SAGAR

COMISION NACIONAL DE SANIDAD AGROPECUARIA
DIRECCION GENERAL DE SALUD ANIMAL

Comisión Nacional de Sanidad Agropecuaria

TECHNICAL INFORMATION ON CAMPECHE STATE AS FREE ZONE OF CLASSICAL SWINE FEVER

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TECHNICAL INFORMATION ON CAMPECHE STATE AS FREE ZONE OF CLASSICAL SWINE FEVER

I. AUTHORITY, ORGANIZATION AND INFRASTRUCTURE OF VETERINARY SERVICES

Competent federal and state animal health authorities rely on the following legislation and Mexican official standards for swine diseases:

Federal Authorities

Federal Metrology and Standardization Act, Third Chapter, Articles 52 to 57 (June 30, 1992), as well as the Decree amending, adding and repealing several provisions under the Federal Metrology and Standardization Act (Federal Official Gazette, May 20, 1997).

Federal Animal Health Act, Third Chapter, Article 4 (June 18, 1993).

Mexican Official Standard NOM-037-ZOO-1995, National Campaign against Classical Swine Fever.

Mexican Official Standard NOM-036-ZOO-1996, Minimum Requirements for Classical Swine Fever Vaccines.

Mexican Official Standard NOM-007-ZOO-1994, National Campaign against Aujeszky's Disease.

Mexican Official Standard NOM-046-ZOO-1996, Minimum Requirements for Aujeszky's Disease Vaccines.

Mexican Official Standard NOM-046-ZOO-1996, National Epidemiological Surveillance System.

Mexican Official Standard NOM-003-ZOO-1994, Requirements for Laboratory Authorization to Perform Animal Health Tests.

Mexican Official Standard NOM-018-ZOO-1994, Veterinarians Certified as Verification Units Qualified to Provide Official Animal Health Services.

Decree expanding in the national territory the National Animal Health Emergency Mechanism, in order to diagnose, prevent, control and eradicate the classical swine fever, published in the Federal Official Gazette on December 18, 1997.

State Authorities

Federal Metrology and Standardization Act, Third Chapter, Articles 52 to 57 (June 30, 1992), as well as the Decree amending, adding and repealing several provisions under the Federal Metrology and Standardization Act (Federal Official Gazette, May 20, 1997).

Federal Animal Health Act, Third Chapter, Article 4 (June 18, 1993).

State of Campeche Livestock Act, Second Chapter, Article 7 (September 12, 1997).

ANIMAL HEALTH INFRASTRUCTURE

a) Federal Structure

The Ministry of Agriculture, Livestock and Rural Development (SAGAR) has a state delegate and an Assistant Delegate for Agricultural Affairs in Campeche. See related organization chart in Annex 1.

Some 109 veterinarians are currently certified to treat classical swine fever and Aujeszky's disease; none reside in the state of Campeche. Epidemiological surveillance of the disease is carried out by government-employed veterinarians, in conjunction with those in charge of the commercial farms.

The state is divided into four Rural Development Districts (RDD) with the following technical personnel attached to SAGAR:

Rural Development District	Veterinarians
001	2
002	9
003	1
004	6

Four veterinarians work under the Assistant Delegate for Agricultural Affairs in monitoring this disease throughout the state.

Further assistance is provided by two plant and animal health inspection stations, 10 checkpoints that limit movement by land, plus one private and nine municipal slaughterhouses, which are inspected by veterinarians for animal health problems.

b) State Structure

As part of the Secretariat of Rural Development, attached to the state government of Campeche, the Agricultural and Forestry Bureau, in coordination with the federal government, represented by SAGAR's Assistant Delegate for Agricultural Affairs, and the

State Livestock Promotion and Protection Committee, coordinates actions geared to prevent, monitor and stamp out diseases addressed by national animal health campaigns. This organization is charted in Annex 2.

c) Technical and Professional Schools

There is one School of Higher Agricultural Education in the state, and 14 Agricultural Technical Studies Centers.

II. TYPE AND EXTENT OF SURVEILLANCE IN THE REGION

Active Surveillance

Absence of the disease was confirmed as of 1989, the eradication phase began in July of 1996. Statistical sampling, initiated in early 1997 for the state to enter the free phase, is detailed in the following charts:

Statistical Sampling at Commercial (*Ejido* [1]) Farms in the State of Campeche
1997
Classical Swine Fever

RDD	MUNICIPALITY	NAME OF *EJIDO*	NUMBER OF SWINE PER *EJIDO*	NUMBER OF *EJIDOS* SAMPLED	NUMBER OF SAMPLES PER *EJIDO*	TOTAL NUMBER OF SAMPLES
Hecelchacan	Calkini	Nunkini	284	1	59	59
Campeche	Campeche	Bobola	467	1	59	59
		Hampolol	1,300	1	59	59
		Kopen	908	1	59	59
Champoton	Champoton	Sihochac	871	1	59	59
TOTAL			**3,830**	**5**		**295**

a) The size of the statistical sample taken at *ejido* farms was based on Cannon and Roe's statistical formula (1982), assuming a 95% confidence and an expected prevalence of 5%.
b) In the event of empty farm reoccupation, 59 samples were obtained per farm.
c) 80% of the samples taken at commercial farms or *ejidos* were drawn from sows, 10% from boars and 10% from fattening pigs over four months old.
d) In the case of fattening facilities, all samples were drawn from swine over four months old.

[1] TN: A Mexican land ownership system

Statistical Sampling at Backyard Swine Production Units in the State of Campeche
1997
Classical Swine Fever

RDD	MUNICIPALITY	NUMBER OF COMMUNITIES	NUMBER OF UNITS	NUMBER OF BACKYARD SWINE	NUMBER OF UNITS SAMPLED	NUMBER OF SAMPLES PER UNIT	SAMPLES PER MUNICIPALITY
Hecelchacan	Calkini	19	2,508	13,970	28	5	141
	Hecelchakan	17	1,088	5,826	12	5	59
	Tenabo	9	823	3,820	8	5	38
Campeche	Campeche	56	2,435	11,373	23	5	114
	Hopelchen	118	6,110	41,365	83	5	416
Champoton	Champoton	138	3,873	17,200	35	5	173
Escarcega	Carmen	211	2,659	15,400	31	5	155
	Escarcega	115	8,114	29,700	60	5	299
	Palizada	42	1,628	9,900	20	5	100
TOTAL		**725**	**29,238**	**148,554**	**300**		**1,495**

a) There being an average of five swine per backyard unit in the state of Campeche, at least five samples were taken per unit; or all were sampled if in a given unit there were fewer than five swine.

b) The size of the statistical sample taken at backyard units was based on Cannon and Roe's statistical formula (1982), assuming a 95% confidence and an expected prevalence of 1%.

c) The sampling was done at random, regardless of whether the animals were confined or loose.

Statistical Sampling at Commercial (*Ejido*[2]) Farms in the State of Campeche
1998
Classical Swine Fever

MUNICIPALITY	*EJIDO*	NUMBER OF FARMS	NUMBER OF SOWS	NUMBER OF FEEDERS	TOTAL NUMBER OF SWINE	%	FARMS SAMPLED	SAMPLES PER FARM	TOTAL NUMBER OF SAMPLES
Calkini	Nunkini	1	20	0	42	1.27	1	29	29
Campeche	Bobola	1	40	120	198	5.97	1	29	29
	Hampolol	1	145	580	1,300	39.17	1	29	29
	Kopen	1	120	450	908	27.36	1	29	29
Champoton	Sihochac	1	115	430	871	26.24	1	29	29
TOTAL		**5**	**440**	**1,580**	**3,319**	**100**	**5**		**145**

a) The size of the statistical sample for commercial farms was based on Cannon and Roe's statistical formula (1982), assuming a 95% confidence and an expected prevalence of 10%.

b) 80% of the samples taken at commercial farms were drawn from sows, 10% from boars and 10% from fattening pigs over four months old.

c) In the case of fattening facilities, all samples were obtained from animals over four months old.

[2] TN: A Mexican land ownership system

Statistical Sampling at Backyard Pork Production in the State of Campeche
1998
Classical Swine Fever

MUNICIPALITY	TOTAL BACKYARD UNITS	%	NUMBER OF SWINE IN BACKYARD UNITS	%	UNITS SAMPLED	SAMPLES PER UNIT	SAMPLES PER MUNICIPALITY
Calkini	2,508	8.58	13,970	9.42	26	5	128
Hecelchakan	1,088	3.72	5,828	3.93	11	5	56
Tenabo	823	2.81	3,618	2.44	8	5	42
Campeche	2,435	8.33	11,373	7.67	25	5	125
Hopelchen	6,110	20.90	41,365	27.88	62	5	312
Champoton	3,873	13.25	17,200	11.59	40	5	198
Carmen	2,659	9.09	15,400	10.38	27	5	136
Escarcega	8,114	27.75	29,700	20.02	83	5	415
Palizada	1,628	5.57	9,900	6.67	17	5	83
TOTAL	**29,238**	**100**	**148,354**	**100**	**299**		**1,495**

a) The size of the statistical sample taken at backyard units was based on Cannon and Roe's statistical formula (1982), assuming a 95% confidence and an expected prevalence of 1%.

b) There being an average of five swine per backyard unit in the state of Campeche, at least five samples were taken per unit; or all were sampled if in a given unit there were fewer than five swine.

c) The sampling was done at random, regardless of whether the animals were confined or loose.

Some 282 samples were collected from commercial farms and 1,591 from backyard units in 1997. The small number of samples drawn from commercial farms was due to a significant drop in the state's commercial swine production inventory. Samples drawn from backyard units, as well as from technified facilities, were negative when tested for this swine disease. The state was officially declared free from the disease on December 18, 1997.

In the epidemiological survey done in 1998, 1,558 serological samples were collected from backyard units and 150 samples from technified farms in Campeche.

The source of the 1997 and 1998 samples is shown in the following chart:

Municipality	1997		1998	
	Commercial farms	Backyard	Commercial farms	Backyard
Calkini	41	142	30	117
Hecelchakan	*	65	*	92
Tenabo	*	40	*	50
Campeche	181	121	90	127
Hopelchen	*	416	*	324
Champoton	60	209	30	202
Escarcega	*	165	*	416
Carmen	*	319	*	145
Palizada	*	114	*	85
Subtotal	**282**	**1,591**	**150**	**1,558**
Total	**1,873**		**1,708**	

*There are no commercial farms in these municipalities.

All samples collected were sent to the Regional Central Laboratory of Merida, and were negative in the classical swine fever (CSF) test.

Five authorized techniques are used to diagnose CSF: Immunoperoxidase, ELISA, seroneutralization, viral isolation and, in the event of an outbreak, immunofluorescence (item 8 of Mexican Official Standard NOM-037-ZOO-1995, National Campaign against Classical Swine Fever).

In the other hand, is important to mention that in eradication and free zones, serological surveys are conducted by means of immunoperoxidase, ELISA, seroneutralization and viral isolation, in order to detect evidence of CSF. For a final diagnosis, the viral antigen must be identified by a direct immunofluorescence test performed on tonsils, spleen and lymph nodes, and an indirect immunofluorescence test on tonsils, spleen, lymph nodes and kidney (items 7.3.1 and 8 of Mexican Official Standard NOM-037-ZOO-1995, National Campaign against Classical Swine Fever).

Passive Surveillance

Since 1994, in Mexico there is a list of diseases subject to mandatory notification (Agreement published in the Federal Official Gazette of September 21, 1994, listing exotic

diseases and pests that might affect the United Mexican States). This agreement was recently revised and updated as Agreement listing exotic and enzootic pests and diseases subject to mandatory reporting in the United Mexican States, published in the Federal Official Gazette of March 5, 1999. These diseases include those considered exotic to Mexico, as well as enzootic diseases, which must be reported immediately and on a monthly basis.

Moreover, persons and instances in charge of notifying evidence of these diseases are defined in items 1 and 7.1.1. of the Mexican Official Standard NOM-046-ZOO-1996, National Epizootiological Surveillance System.

Once central authorities receive the information, it is processed and analyzed by the National Epidemiological Surveillance System, and published in the monthly bulletin. Likewise, weekly, monthly and yearly reports on OIE Lists A, B and C diseases are issued to this agency, as well as to other international agencies (the Pan American Health Organization, the Inter-American Institute for Agricultural Cooperation, and the International Regional Animal Health Organization).

In the event of an outbreak, a positive serological test or viral isolation done in a laboratory, it is the obligation of the swine owner, as well as of the authorized veterinarian and/or person in charge of the farm or laboratory, as the case may be, to advise SAGAR.

III.- DIAGNOSTIC LABORATORY CAPACITY

There are six animal health centers in the state of Campeche. To date, their main diagnostic activity has consisted of running coproparasitological, hematological, bacteriological and serological tests (brucellosis). Immunofluorescence rabies diagnoses are performed at the Animal Health Center of Campeche. The following animal health centers are available:

1. Animal Health Center of Campeche
2. Animal Health Center of Champoton
3. Animal Health Center of Ciudad del Carmen
4. Animal Health Center of Escarcega
5. Animal Health Center of Palizada
6. Animal Health Center of Candelaria

Furthermore, the Animal Health Center of Campeche is being equipped with federal *Alianza para el Campo*[3] funds, so as to shortly function as a reference state laboratory authorized to diagnose Newcastle disease, avian influenza, avian salmonellosis, Aujeszky's disease and classical swine fever. Further support is provided by the Regional Central Laboratory of Merida in Yucatan, which is authorized to diagnose brucellosis, tuberculosis and the above mentioned diseases, as well as the National Center of Animal Health Diagnostic Services (CENASA[4]).

[3] TN: Program that finances the agricultural sector in Mexico
[4] TN: The Center's Spanish acronym

IV. STATUS OF THE DISEASE

The last case suspected of being CSF was recorded in July of 1995, in the municipality of Hopelchen. A high fatality rate among backyard swine in the community of X'maben led to suggest that there was possibly evidence of the disease. The state was in the control phase, **without having reported any outbreak since 1989**, and on the threshold of the eradication phase.

An epidemiological follow-up operation was therefore dispatched to the location, undertaking counter-epizootic activities such as placing the affected units in precautionary quarantine, collecting and forwarding samples for their diagnosis, and implementing epidemiological surveillance in the focal and perifocal zone. Inspection stations were also set up to limit animal movement, preventing swine and pork products from entering or leaving; and all out-bound vehicles were disinfected.

Finally, after having vaccinated 90% of the swine in the municipality and having isolated suspect animals with sentinels, samplings presented negative results, and the presence of the disease was discarded in the focus. The animal deaths were attributed to erysipelas and the operation concluded in September of 1995, when the last vaccines were applied in the state. In July of 1996, the state entered the eradication phase having officially dismissed the presence of the disease as of 1989, and reinforced epidemiological surveillance activities, as well as movement limitation of animals and their products. In the point II was mentioned that the state was officially declared free from the disease on December 18, 1997.

V. STATUS OF VACCINATION IN THE REGION

Because the state of Campeche is a free state, classical swine fever vaccines are neither commercialized nor used there, as stipulated in item 6.7 of NOM-037-ZOO-1995, National Campaign against Classical Swine Fever.

VI. STATUS OF THE DISEASE IN ADJACENT REGIONS

Yucatan, flanks Campeche on the northeast on the east by Quintana Roo, on the south and southwest by Tabasco, and on the west by the Gulf of Mexico. Yucatan and Quintana Roo are both free from CSF, and vaccination is therefore not available in those states either (item 6.7 of NOM-037-ZOO-1995, National Campaign against Classical Swine Fever).

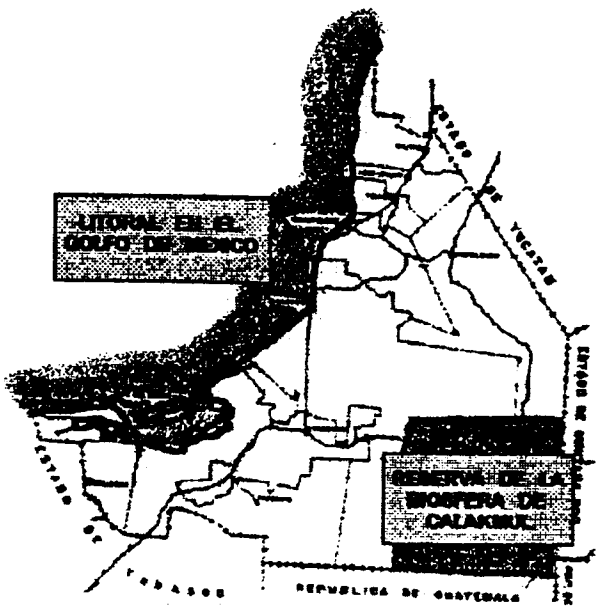
The state of Tabasco is in the CSF control stage. Vaccination is performed in accordance with item 6.1 of Mexican Official Standard NOM-037-ZOO-1995, National Campaign against Classical Swine Fever; and, in an effort to eradicate the disease, the National Animal Health Emergency Mechanism is currently implementing emergency measures in control states.

VII. PHYSICAL SEPARATION OR OTHER BARRIERS BETWEEN CAMPECHE AND REGIONS AT HIGHER-RISK

The state of Campeche is part of Yucatan's Peninsula on the Gulf coastal plain, located in southeastern Mexico, a region pertaining to the Northern Atlantic coastal plain.

The state's main natural barrier is its northwestern coastline of 523 kilometers, which runs from Punta Nimun in the northern municipality of Calkini, to the mouth of the San Pedro and San Pablo River at the southern tip of the municipality of Del Carmen.

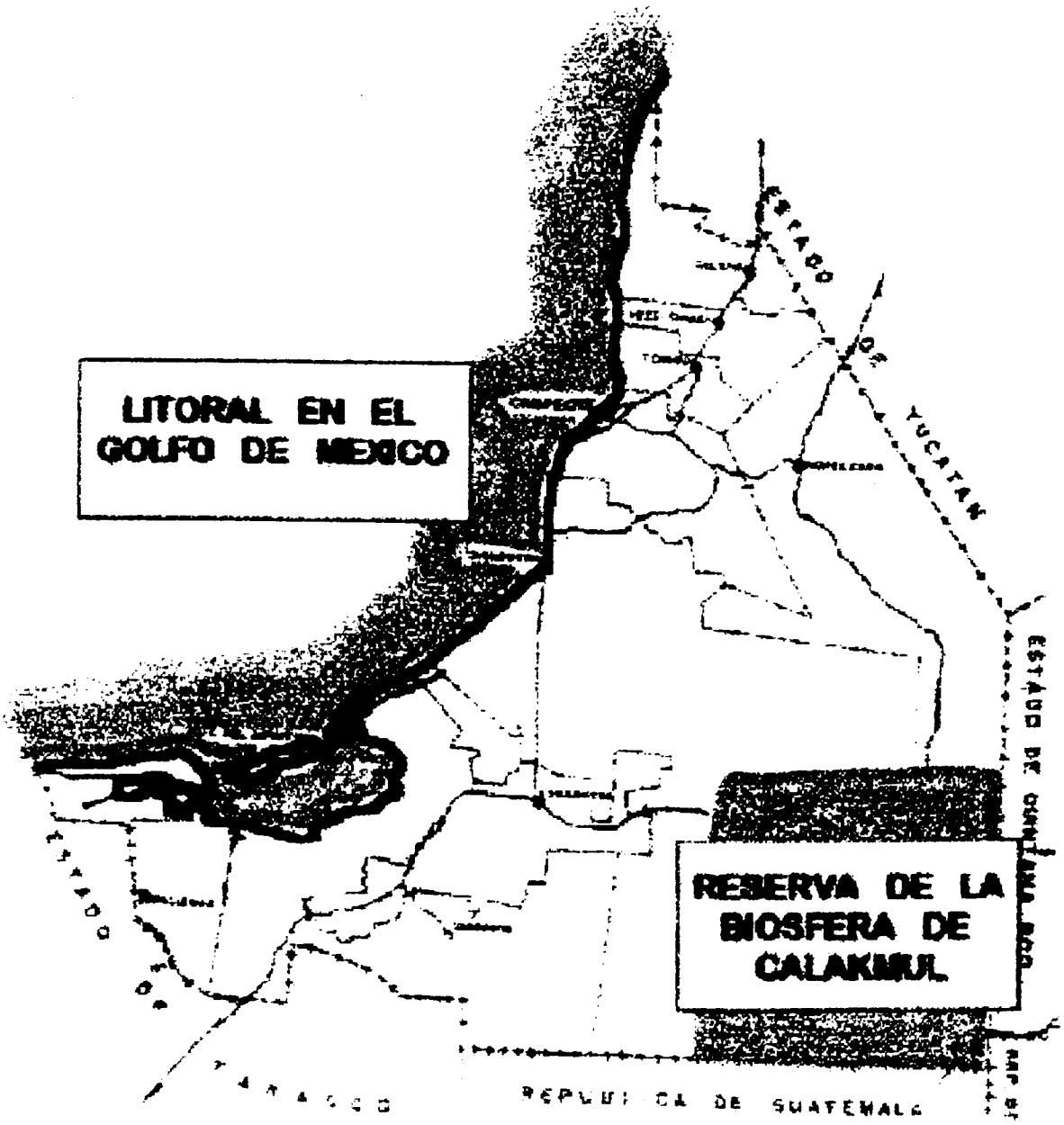
In the southern part of the state, bordering on Guatemala is the Calakmul Biosphere Reserve, which encompasses 600,000 hectares of rain forest, protected by regulations restricting productive agricultural activities.



As for physical man-made barriers, Mexico's National Agricultural Quarantine System marshals numerous checkpoints that limit animal and animal product movement. The purpose of this system is to provide a comprehensive and institutional strategic basis for the application of quarantine services, implemented to protect Mexico's agricultural, forestry and livestock resources, by preventing entry of exotic pests and diseases, controlling and eradicating them if these should arise, supporting nationwide plant and animal health campaigns, and keeping animal and plant pests and diseases out of free zones.

The National Agricultural Quarantine System provides external and internal quarantine services. The external quarantine division performs all activities addressed at preventing diseases from entering the country, whereas the internal quarantine division is responsible for preventing diseases that already exist in Mexico from spreading to free areas.

CALAKMUL BIOSPHERE RESERVE



Internal Quarantine

This service consists of internal checkpoints where animals and agricultural products undergo inspection prior to being transferred from one location to another. Compliance with official standards is also verified, to thus guarantee that such movements do not involve any animal health risk.

Certain inspection stations, besides providing this service, also operate as cattle dips, where animals are given tick baths, and can be monitored in the event of an animal health emergency.

The following inspection stations monitor animals, and agricultural products and byproducts entering and leaving the state of Campeche:

CAMPECHE		
NAME	**LOCATION**	**PERSONNEL**
Nuevo Campechito	Km. 103.3 on the Federal Highway from Villahermosa to Ciudad del Carmen	10
Palizada	Km. 19 on the highway from Jonuta to Palizada	4
Pucté	Km. 10 on the Federal Villahermosa-Escárcega Highway heading toward Palizada	2
Santa Adelaida	Km 175.2 on the Federal Highway from Villahermosa to Escárcega	13
San Elpidio	Km. 183 on the Federal Highway from Villahermosa to Escárcega	2
El Naranjo	Km. 7 on the highway from Naranjo to Machetazo	4
El Encanto	2.2 kms. off the Federal Villahermosa-Escárcega Highway heading toward Candelaria	2
Xpujil-Caobas	Km. 184 on the highway from Escarcega to Chetumal	4
Becal-Halachó	Km. 114.3 on Federal Highway 180 from Campeche to Merida, short route	8
Yaxche-Sta. Elena	Km. 105 on the Federal Highway from Campeche to Merida, via Chenes	4

Personnel on duty at the plant and animal health inspection stations are attached to SAGAR, to the state government, and to Yucatan, Campeche and Quintana Roo State Livestock Promotion and Protection Committees.

It might be mentioned that in March of 1998, with the cooperation of Yucatan and Quintana Roo, movement limitation of animals and their products was reinforced at the border between Campeche and Tabasco: aside from closely monitoring all movement of animals and animal products, the states of Yucatan's Peninsula increased the number of trained personnel posted at the plant and animal health inspection stations.

In addition to the external inspection stations described above, there are two internal inspection stations located at the municipal slaughterhouse in Campeche, and at the municipal slaughterhouse in Ciudad del Carmen. Four inspectors attached to the state producers' associations are posted at these locations.

The system's regional quarantine lines ensure further protection of disease-free regions.

These quarantine lines consist of 46 checkpoints or quarantine stations over a region covering several states, which due to their geographic location, communication routes and agricultural traffic, require that plant, animal, and agricultural products and byproduct transports be properly monitored.

The Peninsula-Tabasco Quarantine Line, formed by the following inspection stations protects all peninsula states, including Quintana Roo:

PENINSULA-TABASCO REGION QUARANTINE LINE

NAME	LOCATION
Tonala	Km. 132 on Federal Highway 180 from Villahermosa to Coatzacoalcos
Francisco Rueda	Km. 90 on the State Highway from Huimanguillo to Chiapas
San Manuel	Village of San Manuel on the highway to Chimea, Chiapas
Amacohite	Km. 40 on Federal Highway 187 from Huimanguillo to Malpaso, Chiapas
Azufre	Km. 80 on Highway 195 from Villahermosa to Pichucalco, Chiapas
Boca de Limon	Km. 30 on the State Highway from Villahermosa to Reforma
Tulija	Km. 79 on Federal Highway 186 Municipality of Macuspana
Coralillo	Km. 100 on Federal Highway 186, Junction Municipality of Jonuta
Libertad	Km. 4 on the highway from Zapata to Tenosique
Gregorio Méndez	Km. 43 on the highway from E. Zapata to Tenosique

It is important to point out that when a state enters the classical swine fever eradication phase, the General Directorate of Animal Health advises the airlines to refrain from serving menus containing pork products on their flights bound to airports in the free states.

External Quarantine

External quarantine, also considered a first sanitary barrier, aims to prevent passage of pests and diseases to countries. Inspectors posted at ports, airports and borders take preventive action.

Inspectors are stationed at the following locations in Campeche:

Inspection Station	Border	Airport	Port
Ciudad del Carmen		*	*
Campeche		*	*

VIII. CONTROL OF MOVEMENTS OF ANIMALS AND ANIMAL PRODUCTS FROM HIGHER RISK REGIONS

Movement of swine, and pork products and byproducts is subject to restrictions set down in regulations specified by SAGAR.

Movement

The following chart lists amounts of swine and pork products brought into the state from 1996 through December of 1998:

Description	1996	1997	1998
Market hogs (head)	62,952	61,239	63,849
Piglets (head)	256	498	3,097
Breeding sows (head)	629	338	404
Boars (head)	18	8	8
Other swine (head)	206	182	0
Carcass pork (tons)	830.49	4,609.99	1,392.41
Cold cuts and sausage variations (tons)	5799.26	2,915.57	3,263.03
Fats (lard) (tons)	42.68	30.70	16.96
Bone meal (tons)	2.81	6.88	24.00
Blood meal (tons	5.72	14.19	2.37
Viscera (tons)	19.06	14.56	41.16
Other pork products (kg)	447.44	479	990

The number of vehicles disinfected along the Federal Peninsula Quarantine Line from 1996 through 1998 was as follows:

Type of Vehicle	Number of Vehicles		
	1996	1997	1998*
Poultry	4,010	2,731	3,291
Swine	2,080	1,205	1,199
Cattle	594	572	573
Total	**6,684**	**4,508**	**5,063**

*Up to December.

The number of seizures performed along this Federal Line during the same period was as follows:

Type of Seizure	Number of Seizures		
	1996	1997	1998*
Poultry	6,711	5,841	6,817
Swine	3,423	3,385	2,881
Cattle	192	270	5
Total	**10,326**	**9,496**	**9,703**

*Up to December.

Retention and seizures performed at the checkpoints were of small amounts of pork products or byproducts that failed to meet transport requirements set down in Mexican Official Standards NOM-037-ZOO-1995, National Campaign against Classical Swine

Fever, and Amendment of NOM-007-ZOO-1994, National Campaign against Aujeszky's Disease, and thus were regarded a possible threat to animal health in the state.

It might be pointed out that no wastage was reported by the inspection stations located in Ciudad del Carmen and Campeche, since charter planes and ships are not allowed to unload such products; if applicable, incineration takes place on the ship itself.

IX. ANIMAL DEMOGRAPHICS AND MARKETING PRACTICES IN THE REGION

In the state of Campeche, there are 3,319 swine on five commercial farms, and 148,354 swine in backyard units.

State swine production figures are indicated in the following charts:

Swine in *Ejido* farms, 1998

MUNICIPALITY	*EJIDO*	NUMBER OF FARMS	NUMBER OF SOWS	NUMBER OF FEEDERS	TOTAL POPULATION
Calkini	Nunkini	1	20	0	42
Campeche	Bobola	1	40	120	198
	Hampolol	1	145	580	1,300
	Kopen	1	120	450	908
Champoton	Sihochac	1	115	430	871
TOTAL		**5**	**440**	**1,580**	**3,319**

Swine in Backyard Units, per Municipality, 1998

Municipality	Total Number of Swine
Calkini	13,970
Hecelchakan	5,828
Tenabo	3,618
Campeche	11,373
Hopelchen	41,365
Champoton	17,200
Carmen	15,400
Escarcega	29,700
Palizada	9,900
Total	**148,354**

The state's major supplier of hogs, and pork products and byproducts is Yucatan, which provides mainly breeding stock, piglets, culled sows, carcass or cut up pork and sausage variations to be distributed in supermarket chains.

Supermarkets and local wholesale dealers of Federal Inspection Type (TIF) plants in northern Mexico meet a small portion of the state demand for processed pork products and byproducts. It might be pointed out that these businesses *(TIF plants)* are authorized by the General Directorate of Animal Health to commercialize their products in the state.

It is estimated that 100% of the state pork production is commercialized within the sate. Swine in backyard units are either used for household consumption or go to middlemen, who take the animals to the municipal slaughterhouses, where the pork is later sold to butchers. The demand for pork and pork products is thus fully met within the state.

X. EMERGENCY RESPONSE CAPACITY

State Animal Health Emergency Groups (GEESA). The regional GEESA was established in June of 1995, and is made up of 36 veterinarians from the states of Yucatan, Campeche and Quintana Roo.

Training. In June of 1997, 42 technicians received training in epidemiological surveillance. These technicians were drawn from the following sources in Yucatan, Campeche and Quintana Roo: the offices of SAGAR's state delegates, the state governments, the pork and poultry livestock producer associations, animal health and zoological diagnosis laboratories, GEESA, state livestock promotion and protection committees, coordinators of the national campaign for the eradication of bovine tuberculosis and brucellosis, certified veterinarians and free practitioners.