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# GUAM

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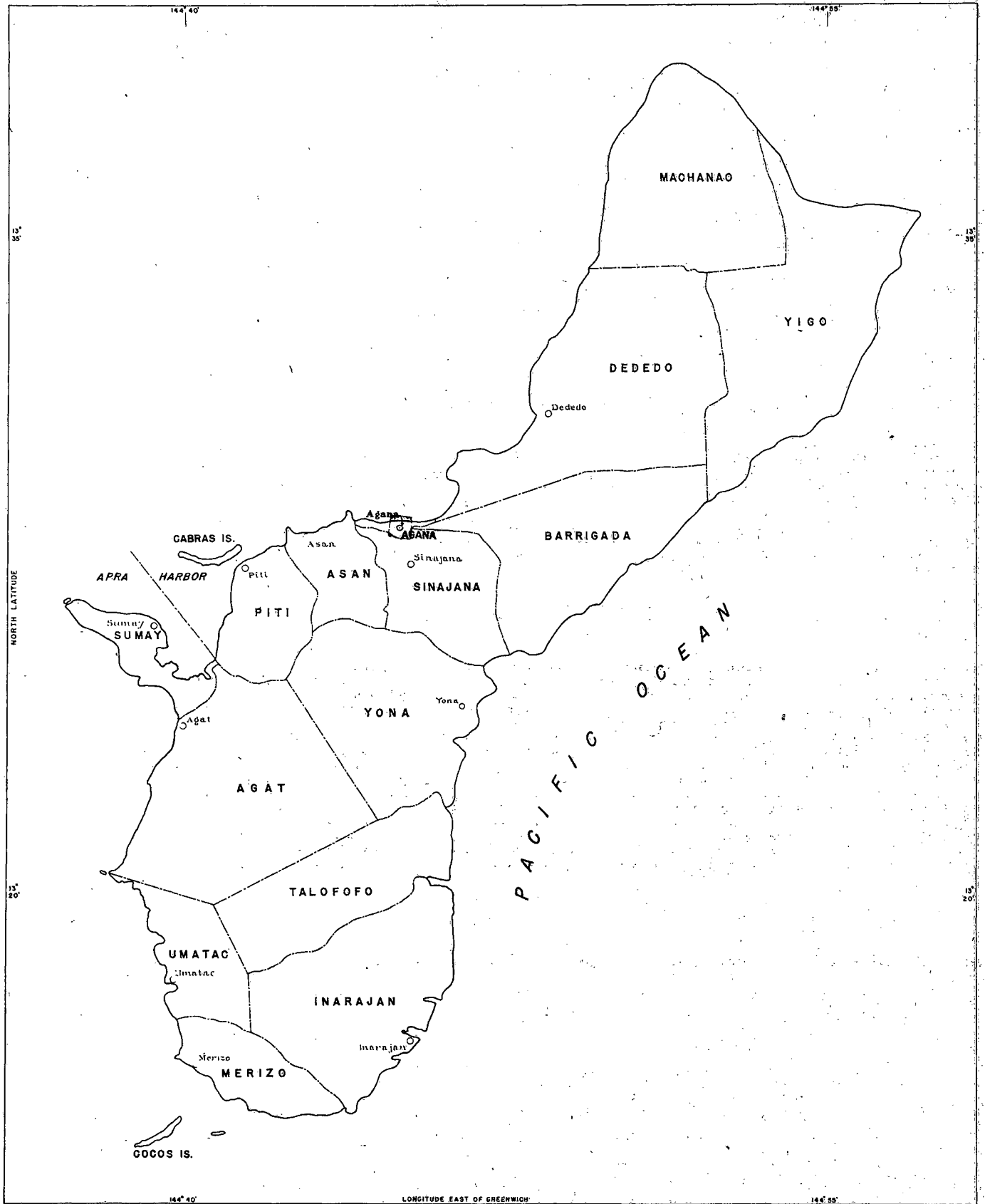
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# GUAM

## MUNICIPALITIES AND TOWNS



# CENSUS OF AGRICULTURE: 1940

**Introduction.**—This report presents, for Guam, statistics on agriculture which were collected in 1940 as a part of the Sixteenth Decennial Census of the United States. Comparative data on agriculture from the Fifteenth Decennial Census taken in 1930 and the Fourteenth Decennial Census taken in 1920 are presented when available.

These censuses of agriculture were taken in conjunction with the censuses of population which are the sources of the figures given herein for the number of inhabitants of this possession. The field work for the censuses of 1940,<sup>1</sup> 1930, and 1920 was performed under the supervision of the Naval Governor in accordance with plans prescribed by the Director of the Census. The Census of 1920 was the first to include agriculture taken in this area by the United States, but censuses of population were taken by United States Naval Governors in 1901 and 1910.

**Brief history, geography, and climate.**<sup>2</sup>—Guam was ceded by Spain to the United States by the Treaty of Paris, which terminated the Spanish-American War. Article 11 of that treaty, signed December 10, 1898, and ratified in April 1899, reads as follows:

Spain cedes to the United States the Island of Porto Rico, and other islands now under Spanish sovereignty in the West Indies, and the island of Guam in the Marianas or Ladrones.<sup>3</sup>

The island of Guam was discovered on March 6, 1521, by Fernando de Magallanes (Magellan) on his historic voyage around the world. As his ships were short of provisions and water, it was his purpose to land and revictual them. The natives, in curiosity, swarmed out and around the ship. Their canoes excited the admiration of the adventurers on account of their great speed and, because of their huge triangular sails, the group of islands was named by Magellan "Lateen Sails Islands" (Islas de Velas Latinas). This name did not long endure for, as a result of the natives appropriating everything portable upon which they could lay hand, the Spaniards rechristened the islands "Ladrones" (Robbers). Late in the seventeenth century they were called the "Marianas" in honor of Maria Ana de Austria, Queen of Spain. The islands were always referred to officially by the Spanish Government as "Marianas" and this name was confirmed by the United States Navy Department, though the name of Ladrones has remained in common use. The island is now officially Guam, without group designation. The remainder of the Marianas Islands are governed by Japan under a League of Nations' Mandate.

Guam is the largest, most populous, and most southern in position of the Marianas Islands, a group which extends almost north and south for a distance of some 420 miles. The 17 islands of this group are of volcanic origin, but the southern members have long been free from volcanic action.

The sailing distances from the Island of Guam (Apra Harbor) to various ports were 5,053 miles to San Francisco, 3,337 miles to Honolulu, 1,506 miles to Manila, and 1,353 miles to Yokohama. Its gross area is 206 square miles and its land area is 203 square miles. Its greatest length is 30 miles and its width ranges from 4 to 8 1/2 miles. The southern part is high and mountainous. A chain of hills ranging from 700 to 1,300 feet in height begins near the Bay of Pago and, crossing to the west coast near Agaña, follows that coast to the extreme southern part of the island. The slope of these hills or mountains is very steep to the northward and westward, while to

the southward and eastward it is steep until an elevation of about 400 feet is reached, where an elevated plateau stretches eastward, terminating in coastal highlands of coral rock which end in abrupt cliffs. This plateau is broken by the valleys of 5 streams with their numerous tributaries, each having its source near the top of the ridge, thence crossing nearly the whole width of the island and emptying into the sea on the east coast. The slope toward the west merges into low foothills some little distance from the sea, leaving a narrow belt of rolling lowlands valuable for cultivation and pasturage. The northern part of the island is a plateau ranging from 200 to 500 feet in elevation, sloping generally from the cliffs bordering the sea inland and from the northernmost point to the swampy land of Agaña, through which flows the Agaña River. This part of the island is watered by no perennial stream except a few brooks that rise on Mount Santa Rosa and disappear in the coral rock at its base.

The climate of Guam is on the whole pleasant. The north-east and east-northeast trade winds prevail from December to May, during which time there is comparatively little rain. From June to November, the southwest monsoon blows at more or less frequent intervals influenced by the typhoons, bringing abundant precipitation. The average yearly rainfall for the 9 years ending December 31, 1923, was 86.9 inches, 75 percent of which fell in the 6 rainy months. The hottest months are May and June, though the temperature is fairly even throughout the year. The mean minimum temperature is about 72 degrees and the mean maximum about 88 degrees. Although the island is in the typhoon belt of the western Pacific, it is seldom visited by severe typhoons.

The agricultural products of Guam are copra, alligator pears (avocados), bananas, pineapples, oranges, tangerines, lemons, mangoes, papayas, breadfruit, coffee, limes, cacao, grapefruit, corn, taro, sweetpotatoes, yams, tobacco, rice, cassava, arrowroot, sugarcane, and kapok. Copra, the dried meat of the coconut, is the principal product of the island and is the main item of export although soap, coconut oil, and "aggag" (a fiber plant) woven products are showing healthy increases. In 1940, there were 5,845 head of cattle, 1,560 carabaos (water buffaloes), 14,089 hogs and pigs, 1,353 goats and kids, and 209,465 chickens.

**Government and people.**—President McKinley, on September 23, 1898, issued an executive order placing the Island of Guam under the control of the Navy Department. A naval officer is commissioned by the President as Governor of Guam, and the same officer is ordered by the Secretary of the Navy as Commandant of the Naval Station, Guam, which includes the entire island. Since coming under American jurisdiction, the people of Guam have been regarded as wards of the United States Government.

The island is divided into 15 municipalities, each of which is in charge of a commissioner appointed by the Governor and assisted when necessary by a deputy commissioner also appointed by the Governor. Agaña City, the seat of government, is about 8 miles from the anchorage in Apra Harbor. In 1940, it had 10,004 inhabitants, out of the 22,290 total for the entire island.

The natives of Guam are called Chamorros, the word Chamorro being derived from Chamorri or Chamoli, the ancient name for "noble." The ancient Chamorros were Malays. The present inhabitants are a very much mixed race, with the Malay strain predominating. During the early conquest and later pestilences,

<sup>1</sup>According to file correspondence the taking of the Guam census was begun as of April 1, 1940 and completed on April 30, 1940, except in the case of one replacement enumerator who finished on May 15, 1940. Capt. James T. Alexander, United States Navy, Governor-Commandant of the Island of Guam, was appointed Supervisor of Census for the Island of Guam as of January 15, 1940, and the Census work for the Island of Guam was started under his supervision. Capt. George J. McMillin, United States Navy, relieved Capt. James T. Alexander as Governor-Commandant of the Island of Guam on April 20, 1940.

<sup>2</sup>Factual data taken from "The Island of Guam," a Navy Department publication, by Civil Engineer L. M. Cox, U. S. Navy, 1904, revised by Mrs. Allen H. White, 1925, and United States Code, 1940 edition.

<sup>3</sup>Geological Survey Bulletin No. 817 of the United States Department of the Interior.

many of the native men died and as a result the present Chamorros are principally descendants of the Spanish, Mexican, and Philippine soldiery, who were brought to Guam for the conquest, and of the Americans, British, Chinese, and Japanese who came later. It is probable that no pure-blooded Chamorro exists in Guam today. The various races have amalgamated pretty thoroughly, and even descendants of Englishmen and Scotsmen call themselves Chamorros. The official language of Guam is English, but the natives still cling to the ancient Chamorro tongue which has been corrupted by the addition of loan words, phrases, and grammatical forms, principally from Spanish and English with a few words and expressions from the dialects of the Philippines.

Immigration into Guam, while not prohibited, is not encouraged, as there is little opportunity for a newcomer to make a living there. All sales of land must have the approval of the Naval Government. Government land may be leased for a definite period, but is subject to withdrawal at any time when it may be needed for governmental purposes.

**Authority for the censuses.**—Legal provision for the 1940 and 1930 censuses of Guam was made in the act providing for the Fifteenth Decennial Census of the United States which was approved on June 18, 1929. In part, this Act provided:

That a census of population, agriculture, irrigation, drainage, distribution, unemployment, and mines shall be taken by the Director of the Census in the year 1930 and every ten years thereafter. The census herein provided for shall include each State, the District of Columbia, Alaska, Hawaii, and Porto Rico. A census of Guam, Samoa, and the Virgin Islands shall be taken in the same year by the respective governors of said islands and a census of the Panama Canal Zone by the Governor of the Canal Zone, all in accordance with plans prescribed or approved by the Director of the Census.

**Schedules and coverage.**—In taking the censuses of agriculture for Guam, several differences in the schedules and in the attempted coverage should be noted. In all cases, the number of subjects covered was very limited. Some of the data collected were not restricted to farms as defined for the enumeration and in the publications. In 1940, one schedule was used to record agricultural activities. It carried the following instruction:

After enumerating each household, ascertain whether any member of the household raised any crops in 1939 or kept any livestock on April 1, 1940. If so, report such crops and/or livestock on this schedule, except that in any case where no crops were raised and no livestock other than poultry was kept, do not make a report for fewer than five chickens or other poultry.

This schedule required the enumeration of the age and tenure of the operator, the number of acres in the property, the area and production of individual field crops harvested in 1939, the number of trees, or plants, on the census date for the individual kinds of fruits and nuts with the production in 1939, and the number of the various kinds of livestock on hand April 1, 1940.

The reports for 1940 were classified on an arbitrary basis into those representing farms and those not representing farms. The line of demarcation is indicated in the following definition of a farm which was carried in an earlier release presenting the 1940 figures for Guam:

The term "farm"....relates to any parcel or parcels of land—regardless of size and of value of production—on which crops were grown by one person, either alone or with the aid of members of his household or of hired help.

Those reports which showed no crops but only livestock were considered to represent places other than farms and that information is presented in the tables under nonfarm places.

In 1930, two schedules, one for crops and the other for livestock, were used to record agricultural activities. The crop schedule carried this definition of a farm:

A farm for census purposes is 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.

A further instruction was carried on this schedule for the enumeration of crops and livestock as follows:

**Crops.**—The crops named on the other side of this schedule are to be reported for each farm on which they are grown.

**Livestock.**—On another form, the Livestock Schedule, are to be reported all carabao, cattle, horses, hogs, goats, chickens, and ducks, whether on farms or elsewhere.

This second form on which the number of livestock was to be recorded carried this instruction:

**Livestock.**—At the time of enumerating a person on the Population Schedule, inquiry must be made as to the number of animals and poultry, of the classes named on this schedule, in his possession, and they must be reported on a single line opposite the name of the person.

The schedule for livestock in 1930 was of a "line" type. It was possible to list the holdings of as many as 56 owners or possessors of animals on one of these forms. No separation was made into animals on farms and animals on places which would not classify as farms.

In 1920, also, two schedules were utilized in the enumeration, one for cultivated crops and the other for livestock. No definition of a farm was given and no attempt was made to classify the returns between farms and nonfarm places. File correspondence indicates that the Governor was to give the enumerators a list of the crops for which data were to be secured. The enumerator was also to be instructed as to the unit of measurement to be reported. For livestock, in addition to the listed species, the enumerator was to report any other kind, if he deemed it worthwhile.

The schedules and instructions for each census are given in the appendix of this report. As indicated by these schedule forms, and by the information given above, the numerical data for the three years are not fully comparable. The tables, therefore, carry notes where necessary to explain major differences in comparability.

**Agricultural establishments.**—Since the 1940 schedule was prepared to secure information for every household which raised any crops in 1939, or kept any livestock on April 1, 1940 (except where the only agricultural activities were the keeping of fewer than five chickens or other poultry), it is necessary to use some terminology other than "farms" to cover all of the establishments, inclosures, or other places reporting agricultural activities. Through purely arbitrary selection, the term "establishment," as used in the tables, is an over-all term to cover not only farms but also nonfarm places. The term "farm," as heretofore mentioned, was designated to cover

\*\*\*any parcel or parcels of land—regardless of size and value of production—on which crops were grown by one person, either alone or with the aid of members of his household or of hired help.

It is emphasized that there are no minimum requirements as to acreage or value of products for an establishment to be classified as a farm. Finally, the term "nonfarm place" was selected to represent any establishment or inclosure not classified as a farm under the definition just given. In other words, this term was selected to represent those places which had livestock on hand on the census date but grew no crops in 1939.

**Operator.**—Some of the data are presented for the operator of the agricultural establishment rather than for the establishment itself. An "operator" of an establishment, according to the census definition, is the person who operates the establishment, either performing the labor himself or directly supervising it. Thus, for all practical purposes, the number of operators is identical with the number of establishments.

**Tenure of operator.**—The tenure of the operators of all agricultural establishments, whether farms or nonfarm places reporting livestock only, is given in accordance with the schedule inquiry which reads: "State whether owner, lessee, renter, or borrower ('squatter') of property." No definitions of these tenure terms were given.

Several operators classified as owners reported that they owned only a part of the land they operated, but since the schedule made provision to secure only the total acreage in such cases, not the portion owned or rented, it is not known what proportion was owned by the operator. An inspection of the schedules indicated that operators leasing land from the government were classified as lessees, while operators renting land from private individuals were classified as renters. The local usage of these two classes of tenure seemed to be fairly well fixed.

Some doubt exists as to the exact status of those operators classed as "squatters." In many cases a squatter is one who settles lawfully on government land under legal restrictions with a view of acquiring title. Whether or not this definition of a borrower (or squatter) holds in Guam could not be ascertained from the schedules. See also discussion on "Government and people" for additional information on land acquisition and leasing.

**Age of operator.**—Operators of agricultural establishments have been classified by age for 1940. In addition to the distribution of operators by age, data are given for their average age.

**Statistical tables.**—Several reorganizations of the municipalities of the Island of Guam took place between 1930 and 1940. In 1940, there were 15 municipalities, whereas in 1930 there were only 8. In these reorganizations, the boundaries of the municipalities were changed to such an extent that comparable data could be presented for only 3 groups of municipalities. In the tables showing figures for these 2 census years, totals are given for comparable groups of municipalities. Figures for 1920 are shown only for the island as a whole, since in the reports of that year no classification of these data by municipalities was given.

The 1940 Agriculture Schedule for Guam carried two "catch-all" questions for reporting data for miscellaneous crops not listed on the schedule, one for field crops, and the second for fruit and nut crops. An attempt has been made to identify and show data for all such crops. In some cases, the names of the crops were reported according to local usage. The information for the crops which could be identified was placed under the schedule designations for those crops, if listed on the schedule; otherwise, it was shown under the most common name for the crop.

Three farms reported "mungos" which is the local name for *Phaseolus mungo*.<sup>1</sup> This forage crop is a related species of the mung bean. Polynesian arrowroot (*Tacca pinnatifida*), not the true arrowroot (*Maranta arundinacea*), was reported under the local name of "gabgab" or "gagpap". This plant is a tender perennial herb producing tubers from which Fiji arrowroot is prepared. The arrowroot of this plant is used for certain sweetmeats.<sup>2</sup>

In reporting "other fruits" a number of farms reported "dugdug" or "dogdog". This fruit (*Artocarpus communis*)<sup>1</sup> is the seeded variety of the breadfruit and has been included in the totals for that fruit. The fruit "bilimbines" (*Averrhoa carambola*)<sup>1</sup> was reported by one farm. The fruit of this plant is translucent, oblong, with a cross section of a five-pointed star, and has an acidulous but pleasant flavor. "Fadang" (*Cycas circinalis*)<sup>2</sup> is a nut crop reported by seven farms. The nuts of this plant, called "federico" by the Filipinos, yield a nutritious starch. "Talisay", reported by one farm, is the local name for the Indian almond (*Terminalia catappa*).<sup>3</sup>

Copra is the chief export from the island. Because of the importance of this product in the island economy and since it forms the largest part of the cash income from agriculture, yearly exports from 1915 to 1940, with the country of destination, are shown in table 10.

<sup>1</sup>Bailey, L. H. and Bailey, Ethel Zoe, "Hortus Second," 1940; and "The Island of Guam," 1917, Navy Department.

<sup>2</sup>Bailey, L. H., "The Standard Cyclopedia of Horticulture," 1939; Safford, William Edwin, "Useful Plants of Guam," 1905.

<sup>3</sup>Bailey, L. H. and Bailey, Ethel Zoe, "Hortus Second," 1941.