,647	1,495	941	317	24	18	154	112
Chickens	-	154,784	209,465	132,781	137,071	137,073	126,636	151,164	123,427	183	206	82	42	1,046	182
Ducks	-	1,025	1,027	399	2,137	1,056	540*	3,324	5,823	962	4,122	2,617	2,021	450	D
Geese	-	-	-	-	-	-	-	79	329	109	115	-	-	-	-
Goats and kids	1,160	1,003	1,353	748	2,592	1,501	458	968	929	391	851	142	179	81	124
Hogs and pigs	543	7,616	14,089	7,056	7,118	4,722	4,348	8,245	8,474	3,122	2,627	2,038	2,287	675	635
Horses, mules, and colts	4,367	147	126	58	124	91	73	113	97	42	21	D	D	D	D
Pigeons	-	-	-	-	2,048	1,790	-	3,219	2,213	875	866	343	459	D	D
Roosters and pullets	-	-	-	-	-	-	-	14,271	9,106	3,198	3,562	5,882	805	271	79
Fighting roosters	-	-	-	-	-	-	-	-	-	-	-	1,186	445	224	D
Other poultry	-	-	932	-	-	-	4,864	4,864	111	116	52	69	252	-	-
<b>TOTAL</b>	<b>6,143</b>	<b>174,776</b>	<b>234,397</b>	<b>144,568</b>	<b>157,934</b>	<b>152,850</b>	<b>139,718</b>	<b>189,117</b>	<b>152,294</b>	<b>10,267</b>	<b>13,008</b>	<b>12,427</b>	<b>6,568</b>	<b>2,998</b>	<b>1,144</b>

Source: Census of Agriculture, US Department of Commerce (1920-1992), Census of Agriculture, US Department of Agriculture (1998-2007).

\* Agricultural Development Plan for the Territory of Guam, College of Agriculture & Business, University of Guam. March 1978.

D - withheld to avoid disclosing data for individual farms.

**Table 12. Fish and Aquaculture Production in Guam, 1960-1996.**

YEAR	FISH AND AQUACULTURE PRODUCTS SOLD (pounds)	YEAR	FISH AND AQUACULTURE PRODUCTS SOLD (pounds)
1960	360,000	1979	-
1961	295,000	1980	-
1962	400,000	1981	-
1963	567,000	1982	-
1964	334,000	1983	-
1965	262,000	1984	-
1966	279,000	1985	-
1967	248,000	1986	-
1968	343,500	1987	-
1969	326,498	1988	-
1970	151,000	1989	-
1971	170,577	1990	212,842
1972	143,629	1991	176,559
1973	183,000	1992	188,023
1974	201,000	1993	211,226
1975	289,017	1994	172,222
1976	208,131	1995	205,011
1977	-	1996	166,725
1978	-		

Source: Department of Agriculture, Government of Guam.

**Table 14. Market Value of Agricultural Products Sold in Guam, 1960-2001.**

YEAR	FRUITS & VEGETABLES		POULTRY		PORK		BEEF		EGGS		TOTAL SALES (\$)
	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)	
1960	2,117,000	290,000	UNK	UNK	UNK	UNK	UNK	UNK	412,000	UNK	290,000
1961	2,666,000	325,000	UNK	UNK	UNK	UNK	UNK	UNK	446,000	UNK	325,000
1962	2,681,000	347,000	UNK	UNK	UNK	UNK	UNK	UNK	645,000	UNK	347,000
1963	1,868,000	209,000	UNK	UNK	UNK	UNK	UNK	UNK	636,000	UNK	209,000
1964	630,000	94,000	UNK	UNK	UNK	UNK	UNK	UNK	792,000	UNK	94,000
1965	712,000	112,000	UNK	UNK	UNK	UNK	UNK	UNK	504,000	UNK	112,000
1966	1,809,355	357,537	81,225	29,241	390,500	292,875	256,044	166,429	720,000	504,000	1,350,082
1967	1,435,319	266,642	90,480	32,573	497,000	372,750	271,208	174,115	960,000	672,000	1,518,080
1968	1,877,872	309,670	108,000	38,880	536,600	402,450	291,622	184,305	1,056,000	739,200	1,674,505
1969	2,230,493	404,919	130,560	47,002	560,900	420,675	289,539	187,042	1,305,000	913,500	1,973,138
1970	2,410,562	430,556	195,000	70,200	411,800	308,850	242,000	157,784	2,150,000	1,505,000	2,472,390
1971	1,819,924	354,973	160,725	60,272	436,909	327,682	185,000	124,581	1,858,912	13,119,838	3,987,346
1972	2,504,308	478,264	194,780	72,848	449,464	336,649	157,000	106,155	2,065,270	1,445,689	2,439,605
1973	3,129,453	622,672	210,000	84,000	550,000	413,000	140,000	98,000	2,265,000	1,628,000	2,845,672
1974	3,485,122	798,065	230,000	92,000	700,000	525,000	130,000	91,000	2,436,000	1,725,000	3,231,065
1975	3,750,400	937,600	258,000	116,000	997,000	750,000	116,000	87,000	2,498,620	2,099,000	3,989,600
1976	1,199,000	329,800	120,000	57,460	513,000	428,098	79,000	61,775	2,007,500	2,204,000	3,081,133
1977	3,684,000	1,842,100	118,000	59,094	616,000	535,572	75,000	61,381	2,108,000	2,314,000	4,812,147
1978	6,617,000	3,639,470	124,000	80,600	1,047,000	889,950	73,000	62,050	2,298,000	2,527,800	7,199,870
1979	6,186,000	3,402,064	133,000	86,242	1,110,000	943,347	71,000	60,188	2,229,000	2,451,966	6,943,807
1980	2,976,000	1,725,891	91,000	63,600	964,000	868,064	52,000	49,400	1,814,000	2,086,522	4,793,477
1981	6,208,000	3,528,653	196,000	66,780	1,012,000	911,467	54,000	51,870	1,904,000	2,190,848	6,749,618
1982	4,833,000	3,383,111	206,000	70,119	1,063,000	957,041	57,000	54,464	1,134,000	1,622,186	6,086,921
1983	6,616,000	3,438,260	196,000	66,613	1,116,000	957,137	59,000	57,187	567,000	811,093	5,330,290
1984	6,631,000	3,738,615	205,000	69,700	1,166,000	998,096	51,000	55,590	593,000	902,462	5,764,463
1985	6,762,000	4,248,692	164,000	73,600	960,000	823,877	40,000	38,950	609,000	937,860	6,122,979
1986	8,035,000	4,293,772	305,000	137,250	575,000	494,500	26,000	25,220	1,308,000	2,053,965	7,004,707
1987	7,595,000	4,692,852	297,000	133,650	850,000	722,500	20,000	19,400	1,220,000	1,878,000	7,446,402
1988	7,878,000	4,200,590	299,000	134,730	914,000	776,688	19,000	18,430	1,229,000	1,880,370	7,010,808
1989	7,141,000	4,379,306	104,000	46,900	310,000	263,500	17,000	16,500	426,000	651,780	5,357,986
1990	5,564,000	6,563,920	90,000	40,600	215,000	182,750	11,000	10,680	3,369,000	564,570	7,362,520
1991	3,243,000	4,486,013	75,000	33,750	190,000	169,100	9,000	8,100	311,000	475,830	5,172,793
1992	5,053,000	4,966,953	50,000	22,500	130,000	115,700	7,000	6,930	238,000	364,148	5,476,231
1993	13,981,000	9,871,960	N/A	N/A	N/A	N/A	N/A	N/A	1,079,000	2,143,165	12,015,125
1994	13,671,000	9,401,143	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13,671	9,414,814
1995	3,215,000	3,559,915	N/A	N/A	11,230,000	645,732	N/A	N/A	74,153,000	185,383	4,391,030
1996	3,727,000	3,887,621	N/A	N/A	151,000	453,012	N/A	N/A	92,000	156,648	4,497,281
1997	2,314,000	2,382,133	16,000*	1,006	232,000*	145,936	7,000*	73,000	149,000*	208,926	2,811,001
1998	1,512,000	1,594,310	21,000*	3,435	151,000*	394,609	6,000*	59,813	151,000*	211,399	2,263,566
1999	3,424,000	3,323,038	14,000	18,725	136,000	341,140	6,000	76,404	80,000	200,780	3,960,087
2000	1,441,000	1,033,541	12,000	16,975	84,000	210,618	9,000	112,476	73,000	182,488	1,556,098
2001	N/A	N/A	10,000	14,406	111,000	277,073	11,000	137,196	68,000	170,460	599,135

\* Revised.

N/A - not available. UNK - unknown.

Source: Department of Agriculture, Government of Guam as reported in the Guam Annual Economic Review, 1969-2001.

**Table 13. Market Value of Agricultural Products Sold in Guam.**

ITEM	YEAR															
	1920	1930	1940	1950	1960	1964	1970	1975	1978	1982	1987	1993	1998	2002	2007	
Total Sales	-	-	-	-	-	-	2,570,540	3,542,537	1,685,740	2,152,817	2,626,747	2,655,980	4,302,396	4,197,680	2,796,173	

Source: Census of Agriculture, US Department of Commerce (1920-1992), Census of Agriculture, US Department of Agriculture (1998-2007). \* Agricultural Development Plan for the Territory of Guam, College of Agriculture & Business, University of Guam. March 1978.

**Market Value of Agricultural Products Sold**

Figure 14 shows that the value of agricultural products sold was first reported in 1964 and increased until 1975. There was a decrease in the following census year but nonetheless increased from 1978 to 1998 and decreased again thereafter.

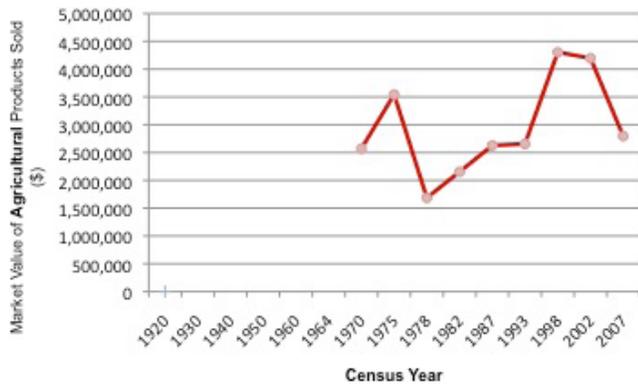


Fig. 14. Market Value of Agricultural Products Sold in Guam, 1920-2007.

As shown on Table 14, the bulk of data was sourced out from the Department of Agriculture as reported from the Guam Annual Economic Reviews. A comparable review in the value of agricultural products sold is shown in Figure 15. The data was based from the Department of Agriculture, Government of Guam covering the years 1960 through 2001. Figure 15 shows an abrupt increase in sales in 1971 with a total value of \$13,987,346 and decreased again in 1972. The second highest peak of sales was in 1993 with a total of \$12,015,125 but decreased thereafter.

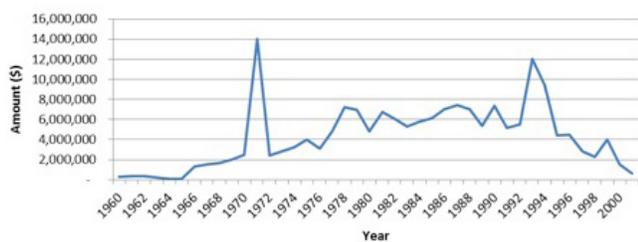


Fig. 15. Market Value of Agricultural Products Sold in Guam, 1960-2001.

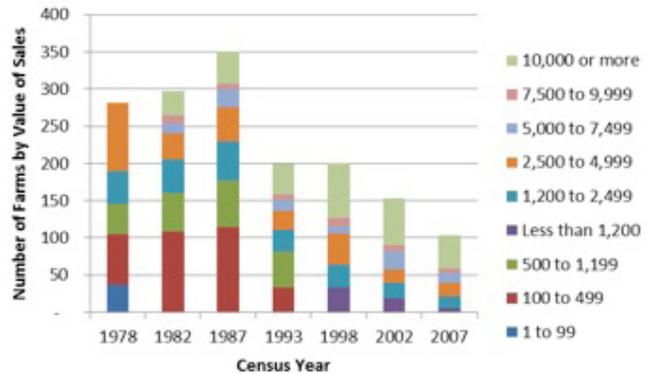


Fig. 16. Number of Farms by Value of Sales.

Figure 16 shows that in 1978, farm sales were low ranging from \$1.00 to \$4,999 only. Majority of farm sales ranging from \$100-\$499 were shown in 1987, \$500-\$1,199 in 1993 and farm sales continuously increased from 1998 onwards ranging from \$10,000 or more.

**Table 15. Number of Farms by Value of Sales.\***

Sales (\$)	YEAR						
	1978	1982	1987	1993	1998	2002	2007
1 to 99	37	-	-	-	-	-	-
100 to 499	68	109	114	34	-	-	-
500 to 1,199	41	52	63	48	-	-	-
< 1,200	-	-	-	-	34	19	6
1,200 to 2,499	44	44	52	29	30	20	15
2,500 to 4,999	92	36	47	25	42	19	18
5,000 to 7,499	-	13	24	15	10	24	14
7,500 to 9,999	-	10	7	7	11	8	6
10,000 or more	-	33	44	41	74	63	45

Sources: Census of Agriculture, US Department of Commerce (1978-1992), Census of Agriculture, US Department of Agriculture (1998-2007). \*In 1998, the definition of farm changed to \$1,000 or more.

### Socio-Demographic Profile of Farmers

#### Age

Figure 17 shows that farmer’s age were first recorded during the 1975 Census. During that year, farmers in between the ages of 45 and 54 years had the highest number until the 1982 census. On the other hand, those that was age 65 years and over had the lowest number from 1975 to 1982. In 1987, the number of farmers for all age groups decreased, with 55 to 64 years bracket having the most number. As of 2007, the highest number of farmers are 65 years and over and the younger age bracket under 35 years have the lowest. The average age of farmers was between 49 to 59 years old.

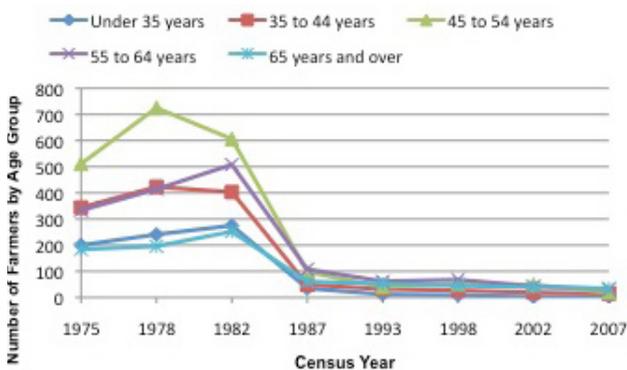


Fig. 17. Number of Farmers by Age Group in Guam.

**Table 16. Age of Farmers in Guam, 1975-2007.**

AGE GROUP	YEAR							
	1975	1978	1982	1987	1993	1998	2002	2007
Under 35 years	200	241	275	35	12	9	3	3
35 to 44 years	344	423	403	49	32	27	19	15
45 to 54 years	511	725	606	98	40	52	49	19
55 to 64 years	333	414	508	108	62	68	43	32
65 years and over	184	196	252	61	53	45	39	35
Average age	49	49	50	53	55	55	56	59

Sources: Census of Agriculture, US Department of Commerce (1975-1992), Census of Agriculture, US Department of Agriculture (1998-2007).

#### Race

Chamorros comprise the largest number of farmers in Guam followed by the Filipinos, Chinese, White, and other race. Male operators were dominant for all races with an average ratio of 7:1 (7 males to 1 female) except for 2002, which was 5:1. Figure 18 shows that the number of operators for all races decreased.

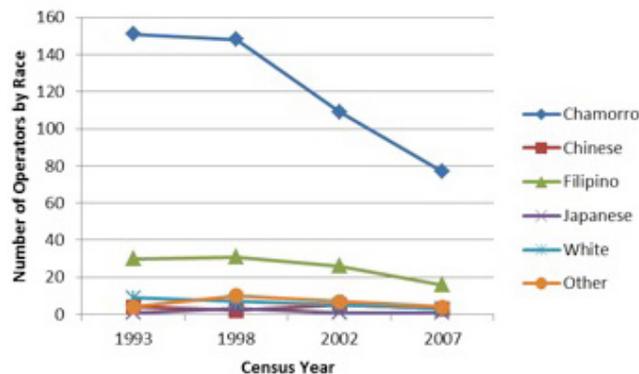


Fig. 18. Number of Operators by Race in Guam.

**Table 17. Number of Operators by Race and Sex in Guam.**

RACE	YEAR			
	1993	1998	2002	2007
Chamorro	151	148	109	77
Chinese	4	2	5	3
Filipino	30	31	26	16
Japanese	1	3	1	1
White	9	7	5	3
Other	4	10	7	4
Male	176	177	128	91
Female	23	24	25	13

Sources: Census of Agriculture, US Department of Agriculture (1993-2007).

#### Main Occupation

Figure 19 shows that from 1975 to 1982, there were more farmers whose main occupation was agricultural however, that was reversed starting in Census year 1987 onwards.

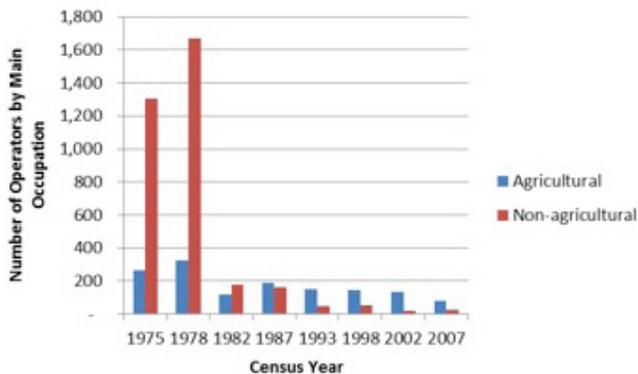


Fig. 19. Number of Operators by Main Occupation in Guam.

**Table 18. Number of Operators by Main Occupation.**

OCCUPATION	YEAR							
	1975	1978	1982	1987	1993	1998	2002	2007
Agricultural	266	326	120	190	151	147	134	80
Non-agricultural	1,304	1,671	177	161	48	54	19	24

Sources: Census of Agriculture, US Department of Commerce (1975-1992), Census of Agriculture, US Department of Agriculture (1998-2007)

**Miscellaneous Agricultural Statistics for Guam**

Other than assisting with the 5 and 10-year Census and the historical data found on Table 14, the Government of Guam does not engage in regular agriculture production studies. To make this document as comprehensive as possible, however, the following tables are also included in appendices.

- Agricultural Employment, 1993-2015
- Fishery Production, 1960-1976
- Aquaculture Production, 1990-1996
- Value of Aquaculture Production, 1989-1996
- Poultry and Livestock Production, 1960-2001
- Other Miscellaneous Agricultural Statistics in Guam, 1969-1973

**Summary**

Based on data gathered from the U.S. Census of Agriculture-Guam and other sources, the following observations can be made:

- The number of farms in Guam is decreasing.
- The number of farms reporting tree crops, field

crops, vegetables and melons, livestock and poultry, and fish production is decreasing.

- There was no copra export after 1940.
- The amount of croplands and pasturelands is decreasing.
- Tree crop, field crop, and livestock and poultry production is decreasing.
- Fish and other aquaculture production are still unknown whether it increased or decreased.
- The market value of agricultural products sold is decreasing.
- The number of farms by value of sales is decreasing.
- The average age of farmers in Guam is between 49 to 59 years old.
- Chamorros comprise the largest number of farmers in Guam, with males being dominant for all races.
- Farm operators’ main occupation is non-agricultural since the late 1980s.

This document and the Excel spreadsheet containing all tables herein can be found at [www.CNAS-RE.uog.edu](http://www.CNAS-RE.uog.edu).

## Appendices

### Fishery Production (Catch Harvested).

YEAR	FISH	
	Pounds	Value (\$)
1960	360,000	144,000
1961	295,000	118,000
1962	400,000	168,000
1963	567,000	255,000
1964	334,000	150,000
1965	262,000	118,000
1966	279,000	126,000
1967	248,000	124,000
1968	343,500	172,000
1969	326,498	200,000
1970	151,000	98,000
1971	170,577	110,875
1972	143,629	93,359
1973	183,000	UNK
1974	201,000	UNK
1975	289,017	UNK
1976	208,131	UNK

Source: Department of Agriculture, Government of Guam.

### Aquaculture Production (Pounds Harvested).

YEAR	SPECIES								TOTAL
	Freshwater prawn	Marine shrimp	Tilapia	Carp	Catfish	Milkfish	Mullet	Ornamental carp	
1990	-	-	128,427	-	26,305	58,020	90	-	212,842
1991	-	865	123,023	-	15,982	35,394	1,295	-	176,559
1992	68	10,131	138,155	-	13,897	25,279	493	-	188,023
1993	-	20,092	149,094	950	16,153	24,564	373	-	211,226
1994	-	23,091	110,909	800	22,182	15,090	-	150	172,222
1995	-	2,273	45,909	-	4,253	152,525	51	-	205,011
1996	135	11,135	51,135	-	11,025	93,295	-	-	166,725

Source: College of Agriculture & Life Sciences, University of Guam; GADTC, Department of Commerce, Government of Guam.

### Value of Aquaculture Production (\$).

YEAR	SPECIES								TOTAL
	Freshwater prawn	Marine shrimp	Tilapia	Carp	Catfish	Milkfish	Mullet	Ornamental carp	
1989	-	-	861,718	-	215,399	562,493	-	-	1,639,610
1990	-	-	834,775	-	217,016	478,665	742	-	1,531,198
1991	-	13,321	799,649	-	131,851	292,000	10,684	-	1,247,505
1992	1,122	156,017	898,007	-	114,650	208,552	4,067	-	1,382,415
1993	-	309,416	969,111	-	133,262	202,653	3,077	30,000	1,647,519
1994	-	355,601	720,909	-	188,547	141,092	-	30,000	1,436,149
1995*	-	40,004	263,977	-	32,748	1,281,210	280	-	1,618,219
1996**	3,300	183,750	281,250	-	54,770	918,440	-	-	1,441,510

Note: 1991 figures are estimates.

\* New price per kilogram were reported in 1995 as follows: marine shrimp - \$17.60, tilapia - \$5.75, catfish - \$7.70, milkfish - \$8.40, and mullet - \$5.50

\*\* Farm prices for 1996 are as follows: tilapia - \$2.75, catfish - \$3.25, prawns - \$11.00, blue shrimp - \$8.00, milkfish - \$9.84

Source: College of Agriculture & Life Sciences, University of Guam; GADTC, Department of Commerce, Government of Guam.

### Poultry and Livestock Production.

YEAR	HOGS (head)	CATTLE (head)	CARA- BAOS (head)	GOATS (head)	HORSES (head)	POUL- TRY*
1960	UNK	UNK	UNK	UNK	UNK	33,000
1961	UNK	UNK	UNK	UNK	UNK	46,000
1962	UNK	UNK	UNK	UNK	UNK	54,000
1963	UNK	UNK	UNK	UNK	UNK	49,000
1964	3,500	3,793	UNK	UNK	UNK	59,933
1965	6,200	5,700	UNK	UNK	UNK	59,760
1966	5,500	6,146	UNK	UNK	UNK	54,150
1967	7,000	6,510	UNK	UNK	UNK	60,325
1968	7,600	7,000	UNK	UNK	UNK	72,000
1969	7,900	6,950	549	600	135	87,040
1970	8,750	5,800	500	1,050	130	130,000
1971	6,699	4,450	322	982	136	107,150
1972	8,325	4,112	316	897	141	120,776
1973	8,619	3,986	298	785	132	133,235
1974	10,463	2,771	256	537	118	139,110
1975	11,726	2,502	259	492	126	142,537
1976	8,442	1,829	247	504	120	91,360
1977	10,130	1,647	235	455	123	95,928
1978	10,637	1,493	314	432	135	147,875
1979	11,275	1,448	305	445	139	158,226
1980	9,842	1,011	213	526	130	108,862

YEAR	HOGS (head)	CATTLE (head)	CARA- BAOS (head)	GOATS (head)	HORSES (head)	POUL- TRY*
1981	8,100	850	250	538	145	104,200
1982	7,900	508	208	510	140	100,700
1983	2,932	790	96	1,019	49	36,430
1984	4,120	650	90	1,300	62	38,100
1985	4,750	410	85	1,420	54	40,200
1986	2,845	262	9	173	40	76,100
1987	4,000	200	70	1,800	45	74,000
1988	4,300	190	68	2,250	42	74,600
1989	1,461	166	67	164	30	25,830
1990	1,015	106	65	563	15	22,390
1991	1,350	186	63	345	18	20,350
1992	1,509	284	60	267	24	16,845
1993	2,101	312	46	347	27	24,096
1994	UNK	UNK	UNK	UNK	UNK	UNK
1995	4,420	269	17	351	47	11,230
1996	2,440	246	21	286	60	11,567
1997	3,249	219	52	326	85	13,342
1998	3,025	206	43	359	64	12,791
1999	3,061	200	40	340	58	5,350
2000	3,644	215	48	325	46	4,850
2001	2,847	211	65	310	52	4,116

\* Represents only laying chickens.

Source: Department of Agriculture, Government of Guam.

**Miscellaneous Agriculture Statistics for Guam, 1969-1973.**

ITEM	YEAR				
	1969	1970	1971	1972	1973
No. of fruit and Vegetable producers (Commercial)					
a. Full time	20	31	39	46	54
b. Part time	36	42	50	62	80
Acres Under Cultivation	1,025	1,061	986	1,057	1,389
No. of Acres Under Government Leases	677	677	677	677	677
No. of Livestock Producers	135	149	158	171	180
No. of Poultry Producers	56	51	47	36	24
No. of Farm Loans	4	25	9	9	23
No. of Acres of Insured Crops	0	0	13	8	17
No. of Fish Weirs	17	17	17	17	17
No. of Farm Associations	1	1	1	5	5

Source: Guam Department of Agriculture Informational Handbook, 1974.

**References and More Sources**

Census of Agriculture. 1920-1992. U.S. Department of Commerce, Washington, DC.

Census of Agriculture. 1998-2007. National Agriculture Statistics Service. U.S. Department of Agriculture, Washington, DC.

Agricultural Development Plan for the Territory of Guam, University of Guam, 1978.

Guam Annual Economic Review. 1969-2001. Guam Economic Research Center, Department of Commerce, Government of Guam.

Agricultural Employment. 1993-2015. Bureau of Labor Statistics, Government of Guam.

M. Marutani, J. Brown, F. Cruz, and G. Wall. 1997. Agricultural Crop Production on Guam During the 20th Century. *Micronesica* 30(2):389-415, University of Guam.

**Acknowledgements**

Thanks to Dr. Bob Barber for pointing us to the Guam Economic Review.