

CLASSICAL SWINE FEVER IN MEXICO

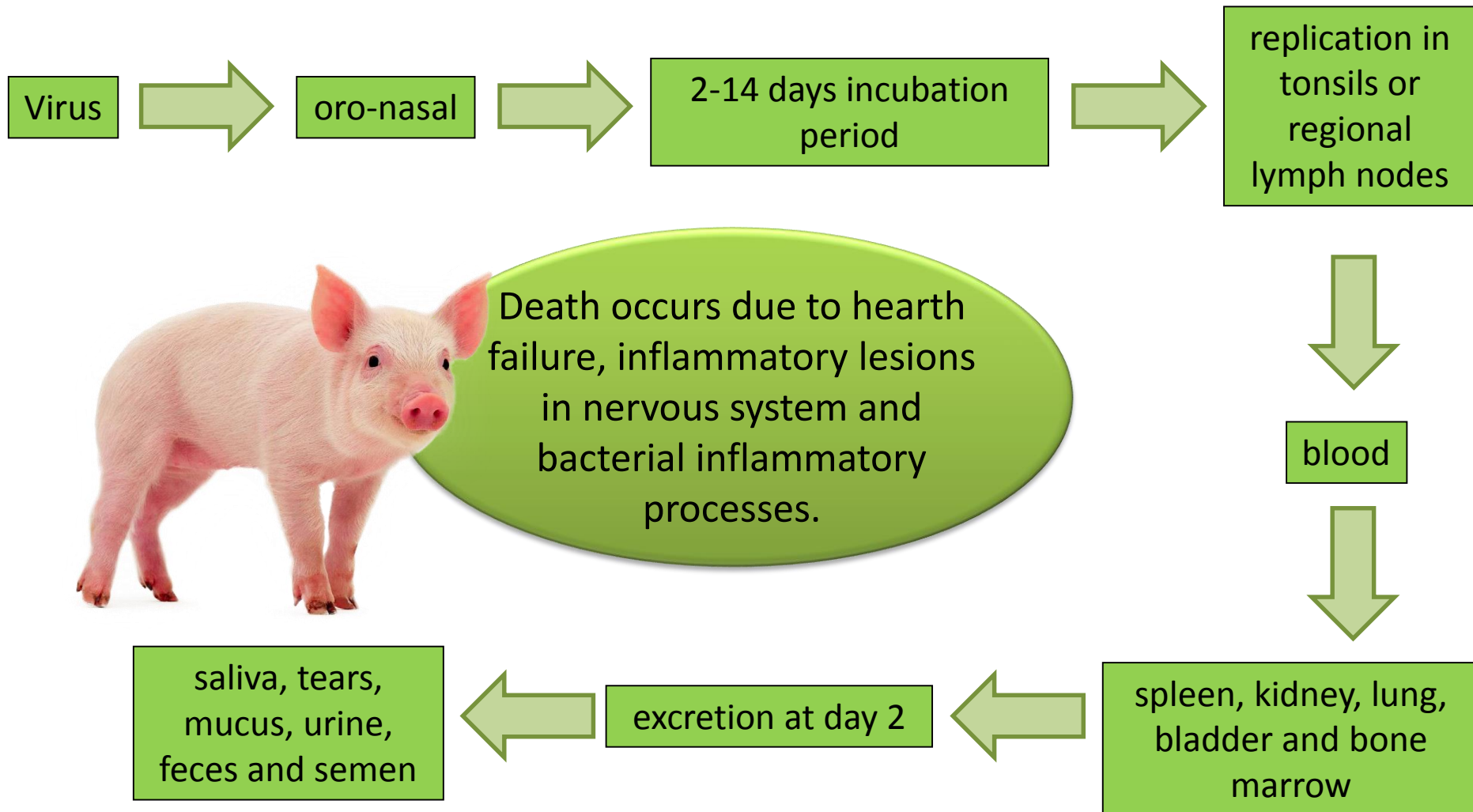


Definition

CSF is a **highly contagious** disease that affects domestic and wild swine. Causes significant economic losses due to reduced production of meat production and derived goods; restriction of national and international trade in animals, products and by-products; as well as high costs due to programs for its control and eradication.



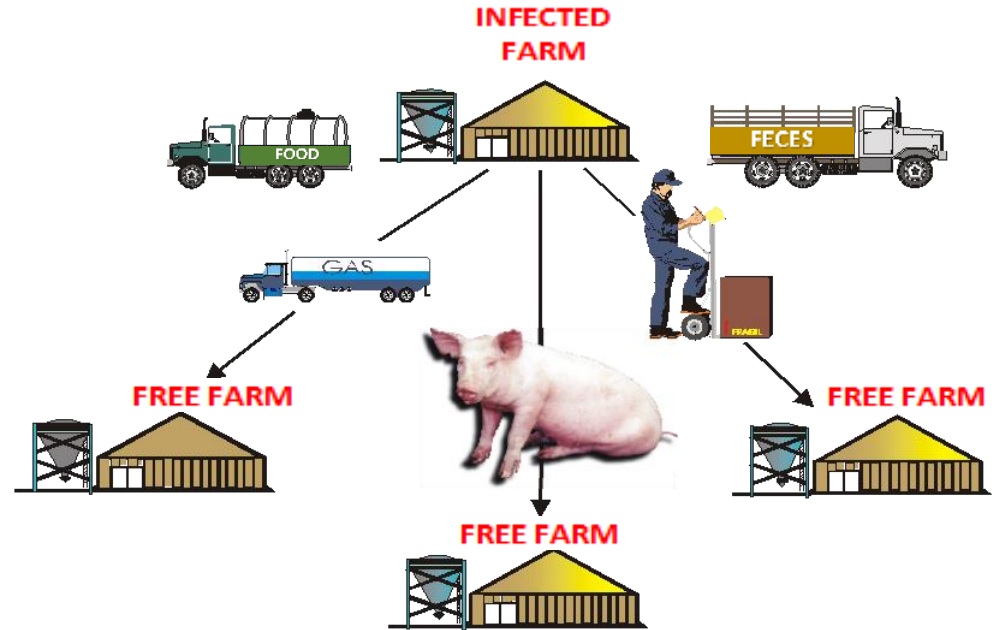
Pathogenesis



Transmission

Intensive production practices originate the constant mobilization of pigs in different production stages, increasing the possibilities of direct or indirect contact.

Globalized trade, tourism and immigration increase the risk of virus introduction.



CSF Antecedents in México

Previously known as «hog cholera».

1876.- Introduction through the importation of pigs from the USA.

1963.- First isolation of the «Cepa Copilco» virus.

1973.- Hog Cholera Control Program.

1980.- National Program for the Control of Hog Cholera.

1992.- Agreement that modifies the program of the National Campaign against Hog Cholera (HC – CSF).

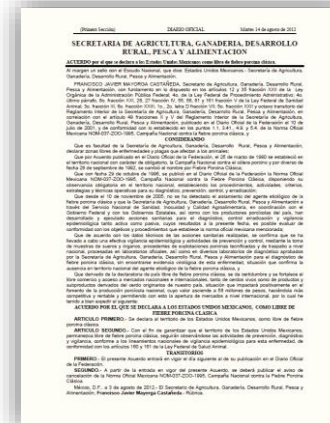
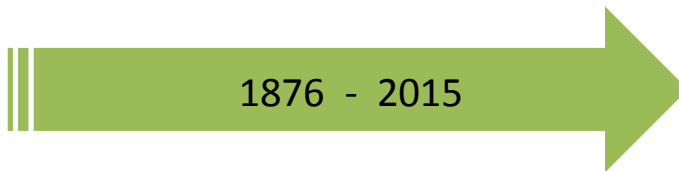


CSF Antecedents in México

1996.- NOM-037-ZOO-1995 National Campaign Against Classical Swine Fever.

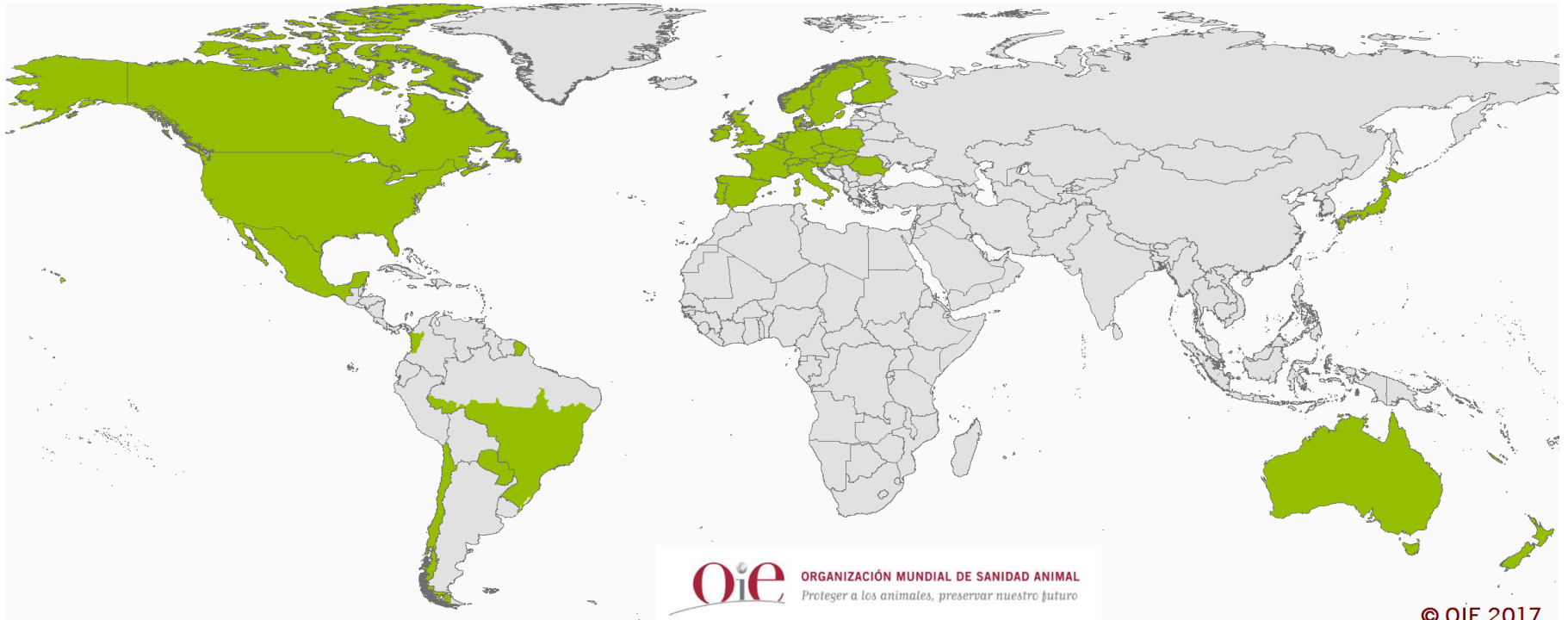
2012.- Agreement declaring the United Mexican States free from Classical Swine Fever.

2015.- OIE recognition of México as free of Classical Swine Fever.



Map of Classical Swine Fever Official Status of OIE Member Countries

Last update May 2017



- Member countries and zones recognized as free of CSF
- Countries and zones without recognitions as free of CSF by OIE

Prevention

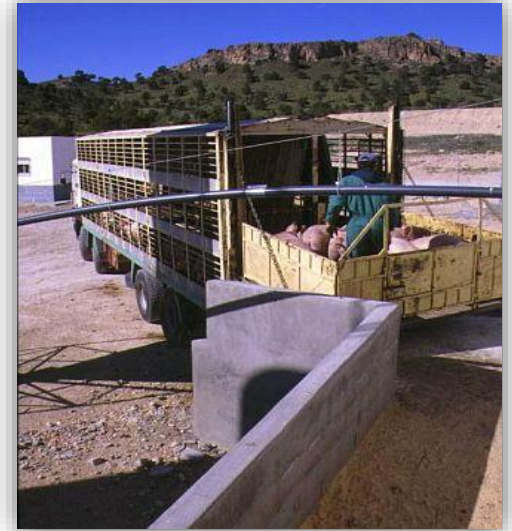
Not to import animal, products or by-products illegally or from affected countries.

Pigs entering the farm should be quarantined with strict supervision.

Avoid contact of pigs with other domestic or wild animals.

Do not feed the pigs with food waste.

Sanitary disposition of carcasses inside the farm.



Prevention

Do not allow the entry of people who have recently traveled outside the country.

Implement a strict biosecurity program.

Apply the «all in-all out» program.

Implement sanitary emptying between production cycles.

Wash and disinfect vehicles, materials and equipment.

Effective communication between veterinary authorities, veterinarians and producers.



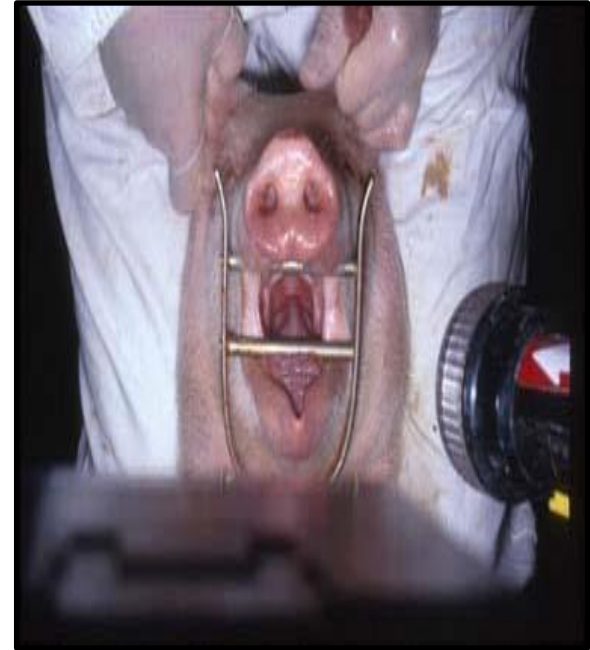
SAMPLES FOR DIAGNOSIS

For serological tests:

- Blood serum (refrigeration).

Antigen detection tests:

- Tissues: tonsils, lymphatic nodes (pharyngeal, mesenteric), spleen, kidney, distal ileum.
- Live animals: EDTA whole blood, tonsillar scraping (PBS) in refrigeration.



OPERATIONAL CASE DEFINITION

- CLINICAL CASE
- SUSPECTED CASE
- PRESUMPTIVE POSITIVE CASE
- **CONFIRMED POSITIVE CASE**



CLINICAL CASE

A pig or herd with **clinical signs compatible** with ASF in which there is **evidence of import** of genetic material; or that it feeds on food waste; or in which an **epidemiological relationship** of people linked to swine production in another country is identified.



SUSPECTED CASE

Corresponds to the definition of clinical case.

A pig or herd that has **positive results in serial tests**: enzyme-linked immunosorbent assay (ELISA), immunoperoxidase (IP) and virus seroneutralization (VSN), **without epidemiological information or clinical signs compatible with the disease**.

A pig or herd in which an **inconclusive or positive result to the conventional or real time RT-PCR test** is obtained in a **sample** taken during the routine **epidemiological surveillance**, with or without the presence of clinical signs or with pending results of the epidemiological investigation.



PRESUMPTIVE POSITIVE CASE

A suspected case with a repeated positive result to conventional or real time RT-PCR, or genomic sequencing after conventional RT-PCR, of a sample of pigs with or without clinical signs and / or epidemiological evidence of the disease; or

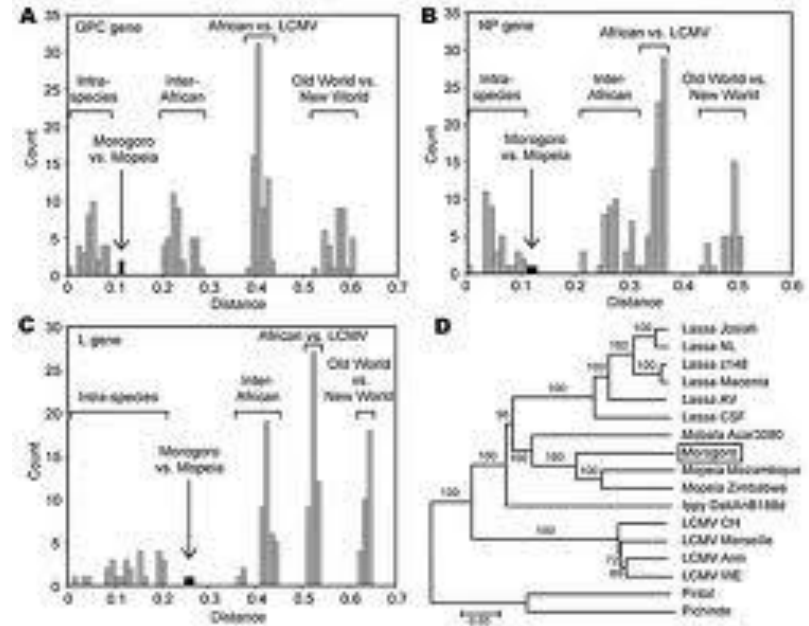
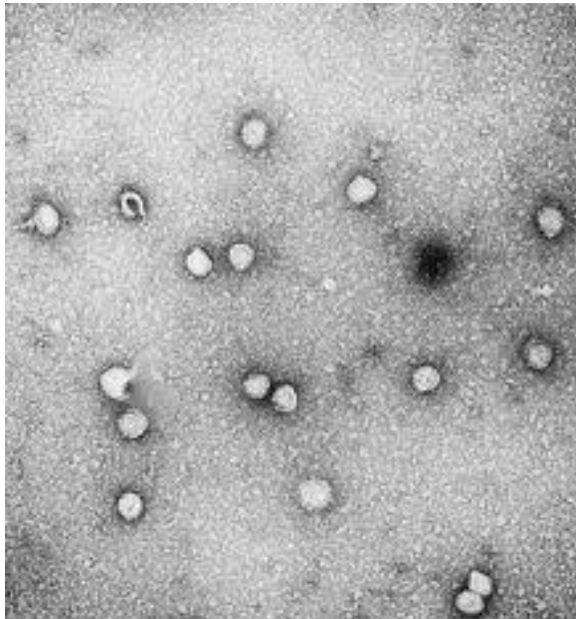
a pig or herd **with epidemiological and / or clinical evidence** compatible with the disease and with **POSITIVE** results to:

Conventional or real time **RT-PCR**; or
Virus neutralization test (**VSN**); or
Immunohistochemical test (when applicable).



CONFIRMED POSITIVE CASE

A pig **with or without clinical signs** and / or compatible lesions and / or **epidemiological evidence**, from which the FPC **virus is isolated** and **confirmed by genetic sequencing** in a SENASICA laboratory, in accordance with international standards.



NATIONAL NETWORK OF SENASICA LABORATORIES



DIFERENTIAL DIAGNOSIS

- African Swine Fever
- Porcine Circovirus
- Infection with bovine viral diarrhea virus
- Salmonellosis
- Erysipela
- Acute pasteurellosis
- Other viral encephalomyelitis
- Streptococcosis
- Leptospirosis
- Coumarin poisoning
- Aujeszky's Disease
- Porcine reproductive and respiratory syndrome (PRRS)
- Other septicemia causes

Epidemiological surveillance

It includes the activities that allow gathering the indispensable information to identify and evaluate patterns of diseases and pests, to detect and anticipate any change that may occur due to alteration in the conditional and determining factors, in order to establish the corresponding zoosanitary measures.

Objective

Demonstrate the absence or presence of an etiological agent in a given area.



Epidemiological surveillance

ACTIVE

Search for the etiological agent through epidemiological sampling.



Statistical sampling in farms, Backyards and slaughterhouses.

PASSIVE

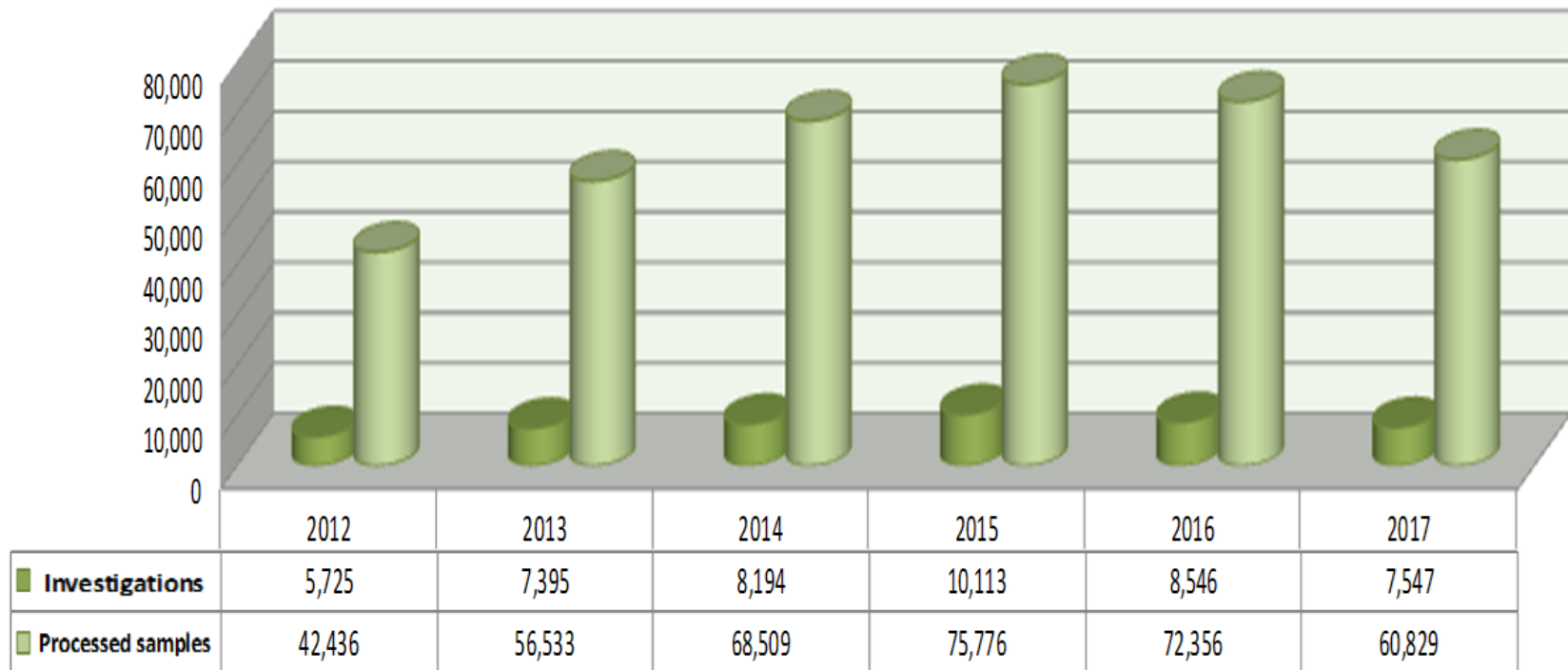
Notification of any suspected case of notifiable disease.



- Clinical suspicions
- Suspicious in slaughterhouse.
- Diagnostic laboratories.
- Reports to SIVE.

CSF ACTIVE SURVEILLANCE 2012-2017

Number of investigations and processed samples for the diagnosis of CSF in Mexico 2012-2017



PASSIVE SURVEILLANCE

Promotion of notification

The objective is that any person involved with livestock activities, report to the official veterinary services the possible presence of an exotic, emerging or re-emerging animal disease or pest.

Promotion is made through:

Distribution of educational contents

Booklets

Pamphlets

Posters

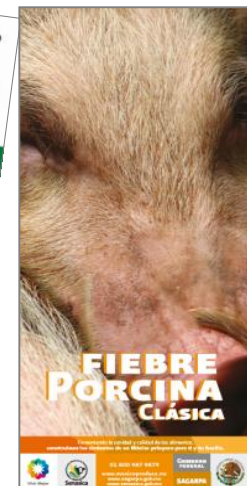
Promotional items

Training courses

University courses

AUTOSIM I.

AUTOSIM II.



ATTENTION OF THE NOTIFICATION

Animal **WITH** suggestive signs or mortality

Attention of the notification

Sample collection

Official diagnostic laboratory

Diagnostic result

Negative
Closure of the
case

Positive
Zoonitary
measures

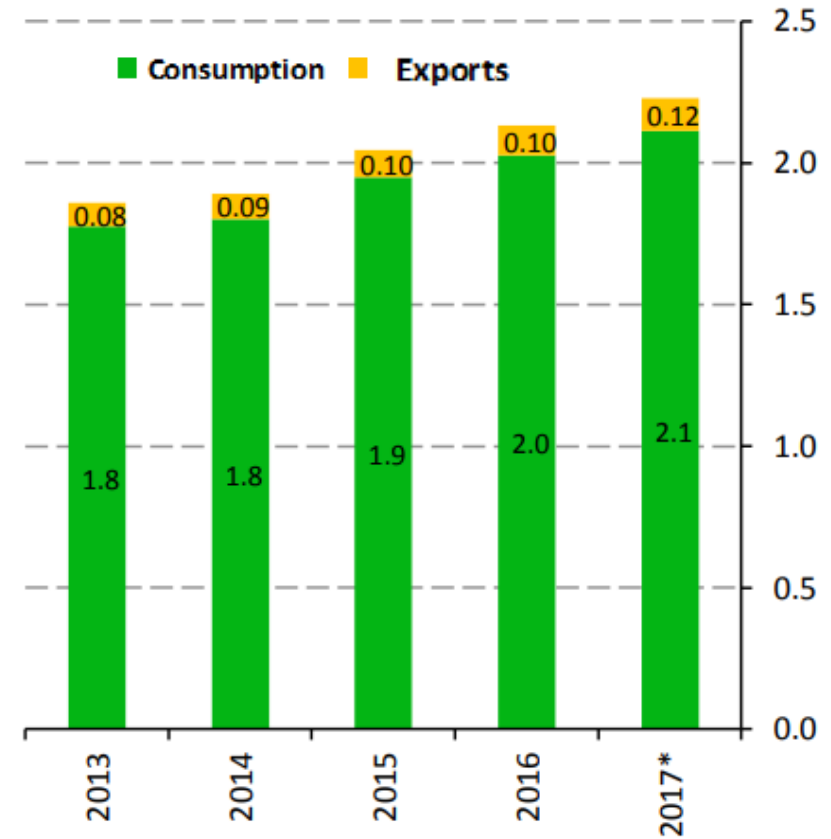
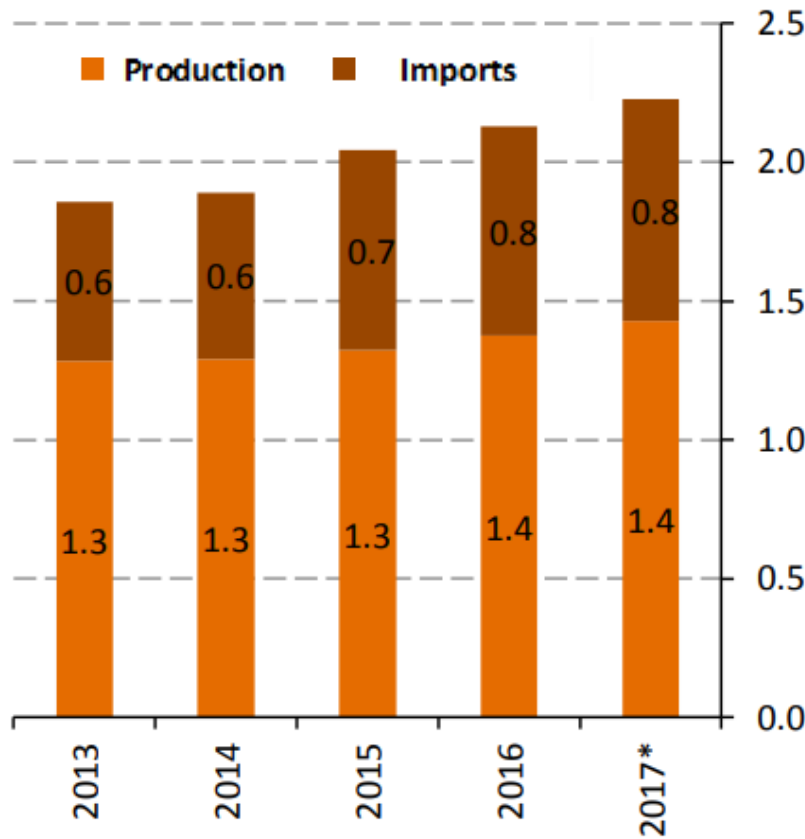


Offer and demand of pork in Mexico, 2013-2017

(Millions of tons)

a) Offer

b) Demand



Fuente: SIAP, SIAVI y Números del Campo

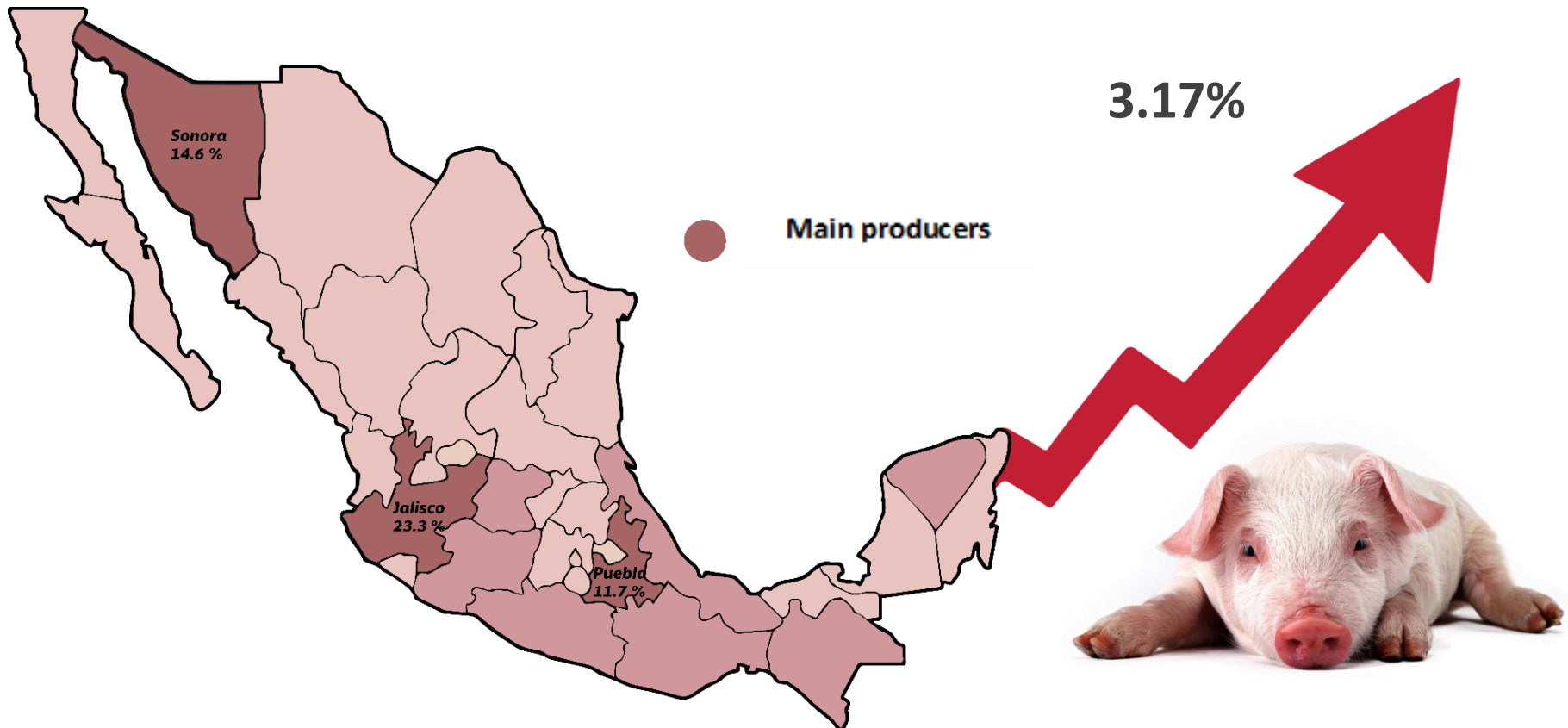
*Estimación, Números del Campo, febrero de 2017.

Fuente: SIAP, SIAVI y Números del Campo

*Estimación, Números del Campo, febrero de 2017.

PRODUCTION OF PORK MEAT AT A NATIONAL LEVEL

The main producing states are Jalisco, Sonora and Puebla, which contribute 49.8% of the national production value, followed by Yucatan, Veracruz, Guanajuato, Michoacán, Oaxaca, Chiapas and Guerrero.





SENASICA

SERVICIO NACIONAL DE SANIDAD,
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