

CHARACTERIZATION OF THE STATE OF SONORA
FOR INTERNATIONAL RECOGNITION AS A
CLASSICAL SWINE FEVER FREE ZONE

México / junio 1994



SUBSECRETARIA DE GANADERIA
Dirección General de Salud Animal

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I. INTRODUCTION

a) BACKGROUND

The concept of regionalization is not new, and in fact veterinary services in most countries have applied it successfully for a long time. Nevertheless, this idea had not been applied internationally until relatively recently.

The growth in world trade has led to a new conceptualization of the international animal health situation. Previously, when a disease occurred in any part of a country, the international community considered that the whole country was affected. This perspective resulted in major trade barriers, often hidden under the guise of animal health protection measures.

It must now be recognized that it is possible for there to be areas or regions within a country in which a given disease is not present or in which the prevalence of the disease is low.

The North American Free Trade Agreement (NAFTA) proposes the implementation of these concepts in order to facilitate international trade and at the same time protect animal health in the importing country. The three North American countries of Canada, United States, and Mexico are committed to regionalization, but the methodology for recognition of disease-free regions must be harmonized.

Although risk analysis is basically a tool for evaluating the possible impact associated with importations, in the case of regionalization it is used to evaluate the risk of introduction of a disease into a free zone. It is now recognized that a risk level of zero cannot be attained, so that risk management, that is, the application of various options for reducing it, becomes increasingly important.

One of the most important factors for conducting a reliable risk analysis is the quality of the information used. This in turn depends on the efficiency of data collection by the veterinary services of the country involved. The countries participating in the treaty must commit to sharing information about regionalization and risk analysis.

When evaluating the veterinary services of a country, it is necessary to consider various aspects, such as organization, legal and financial support, emergency systems, and diagnostic capability, among others.

The process of recognition of regions should be done bilaterally, since the importing country will thus have more confidence in the quality of the information gathered. However, this does not exclude the possibility of sharing and utilizing the information generated during the risk analysis and evaluation of veterinary services by another country if the risk situation is considered to be equivalent.

The decisions made should be based on scientific principles, and the whole process should be objective and transparent.

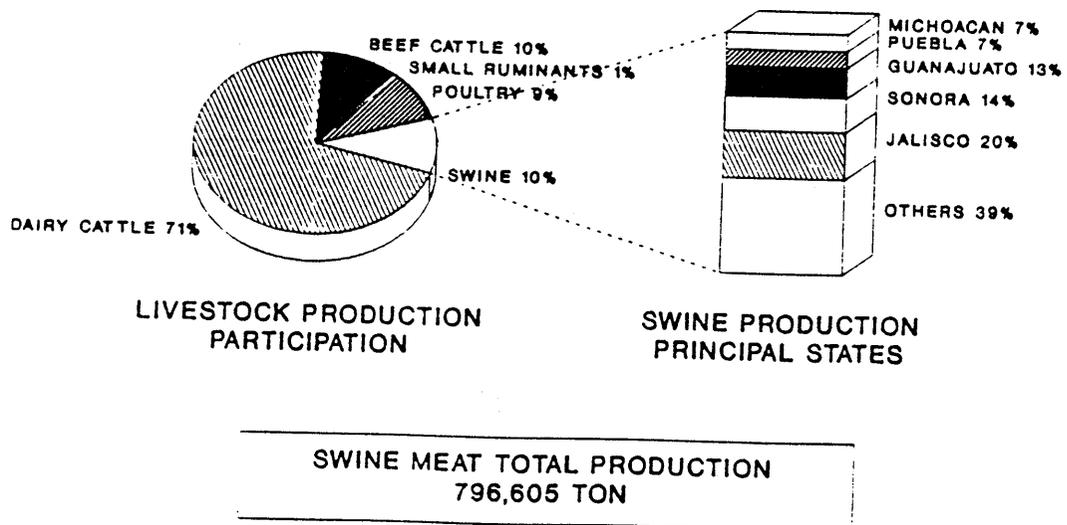
b) THE MEXICAN SWINE INDUSTRY

Hog production in Mexico is an area of the livestock subsector which suffered a marked slump during the period from 1985 to 1989, with a slight rebound occurring from 1990 to 1992. Pork production contributes substantially to the domestic food supply, exceeded only by beef production, with the same trend observed in per capita consumption.

In spite of the fluctuations in the swine inventory, productivity has been maintained basically through highly efficient production based on advanced techniques, and particularly due to the demand in the domestic and international markets for this industry's products.

As can be seen in the figure below, the principal swine-producing zones of the country are located in five states, which have an area of 387,900 km² that is, 16.69% of the country's total area, and supply 60% of domestic production having an estimated value of 2 billion pesos, with 483,500 tons of meat produced per year.

IMPORTANCE OF SWINE PRODUCTION IN MEXICO



For this reason, an interesting consideration is that for our country hog production is fundamental for the livestock industry's growth and development, and therefore any actions taken to achieve greater equality in competition in international markets will guarantee its continuity and expansion.

c) DESCRIPTION OF THE DISEASE

Amongst the characteristics of classical swine fever (CSF) is the fact that it is extremely contagious and causes high rates of morbidity and mortality in herds affected. The principal mechanisms for its transmission are sick or recently recovered hogs and their products and by-products, especially in the form of garbage fed to susceptible hogs.

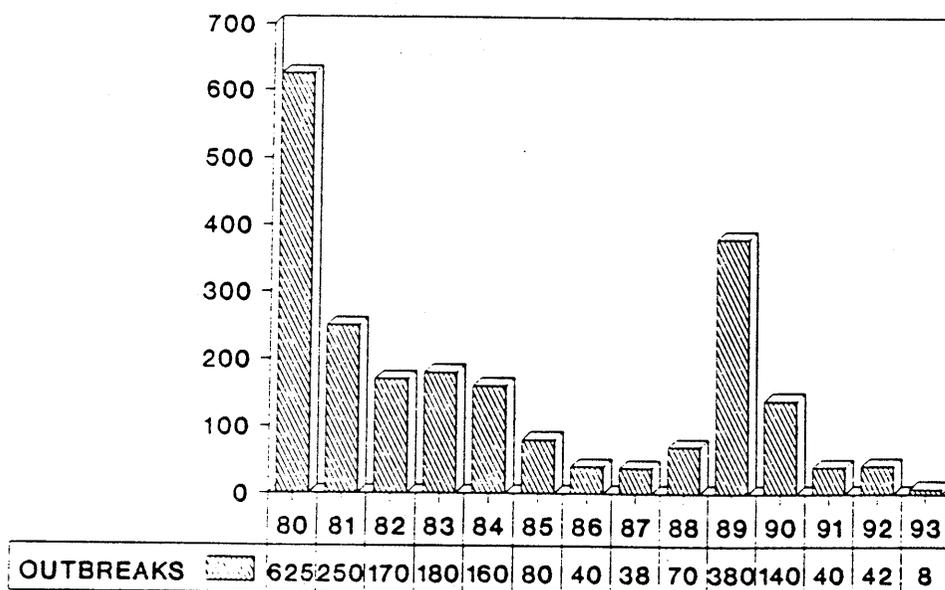
Classical swine fever is a disease caused by a virus of the togaviridae family, which usually follows an acute course, but it may have an atypical presentation. In the typical form, the hogs may have anorexia, a fever of 41°C or more, muscular tremors, prostration, intestinal constipation alternating with periods of diarrhea, mucopurulent eye secretions and skin erythema. In the final stages of the disease, nervous disorders and paralysis occur and finally death.

In the atypical form, which is caused by the so-called low-virulence strains, the signs observed may include the following: congenital tremors, also known as congenital myoclonia, which is seen in newborn piglets or within a few hours after birth, and is characterized by tremors of the head, neck, back, and hind legs. And finally, infection of newborn piglets by contagion from unvaccinated mothers, which die from acute CSF without the disease affecting the dams, and from healthy animals vaccinated with modified live virus with the characteristic that only young animals are affected.

d) THE CAMPAIGN IN MEXICO

A decree published in the Federal Official Daily of March 25, 1980, established the National Campaign for the Control and Eradication of Hog Cholera, now known as classical swine fever, and its corresponding program as general, mandatory, and permanent throughout the entire country, with modifications made in decrees published on March 12 and September 28, 1992, and also on May 20, 1993. Starting in 1990, the campaign was strengthened by the reincorporation of the General Division of Animal Health, and since then significant progress has been made.

CLASSICAL SWINE FEVER IN MEXICO



Advances and current situation.- In 1978, 58 municipalities in northern Sonora were incorporated into the eradication phase, and in 1990 the State of Chihuahua entered that same phase. In 1991, the States of Baja California and Baja California Sur and 11 municipalities in southern Sonora became free of this disease. In October 1992 the State of Sinaloa was incorporated into the eradication phase, and in 1993 the States of Coahuila (November), Nuevo León (February), Tamaulipas (November) and Yucatán (September) were incorporated. In addition, in 1993 the States of Chihuahua (September) and Sinaloa (November) became free of this disease. Since 1992 the States of Guanajuato, Jalisco, Michoacán, Querétaro, Puebla, and Tlaxcala have continued in the intensive control phase.

The current situation of the campaign is as follows:

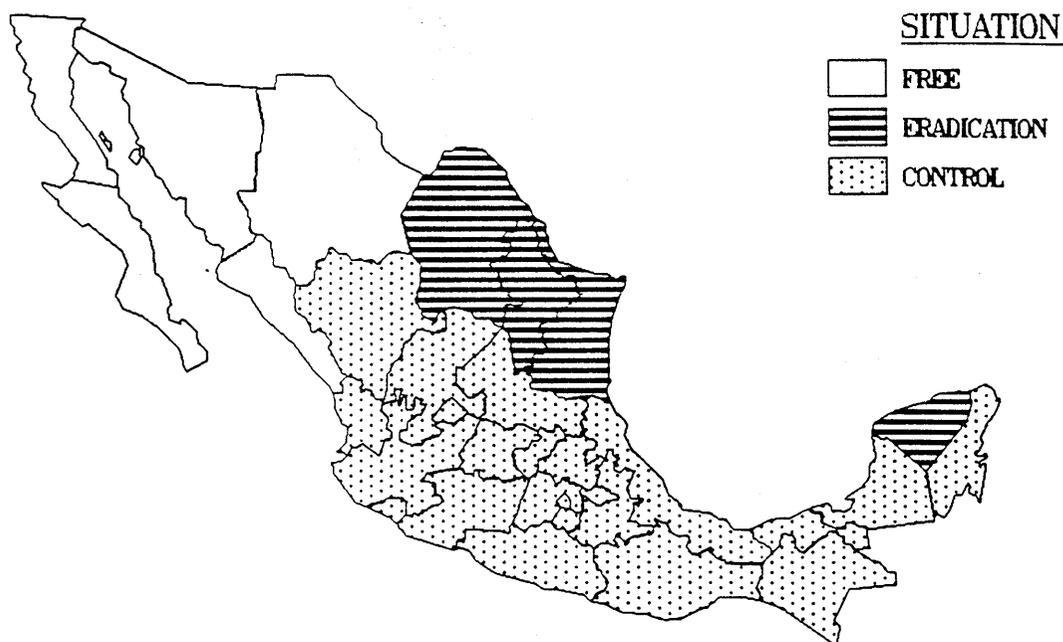
The States of Baja California, Baja California Sur, Chihuahua, Sinaloa, and Sonora continue in the classical swine fever free phase, which represents 32% of the total area of the country, 14% of the national inventory, and 19.61% of pork production.

Baja California Sur had an outbreak in May 1993, which was controlled by sanitary slaughter without the use of vaccine. The state recovered its disease-free status in December 1993, after completing six months without any cases.

The States of Coahuila, Nuevo León, Tamaulipas, and Yucatán are in the eradication phase, representing 17.1% of the area, 5.3% of the national swine inventory, and 5.4% of production. Since 1992 the States of Guanajuato, Jalisco, Michoacán, Querétaro, Puebla, and Tlaxcala are in the intensive control phase.

CLASSICAL SWINE FEVER

CURRENT SITUATION

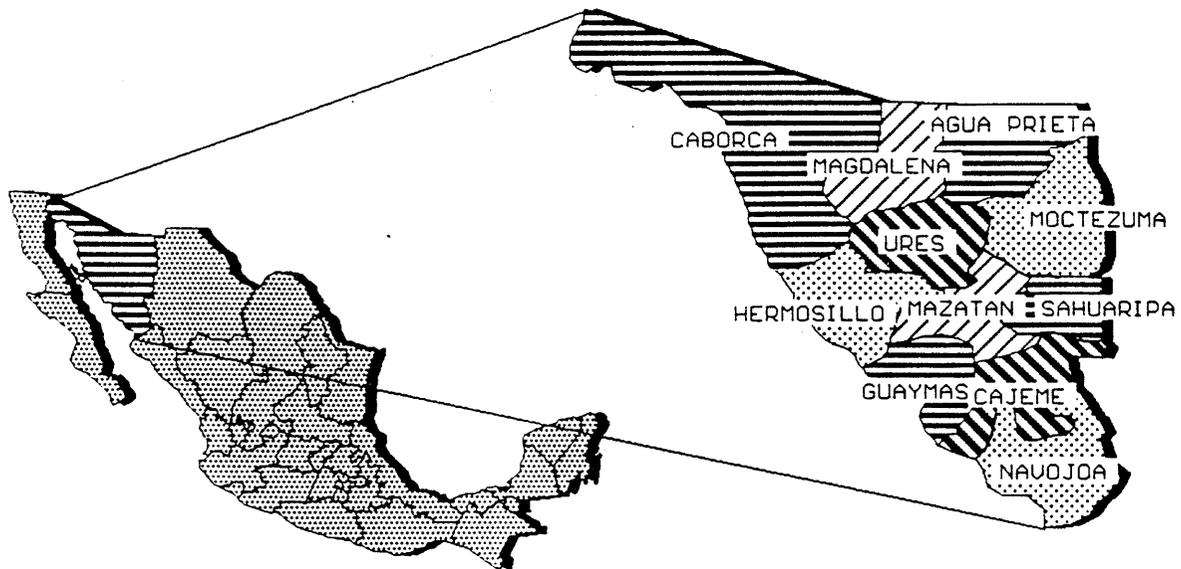


e) GEOGRAPHIC LOCATION OF THE STATE

Sonora is located in the northwestern part of the country, between 27°30' and 32°15' N latitude and 103°30' and 114°15' W longitude, bordered on the north by the United States of America, on the east by Chihuahua, on the southeast by Sinaloa, on the south and west by the Gulf of California, and on the northwest by Baja California. It has an area of 108,052 Km².

The State of Sonora has an excellent geographic location as far as animal health is concerned, since to the west the Gulf of California acts as a natural barrier, as does the mountain range of Chihuahua, on which it borders, and also Sinaloa, with only two ports of entry, located in the southern part of the state and controlled by inspection stations.

RURAL DEVELOPMENT DISTRICTS SONORA



The state has 11 Rural Development Districts (DDR) comprising 70 municipalities.

| Rural Development District | Municipalities |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| 01. Caborca | Caborca Pitiquito San Luis Río Colorado Plutarco Elías Calles Puerto Peñasco Altar Oquitoa Tubutama Atil Saria |
| 02. Magdalena | Magdalena Cucurpe Imuris Nogales Santa Cruz Santa Ana Benjamín Hill Trincheras |

| | |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 03. Agua Prieta | Nacozari de García Fronteras Agua Prieta Bacoachi Arizpe Cananea Naco |
| 04. Ures | Ures Rayón Banamichi Huepac San Felipe Aconchi Baviacora San Miguel de Horcasitas Opedepe Carbo |
| 05. Moctezuma | Moctezuma Cumpas Divisadero Tepache Huasabas Granados Villa Hidalgo Bacadehuachi Nacori Chico Bavispe Bacerac Huachineras |
| 06. Hermosillo | Hermosillo Guaymas |
| 07. Mazatán | Mazatán Villa Pesqueira San Pedro de la Cueva La Colorada Suaqui Grande San Javier Soyopa Onavas |
| 08. Sahuaripa | Arivechi Sahuaripa Bacanora |

09. Guaymas

Guaymas
Empalme

10. Cajeme

Cajeme
Navojoa
Etchojoa
Guaymas
Bacum
Rosario
Quiriego
Yecora

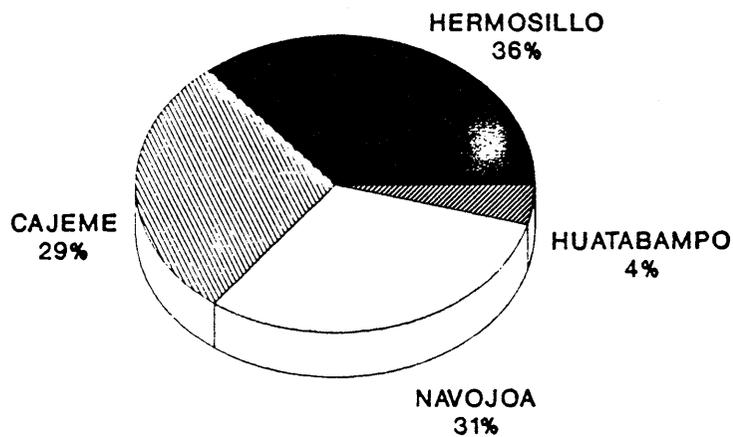
11. Navojoa

Navojoa
Etchojoa
Huatabampo
Alamos

f) DESCRIPTION OF SWINE PRODUCTION IN THE STATE

The State of Sonora supplies 14% of the country's pork production; it has 1,440,000 heads of swine, with 110,680 tons of pork meat produced a year.

PROPORTION OF SOWS BY PRODUCERS ASSOCIATION

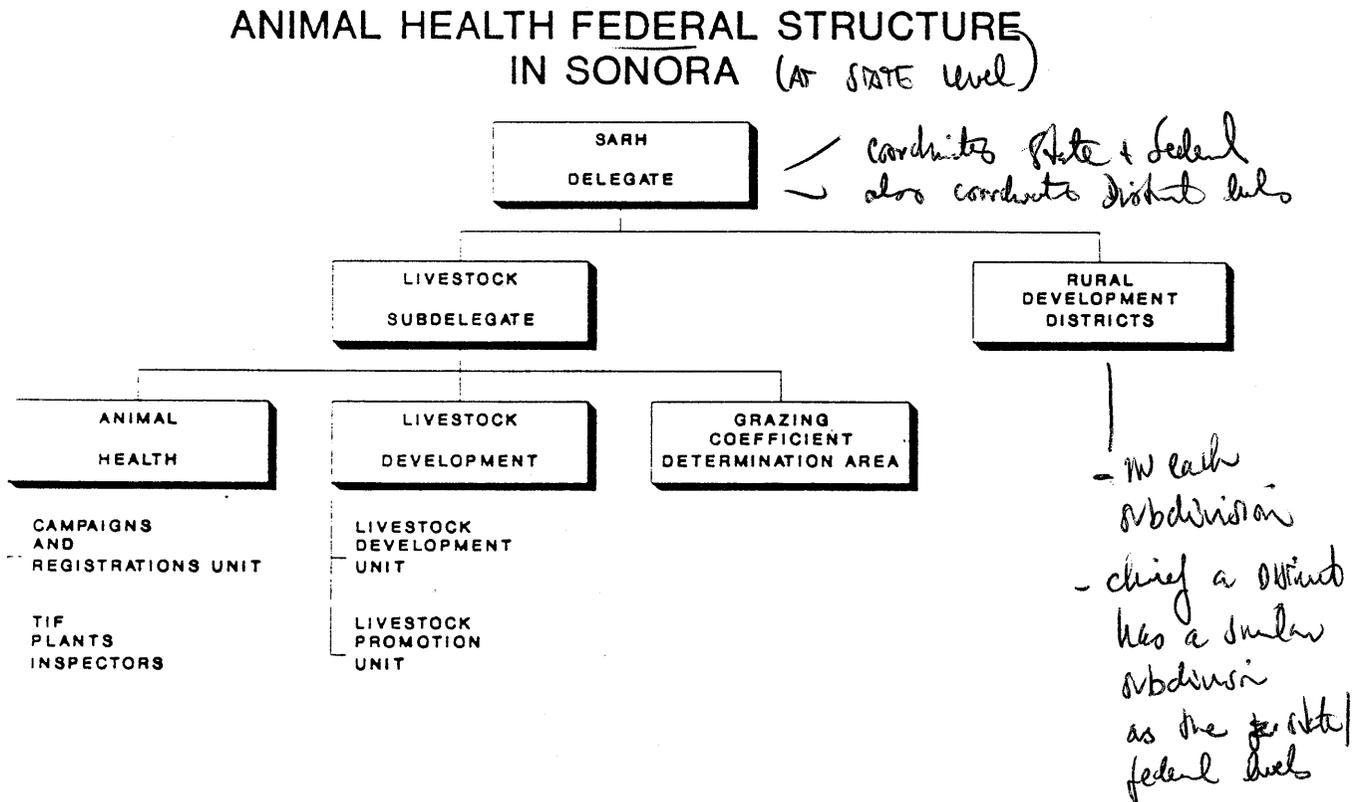


TOTAL 166 PRODUCERS
135,115 SOWS

II. ANIMAL HEALTH INFRASTRUCTURE IN THE STATE

a) FEDERAL STRUCTURE

The Ministry of Agriculture and Water Resources (SARH) has a state delegation in Sonora. The delegation includes the livestock subdelegation, which covers the functions of animal health, livestock development, and establishing grazing coefficients. The organization chart is given in the figure below:



In addition, the state is divided into 11 Rural Development Districts (DDR) with the following technical staff coordinated by the livestock subdelegation.

| Rural Development District (DDR) | Veterinary Staff |
|----------------------------------|------------------|
| Caborca | 2 |
| Magdalena | 3 |
| Agua Prieta | 2 |
| Hermosillo | 4 |
| Cajeme | 5 |
| Navojoa | <u>4</u> |
| Total | 20 |

Share of Federal includes TIF units (12) other program units (2)

It should be mentioned that the total number of veterinarians in the districts includes the 12 inspectors in TIF abattoirs shown in the organization chart. The districts of Ures, Moctezuma, Mazatán, Sahuaripa, and Guaymas do not have a veterinarian. In addition, in each Rural Development District there is a veterinarian from the Tuberculosis and Brucellosis Eradication Committee, and although his work is not directly related to swine production, indirectly he is a staff member engaged in passive surveillance work.

The state has three diagnostic laboratories:

| LABORATORY | AREA OF INFLUENCE | DIAGNOSIS |
|-------------|-------------------------|------------------------------------------|
| Cd. Obregón | The entire state | CSF, salmonellosis, and elementary tests |
| Lancer | The entire state | Approved for NC, salmonellosis, and CSF |
| Pecuaris | Sonora and other states | Approved for NC, salmonellosis, and CSF |

For international control of movements of livestock and animal products and by-products, there are 8 animal health inspection offices with official veterinary inspectors. The inspection offices will be described later.

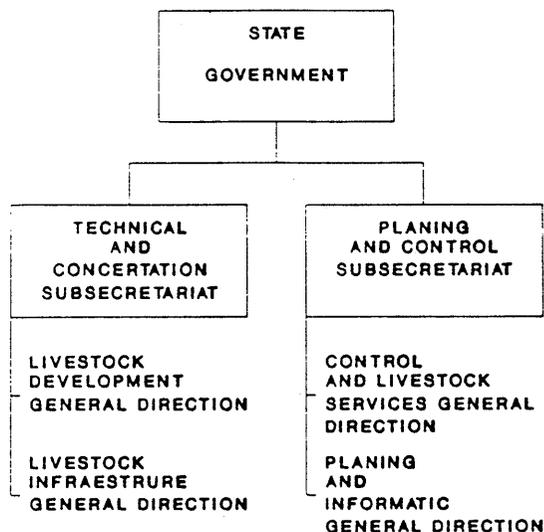
In the state there are 7 checkpoints for control of overland movements, in 5 of which have official SARH staff to operate them.

Hog slaughtering and processing is done in Federal Inspection Standard (TIF) establishments, which comply with international sanitary requirements and have official veterinary sanitary officers, and supervision and certification by the countries to which they export. The state is the location for TIF plants No. 57, 62, 66, 67, 70, 74, 81, 87.

b) STATE STRUCTURE

The government of the State of Sonora includes a Secretariat for the Development of the Livestock Industry, with a very complex organization as shown in the following organization chart:

ORGANIZATION CHART FOR THE STATE GOVERNMENT



*Support government projects
committee → subcommittee
by mail
press
committee conducts immediate
sets to work in the company*

The functions of the agencies shown in the above organization chart are roughly the following:

The Secretariat for the Development of the Livestock Industry carries out the objectives of promoting, developing, coordinating, and executing actions to develop the state's livestock industry, and is supported by the following structure: a technical and coordination subsecretariat and another for planning and control, each of which has two general divisions to conduct its operations.

The Technical and Coordination Subsecretariat is in charge of technical matters, such as technical assistance, studies, projects, and construction, as well as coordination, which refers to relations with industry associations, research, and support. Its general divisions include one for livestock industry development and one for livestock industry infrastructure.

The Subsecretariat for Planning and Control is in charge of activities involving planning, information analysis, livestock records, controls and classification and quality inspection of animal products and by-products and animal health matters. It is supported operationally by two general divisions, one for livestock production control and services and one for planning and information systems.

Administration of human resources, materials, and finance is handled by a general administrative division, reporting directly to the Secretary.

General divisions:

The divisions handle technical matters and services that are the responsibility of this Secretariat, and amongst the more important tasks of each are the following:

The General Division for Livestock Production Infrastructure participates in the promotion and construction of infrastructure works, such as drinking troughs, wells, fences, handling pens, and establishing planned grasslands to improve livestock production. The beneficiaries of these programs are small livestockmen whose projects are promoted by the livestock producers' associations, organized ranchers, municipal council presidents, and sectorial institutions. For all works and projects the major investment comes from the producer, with fiscal resources used to encourage infrastructure building. The division has 11 technicians to conduct these activities.

The General Division for Livestock Production Development's principal activity is carried out through technical assistance to producers of both large and small species livestock through programs such as studies and projects, genetic improvement, training, formulation of technical opinions about the use of pastureland and promotion and development of the dairy industry and small species. The division has 18 technicians to conduct these activities.

The General Division for Livestock Control and Services is the unit which keeps the records, brands, abattoirs, classified meat outlets, livestock inspection zone and livestock censuses, entry and exit permits for livestock and animal products and by-products and livestock movements in general. Services are provided for the classification of meat and milk and product quality inspection from production to the consumer. Sanitary controls are also maintained through the operation of quarantines at the main points of access to the state, inspection along routes for livestock movements and participation in animal health campaigns. The division has 47 technicians to conduct these activities.

The General Planning and Information Systems Division is in charge of integrating the livestock production sector into the state's development plan, integration of regional strategic and medium-term programs, following up on meeting the sector's goals and gathering and analyzing information for inclusion in the reports of results presented by the secretariat the chief executive. The division has two technicians to conduct these activities.

For control of livestock and animal products and by-products in Sonora, there are 7 control stations, 3 of which belong to the state government and 5 are staffed with its personnel.

There are 19 municipal and 2 private abattoirs for the slaughter of hogs, in which epizootiological surveillance activities are performed.

c) TECHNICAL AND PROFESSIONAL SCHOOLS

In the State of Sonora there is a Department of Veterinary Medicine and Animal Husbandry at the Sonora Technological Institute.

In addition, there are 6 technical agricultural schools and an Agricultural Technical Institute, whose graduates are technicians performing the functions of technical assistance, training and technological modernization in rural communities.

III. CAMPAIGN ACTIVITIES AND STRUCTURE

a) PHASES

The decree published in the Federal Official Daily of March 25, 1980 established the National Campaign for the Control and Eradication of Hog Cholera, now known as classical swine fever, as general, mandatory, and permanent throughout the entire country.

According to Official Mexican Standard NOM-005-ZOO/1993, the National Classical Swine Fever campaign comprises three zones or stages:

what it means how control

-Control zone.- This stage includes the states in which CSF is enzootic, and therefore the following procedures must be applied: vaccination; control of movements of swine and swine products and by-products; and epidemiological surveillance, notification of cases or outbreaks, diagnosis, and follow-up until each of the cases has been resolved.

no vx how exposed surveillance

-Eradication zone.- This stage includes the states where CSF has not occurred for 12 months and the procedures described for the control zones have been followed, in addition to applying the following procedures: suspension of CSF vaccination; prohibition of the use, distribution, and marketing of CSF vaccines; strict control of interstate movements of swine and swine products and by-products; and epizootiological surveillance.

what it means what kind of sample

Free zone.- This stage includes the states in which CSF has not occurred in the last 24 months and the procedures for eradication zones have been followed and applied, in addition to the following procedures: prohibition of the use, distribution, and marketing of CSF vaccines; strict control of interstate movements of swine and swine products and by-products; and constant epizootiological surveillance, which is carried out through serological sampling at least every 12 months.

b) CHRONOLOGY OF THE CAMPAIGN IN THE STATE

The last outbreak of classical swine fever in the northern part of the state was in 1976, with vaccination prohibited in 1978, when the eradication phase began. The last outbreak in the southern part of the state was in April 1985, in the municipality of Cd. Obregón, with vaccination prohibited in 1989, when the eradication phase began.

Finally, the northern and southern parts of the state were declared free of classical swine fever, with publication in the Federal Official Daily on January 10, 1983 and October 16, 1991, respectively.

c) EPIDEMIOLOGICAL SAMPLING

To declare technically that the classical swine fever virus was not present in the southern part of Sonora, an epidemiological survey was made in 1991, for which a total of 718 sera were collected. Of these, 13 were positive for classical swine fever, with titers of less than 1:8 and two of 1:16. Samples were taken from the organs (tonsils, spleen, and lymph nodes) of the hogs for which positive titers had been obtained, and were sent for testing by direct immunofluorescence, with negative results. Therefore, the presence of the classical swine fever virus was discarded. The titers in the sera can be attributed to cross reactions with bovine viral diarrhea.

d) RELATIONSHIPS BETWEEN PRODUCERS' ORGANIZATIONS, THE STATE GOVERNMENT, AND SARH

According to the draft of Mexican Official Standard NOM-700/1993, the state governments and SARH's delegations, together with the State Committees for Livestock Development and Protection, hog producers' associations and unions, swine owners, meat processors, accredited veterinarians, the pharmaceutical industry, merchants, middlemen, transporters, and anyone related to the swine industry are responsible for application and enforcement of the standard.

The General Division of Animal Health (DGSA) coordinates participation by the various authorities in the activities involved in conducting the epizootiological studies required for declaring a zone free of classical swine fever.

The General Division of Animal Health (DGSA) works in coordination with the authorities responsible for the establishments where swine and swine products and by-products are slaughtered or processed to monitor the application of the sanitary and documentary controls required for the movement, distribution, and slaughter of hogs throughout the entire country.

The state governments participate in the implementation, remodelling, adaptation, construction, and operation of intrastate and interstate animal health inspection stations. At these checkpoints the provisions and procedures of the Standard for movements of swine and swine products and by-products are applied.

The State Livestock Development and Protection Committees, the classical swine fever campaign subcommittees, hog producers' unions and associations, and the processing industry sector linked to the swine industry in this country, in coordination with SARH and the state governments, participate in strengthening the campaign's activities, including those related to the public information program.

e) FINANCING

The classical swine fever campaign in the State of Sonora was financed by the swine producers' associations, who contributed funds to conduct the epidemiological studies and accredit veterinarians in classical swine fever and pay their salaries.

In addition, through the Ministry of Agriculture and Water Resources (SARH), the federal government contributed reagents, provided official veterinarians, and gave the course for accreditation in classical swine fever to the swine producers' veterinarians.

And lastly, the state government, industrialists related to swine production, middlemen bringing products into the state, and swine producers financed the construction or remodelling of the checkpoints for the control of movements.

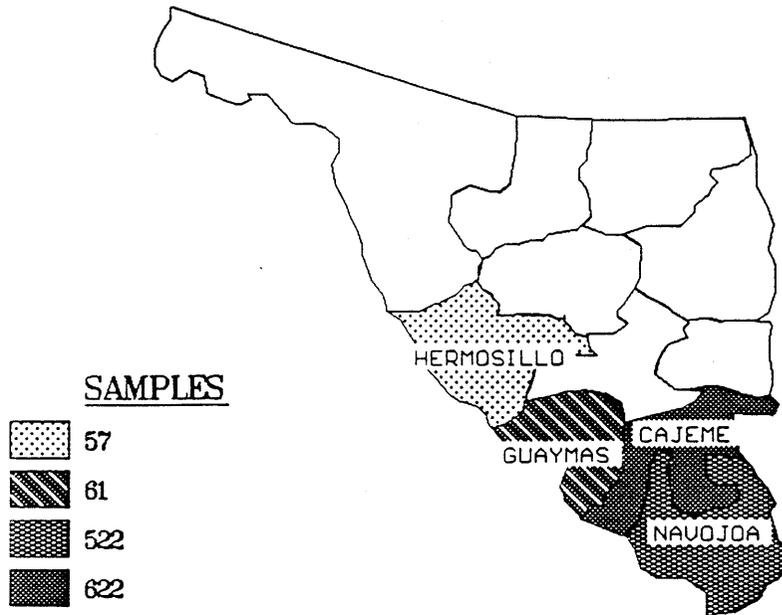
The epizootiological survey for the purpose of declaring the State of Sonora free of classical swine fever was conducted on two levels: on farms, through accredited veterinarians paid by the swine producers; and in abattoirs, through official veterinarians paid by the federal government.

IV. SURVEILLANCE AND STATISTICAL PROGRAMS

a) CLINICAL SURVEILLANCE ON FARMS

In Sonora an epidemiological survey was made in 1993 to confirm that the classical swine fever virus was not present in the southern part of the state. A total of 1,262 sera were collected from the 4 DDRs in southern Sonora.

SEROLOGICAL SAMPLING FOR CLASSICAL SWINE FEVER SONORA 1993



Two farms had animals with positive reactions for classical swine fever. On one of them the positive animals were multiparous sows (7 farrowings) that were 3-1/2 years old, which indicated that in accordance with the date of the last stage of vaccination in the southern zone of Sonora, which was in 1990, these sows had still been vaccinated, since they came to the farm in November 1990. Subsequently, 37 sera were collected from that farm, which gave negative results for CSF.

On the other farm, the sows had already been replaced, so another sampling was done, with 55 sera collected which were negative for classical swine fever.

As mentioned in the next section, a campaign against Aujeszky's disease is being conducted in Mexico, for which epizootiological surveys are done. Advantage is taken of these samples to run CSF tests simultaneously, thus doing additional surveillance besides that done exclusively for classical swine fever.

In regions, states, or areas under eradication or free of classical swine fever, it is the responsibility of the federal and state governments, as well as swine owners or producers and accredited veterinarians, to maintain epidemiological surveillance for evidence of suspicious cases or confirmed outbreaks of classical swine fever.

This surveillance is done by inspection of hogs and swine products and by-products, and of the official documentation required for their movement from control or eradication areas into eradication or free areas, and by means of virological monitoring done by the federal and state governments and organized producers.

b) DISEASE NOTIFICATION

In Mexico a number of diseases require immediate, mandatory notification. These include all those classified as exotic to this country, those covered by an official control and eradication campaign, and all other diseases covered by the A list of the International Office of Epizootics (OIE) and some on the B list that are deemed to be of economic importance.

At present there are 8 control and eradication campaigns in effect:

- Classical swine fever
- Aujeszky's disease
- Avian salmonellosis
- Newcastle disease
- Boophilus sp.* cattle ticks
- Bovine paralytic rabies
- Bovine tuberculosis
- Bovine brucellosis

It is important to mention that in a state that is free of the diseases in question, these are classified as exotic, so the responsibility for control and eradication if an outbreak is detected falls to the National Animal Health Emergency System (DINESA). For this purpose, in addition to routine serological sampling, it has a surveillance system with support from the regional offices of the Mexican-American Commission for the Prevention of Foot-and-Mouth Disease and other Exotic Animal Diseases (CPA). Emergency responses are described in greater detail in section VII.

In the case of an outbreak on a farm or a positive result from a viral isolation in a laboratory, it will be the obligation of both the owner of the swine and the accredited veterinarian and/or the person responsible for the farm or the head of the laboratory, as the case may be, to notify SARH immediately.

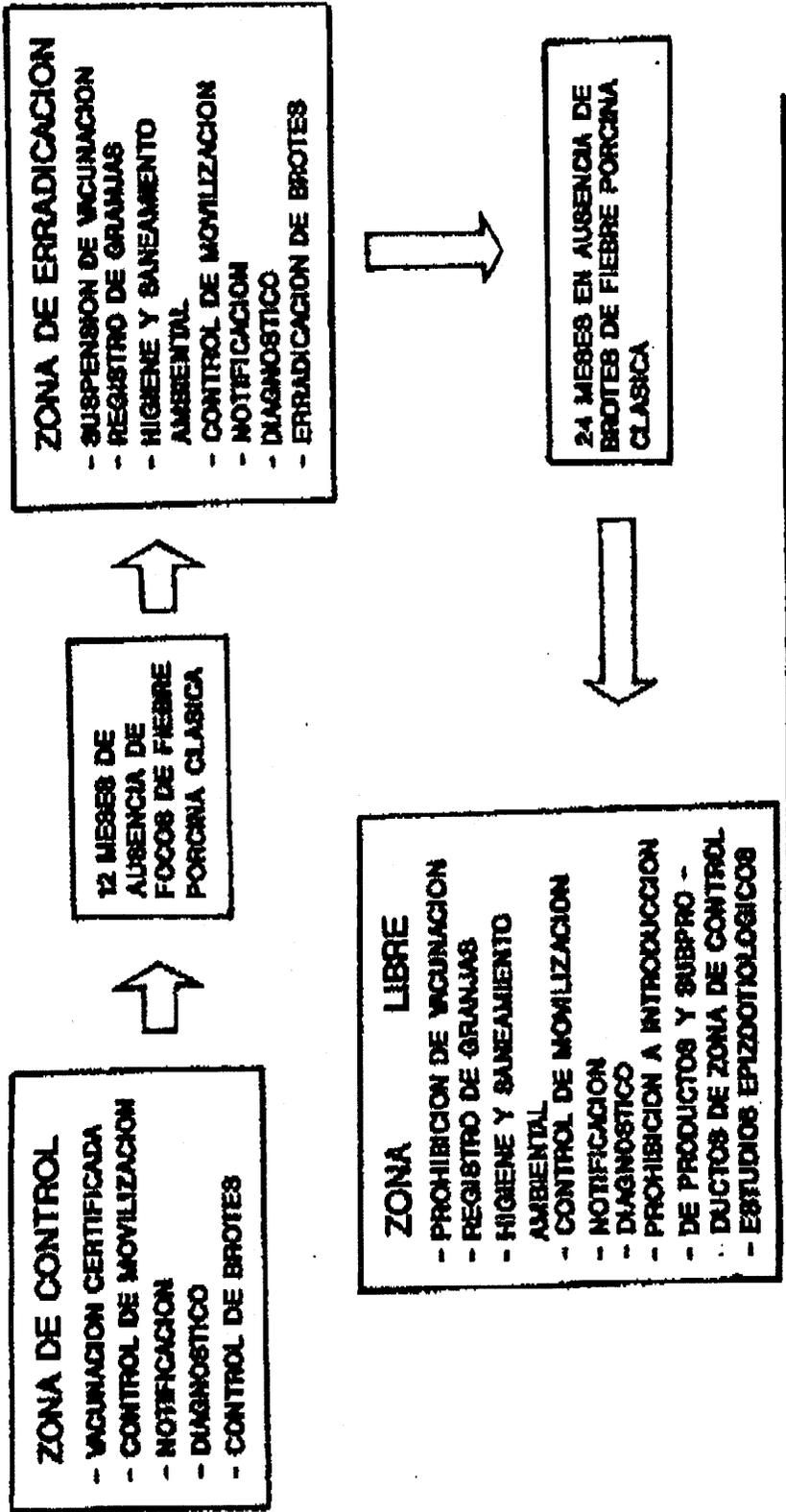
c) DIAGNOSTIC LABORATORIES

Surveillance programs are carried out through the national reference laboratories, which are the National Center for Animal Health Diagnosis (CENASA) and the laboratory of the Mexican-American Commission for the Prevention of Foot-and-Mouth Disease and other Exotic Animal Diseases (CPA), in addition to the 8 laboratories accredited for the diagnosis of classical swine fever located throughout the country, which give notification if an outbreak is suspected or merely maintain surveillance regarding the absence of classical swine fever in free states.



SUBSECRETARIA DE GANADERIA
DIRECCION GENERAL DE SALUD ANIMAL

DIAGRAMA DE FLUJO DE PROCEDIMIENTOS DE LA CAMPAÑA NACIONAL CONTRA LA FIEBRE PORCINA CLASICA



V. EPIDEMIOLOGICAL TRACING CAPABILITY

a) FROM ABATTOIRS TO FARMS OF ORIGIN

In the federal inspection type (TIF) abattoirs, there is a system that allows retrospective tracing of animals, when necessary. Each abattoir has an official veterinarian that inspects the animals ante and post mortem.

Each lot of animals is placed in a pen and each individual is tattooed with the pen number. There is a slaughter program applied pen by pen. On the slaughter line, each hog is numbered individually, weighed, and the yield of the carcass is estimated. If an abnormality is detected during the inspection, the lot to which the animal belongs can be determined and through the plant's records the farm of origin can be identified.

When slaughter is done at municipal or private abattoirs, control of entry is done by the shipping waybill, by means of which the origin of the animal can be determined in the event that an abnormality is detected during the inspection.

b) FROM FREE STATES TO CONTROL ZONES

All movements of swine products that enter the state coming from control zones are inspected physically and the documents are checked at the posts for controlling movements that protect the state. Their duties and locations are described in the next section.

In addition, all products must come from authorized federal inspection type (TIF) plants and the meat from which they are processed must in turn come from TIF abattoirs. It is therefore possible to know from the sanitary waybill what the TIF plant of origin was and through the lot number the abattoir and farm of origin of the animals can be determined.

It should be mentioned that the entry of live hogs from control zones into free zones is not allowed, thus avoiding the greatest source of risk.

VI. CONTROL OF MOVEMENTS

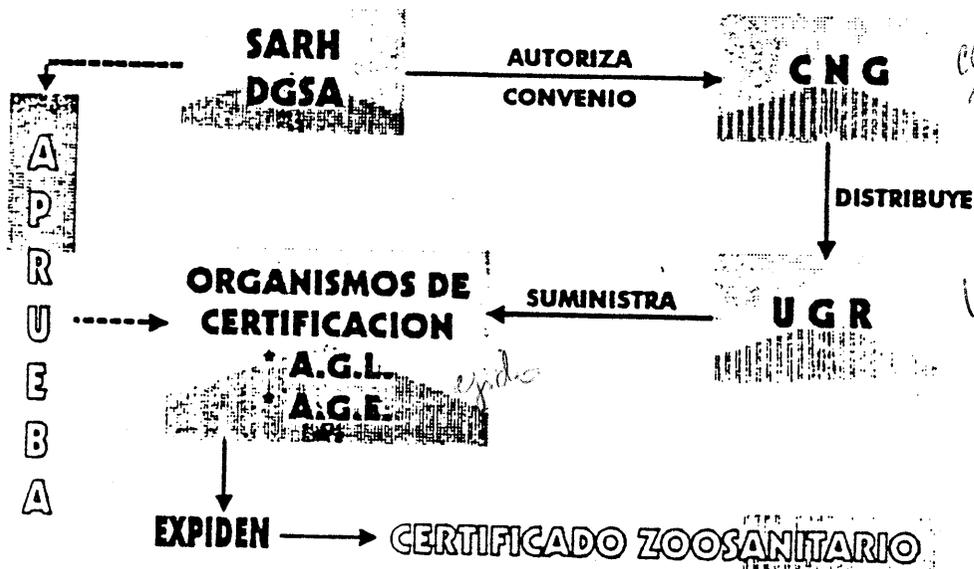
a) STATE

control

The Ministry of Agriculture and Water Resources (SARH), represented by the Animal Health Division (DGSA), through an agreement with the National Livestock Producers' Confederation (CNG) authorizes the distribution of animal health certificates to the Regional Livestock Producers' Union (UGR), which supplies these certificates to certification agencies approved by SARH. These are usually the local livestock producers' associations (AGL) and ejido livestock associations (AGE), and they actually issue the animal health certificates for control of movements of livestock and animal products and by-products, signed in all cases by a veterinarian in charge, who may be official or accredited for control of movements.

SUBSECRETARIA DE GANADERIA
DIRECCION GENERAL DE SALUD ANIMAL

MANEJO Y CONTROL DEL CERTIFICADO ZOOSANITARIO



The various federal and state offices and agencies that intervene in the control of animal movements are:

State government.- Gives authorization for the entry of animals of various species; at the inspection posts reviews the documentation for animals entering and leaving the state; and through the state judicial police checks that vehicles transporting livestock and animal products and by-products have the proper documentation.

Federal Government.- Handles, through SARH: import and export permits; issuance of certificates required for each species to process the sanitary waybill; issuance and distribution of animal health certificates to non-official certification agencies; and review of documents and inspection of livestock and when necessary application of quarantine measures at the control posts, as well as conducting surveillance of vehicles to ensure their cleanliness to do disinfection.

Livestock Producers' Union.- Authorizes movements into and out of the state; reviews the documentation required for issuance of the sanitary waybill and issues the animal health certificate.

For control of movements within the state the following intervene:

Local livestock producers' associations.- Issue the shipping waybill; extend letters authorizing movements of livestock out of the state.

Livestock inspectors.- Issue the shipping waybill.

Municipal council presidents.- Provide support for activities to control movements through the municipal security forces, which conduct sporadic reviews of documents.

The shipping waybill is for movements within the state and verifies the ownership of the animals.

The animal health certificate is for movements of livestock and animal products and by-products outside the state and is used throughout all of Mexico, and as its name indicates, verifies that the animal is healthy.

The animal health requirements for marketing swine products and by-products from classical swine fever free and eradication zones are:

Movements coming from free zones.- Movements of products and by-products coming from zones that are free of classical swine fever may be made without restrictions, unless they go through a control zone, in which case the movement must be made in vehicles which have been sealed with metal straps.

Movements between eradication zones.- Movements of products and by-products coming from eradication zones and having as their destination another eradication zone may be made without restrictions, unless they go through a control zone, for which there are two possibilities: The first is that the company of origin must be a federal inspection type (TIF) establishment and be authorized by the General Division of Animal Health to market swine products and by-products into classical swine fever free and eradication zones, in which case the movement must be made in vehicles which have been sealed with metal straps; and the second is that for companies of origin that do not meet the above, including non-TIF companies, the movement must be made by air on a direct route.

Movements from eradication zones to free zones and from control zones to eradication and free zones.- Movements of products and by-products coming from eradication zones and having as their destination free zones and those coming from control zones with eradication or free zones as their destination must be made by federal inspection type establishments that meet the following requirements: have a current TIF registration; be expressly authorized by the General Division of Animal Health to market their products and by-products into classical swine fever free and eradication zones; transportation must be in vehicles sealed with metal straps; and finally, in making their products and by-products, the companies may use raw materials from free zones or countries, eradication or control zones, which must come from federal inspection type abattoirs.

Companies must following the heat processing requirements and the movement and identification procedures described below:

- 1.- Swine products or by-products to be marketed in classical swine fever free and eradication zones must receive the following heat processing: 68.9°C for 30 minutes or 80.5°C for 3 minutes.
- 2.- After the heat processing, the plant's veterinary health official must supervise the packing and storage of the products by lots.
- 3.- To authorize the movement of swine products and by-products into classical swine fever free and eradication-phase zones, the plant's veterinary health official will issue the corresponding sanitary waybill and ascertain that the trucks or transport units for the finished products are properly sealed with metal strapping when they leave the plant of origin.
- 4.- Upon the arrival of shipments of swine products and by-products in the destination state, the official inspection personnel duly authorized by SARH and assigned to the quarantine control point at the state's point of entry shall comply strictly with the following inspection procedure: review the sanitary waybill; verify that the strapping has not been removed; and finally, take off the strapping and inspect the cargo to be sure that it corresponds to what is shown on the sanitary waybill.
- 5.- In shipments of products and by-products which must go through classical swine fever free or eradication-phase states, the official personnel duly authorized by SARH and assigned to the quarantine points at these states' points of entry and exit will only review the sanitary waybill

covering the movement, place their review seal and signature on the reverse side of this document, and ascertain that the strapping on the vehicle has not been removed, and in consequence it will be permitted to transit freely.

There are 9 Federal Inspection Type (TIF) plants authorized to market swine products and by-products into CSF free and eradication zones.

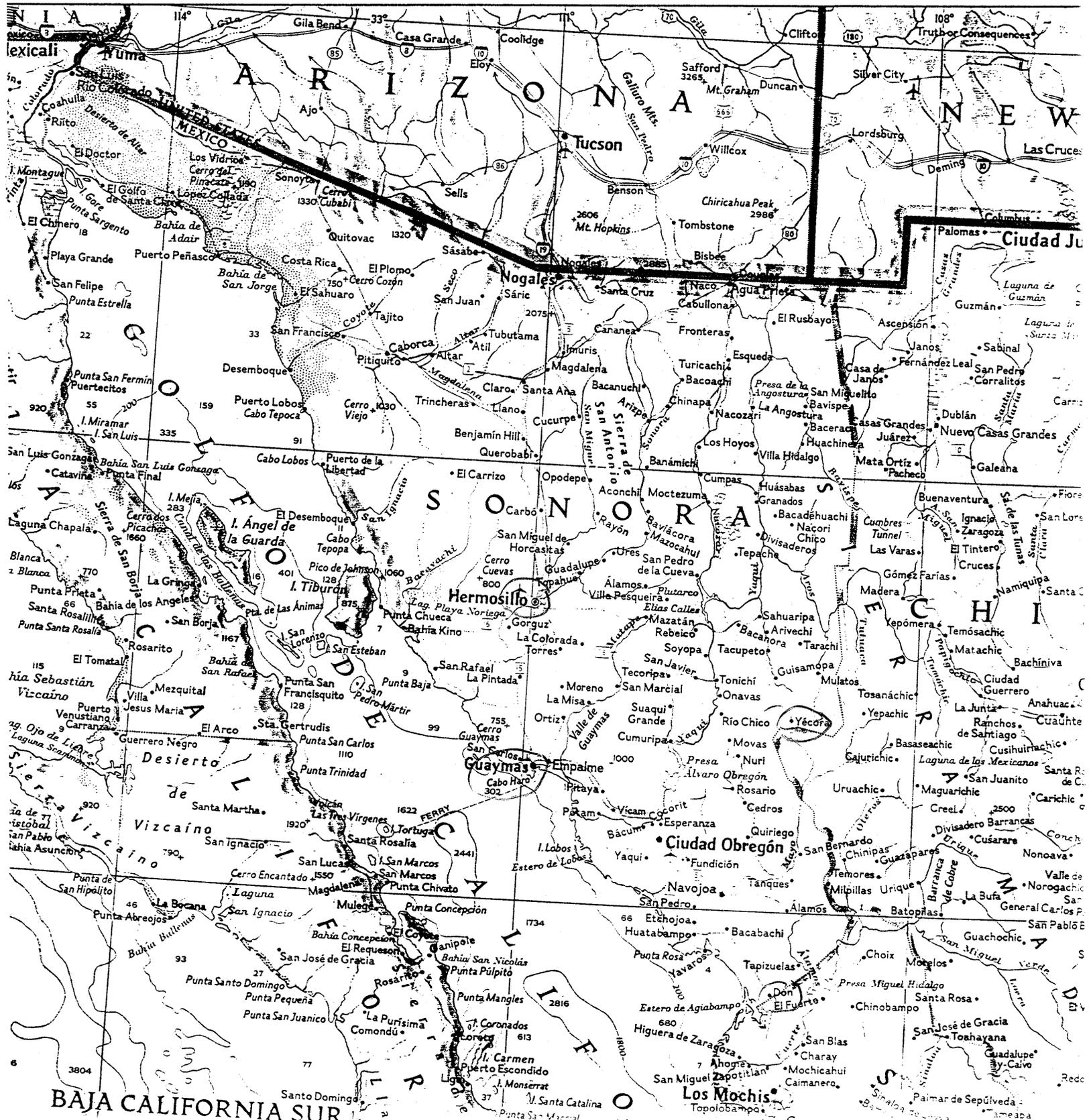
b) NATIONAL AGRICULTURAL QUARANTINE SYSTEM

Its purpose is to establish in a comprehensive, institutional form the strategic base for application of quarantine services, which are carried out for the protection of the national agricultural, forestry, and livestock patrimony. These services are focussed on: preventing the entry of exotic pests and diseases into the country; contributing to control and eradication of any that enter; supporting national plant and animal health campaigns; and maintaining areas free of plant and animal diseases and pests.

The National Agricultural Quarantine System comprises external and internal quarantine systems. The external quarantine system includes all the activities directed towards preventing the entry of diseases into country, whereas the internal quarantine service is in charge of the activities involved in preventing the diseases present within the country from spreading from infected areas into free areas.

Internal quarantine service.- One of the most important elements for the success of plant and animal health campaigns is instrumentation of effective quarantine control by establishing internal check points (quarantine posts and stations) on the main highways throughout the country, where animals and agricultural products involved in movements are inspected, in addition to verifying compliance with the official rules so as to ensure that such movements will not represent a plant or animal health risk.

The inspection posts that control the entry and exit of animals and agricultural products and by-products into and out of the state are the following:



BAJA CALIFORNIA SUR

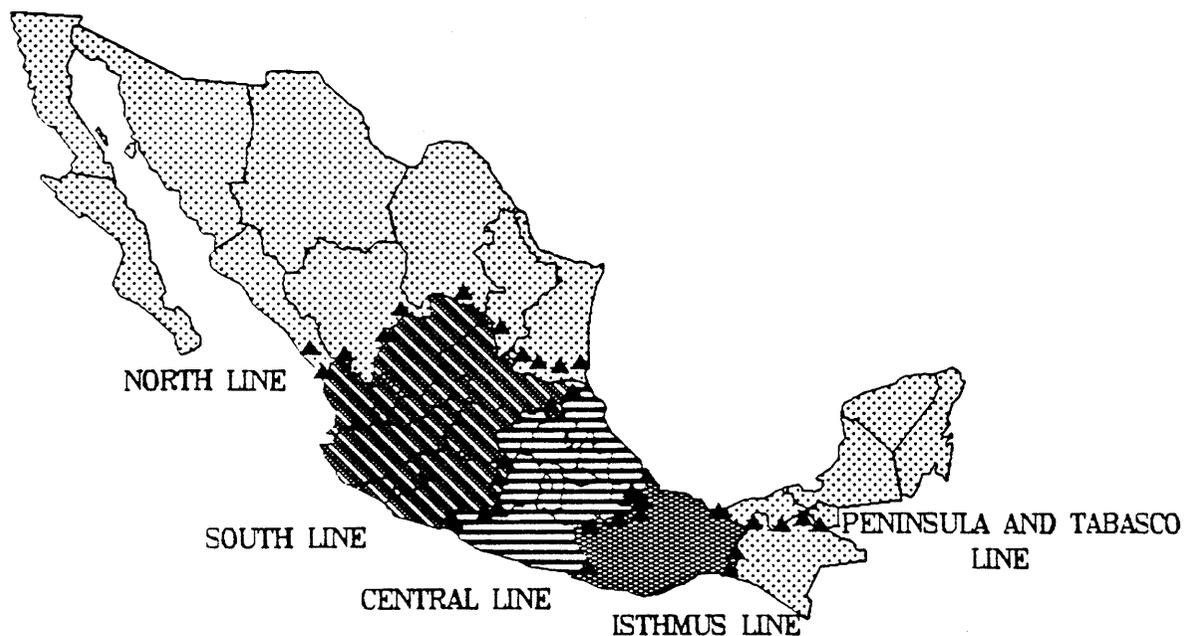
| NAME | LOCATION | PERSONNEL |
|---------------------------------------|--------------------------------------------------|-----------------------|
| <i>INTRA</i> Las Guasimas | Km 90 Fed. Highway 15, Obregón-Guaymas | 3 State Gov. |
| <i>US/MX</i> San Luis Río Colorado | Km 22.5 highway San Luis Río Colorado-Sonoita | 12 |
| <i>US/MX</i> Agua Prieta | Km 70 highway Agua Prieta-Janos, Chih. | |
| * <i>SINALOA</i> Estación Don | Km 72 Fed. Highway 15, Sinaloa border | 33 SARH-State Gov. |
| <i>US/MX</i> Puerto San Luis | Km 84.5 highway, Agua Prieta, Sonora | 9 State Gov. |
| Maycoba | Km 334 state high Hillo, Son. Chih. | |
| * <i>clear port</i> El Caballo | Km 20 Fed. Highway 15, Guaymas, Hermosillo | 12 SARH-State Gov. |

State Gov.- State Government

In addition to the above, for the purpose of optimizing resources and channeling them into a reliable, permanent internal quarantine system which can provide sufficient inspection capacity and better protection for disease-free regions, a project was developed based on the establishment of regional quarantine lines.

These lines are made up of 46 installations, including quarantine posts and stations, located around regions made up of various states having similar plant and animal health characteristics, which because of their geographic location, communications, and plant and animal transit routes, have adequate control of movements of plants, animals, and agricultural products and by-products.

QUARANTINE INFRASTRUCTURE



NORTHERN REGION QUARANTINE LINE

| NAME | LOCATION |
|-----------------------|---------------------------------------------------|
| La Concha | Km 960 Fed Highway 15 at Nay.-Sin. borders |
| Concordia | Km 44 Fed Highway 40 Mazatlán, Sin.-Durango, Dgo. |
| Coyotes | Interoceanic Highway Km 96 |
| Vicente Guerrero | Fed Highway 45 Durango-Fresnillo, Zac. |
| Santa Clara | Fed Highway 49 Cuencame-Durango-Fresnillo, Zac. |
| Tanque Escondido | Fed Highway 45 Saltillo-Zacatecas-Coahuila |
| San Roberto | Highway Matehuala-Saltillo, Coah.-Monterrey, N.L. |
| Caseta No. 21 (Tula) | Highway 101 Victoria-San Luis Potosí |
| Antiguo Morelos | Km 3.5 Highway 85 Antiguo Morelos-Mante |
| Caseta No. 30 (Rayon) | State highway Manuel-Ebano, S.L.P. |
| Altamira | Km 24.5 Highway 180 Tampico-Est. Manuel |

As its name indicates, the northern region quarantine line provides protection for our country's northern states as well as Sinaloa and Durango.

It is important to point out that when a state enters the classical swine fever eradication phase, the Quarantine Control Division notifies the airlines so that on flights made by these companies with airports in the free states as their destination, they will eliminate any pork products from their menus. For example:

ORIGINAL PRODUCT

SUBSTITUTION

Canadian bacon
Pork sausage
Ham made from pork

Smoked turkey
Turkey sausage
Ham made from Turkey

External quarantine system.- This type of quarantine is also considered to be the first sanitary barrier and is for the purpose of conducting actions to prevent the entry of pests and diseases from other countries; to do so, compliance with the plant and animal health standards and requirements applicable to importations of animals, plants and agricultural products and by-products in ports, airports, and border crossing points is verified.

At present, both physical inspection and verification of documents is done at 18 seaports, 18 airports, and 17 inland border crossing points, with technicians trained in the health, livestock, and plant areas.

In addition to the inspection offices on the northern and southern borders, each state has its own plant and animal health inspection offices to control movements at border crossing points, airports, and seaports, which in the State of Sonora are as follows:

**PLANT AND ANIMAL HEALTH INSPECTION POINTS
BORDER CROSSING POINTS, AIRPORTS, AND SEAPORTS**

| INSPECTION OFFICE | BORDER CROSSING POINT | AIRPORT | PORT |
|-----------------------|-----------------------|---------|------|
| San Luis Río Colorado | * | | |
| Agua Prieta (1) | * | | |
| Naco | * | | |
| Nogales | * | | |
| Sasabe | * | | |
| Sonoita | * | | |
| Cd. Obregón | | * | |

(1) Central inspection office providing inspection service to others nearby having fewer importation movements.