



# COMITÉ DE SANIDAD VEGETAL DEL CONO SUR

Pest Outbreak Alert and Response Systems:  
COSAVE Locust Alert System

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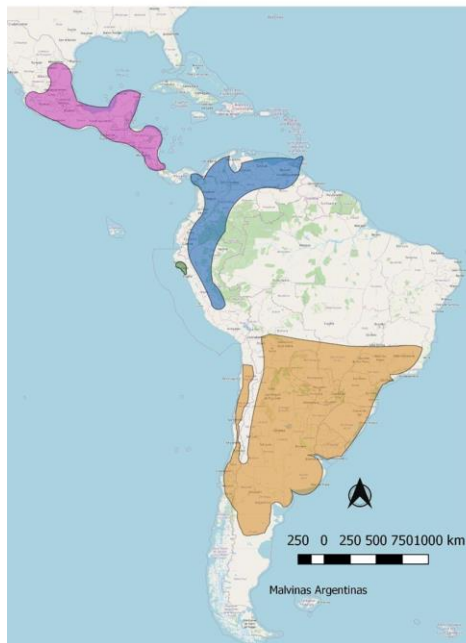
# Pest Outbreak Alert and Response Systems: Cosave Locust Alert System







# South American Locust



## DISTRIBUCIÓN DE LAS LANGOSTAS DE AMÉRICA



-  Distribución *S. piceifrons piceifrons*
-  Distribución *S. piceifrons peruviana*
-  Distribución *S. interita*
-  Distribucion *S. cancellata*



**GICSV**  
Grupo Interamericano de  
Coordinación en Sanidad Vegetal  
Inter-American Coordinating  
Group in Plant Protection

Ing. Agr. Hector E. Medina



A large-scale photograph capturing a massive swarm of locusts. The insects are seen in various stages of flight across a bright blue sky, with many appearing as dark specks and others showing their translucent wings. Below, a wide dirt road stretches into the distance, flanked by a fence and dry, yellowish grass. The ground is covered with a thick layer of locusts, and some are also seen on the fence posts. The overall scene conveys the immense scale and movement of the infestation.

**Langosta sudamericana**  
**South American Locust**

# Locust Potential Impact



Production at risk

**USD 3.7  
billion dollars**  
(Only in Argentina).

Consultoría  
Beneficio - Costo.  
IICA, 2020.



# Objectives



## General Objective:

Contribute with the response system and risk assessment to reduce of damage by locust.

## Specific Objectives:

- Implement an Information System for the surveillance and alert responses in COSAVE Region.
- Develop a System for the management and assessment of data using GIS.

# 1) Mobile App at regional level

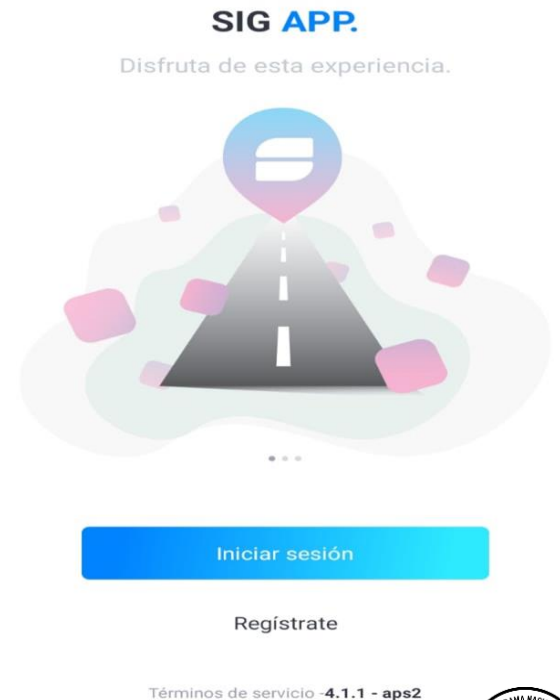


## What for?

Collect data and information from the field

## How?

By the mobile APP (SIGAPP Senasa AR)



# 1) Mobile App at regional level



## Advantages:

- Harmonization of surveillance criteria.
- Information in real time (it works offline).
- Information is centralized in the Locust GIS.

## 2) Locust Alert System



### What for?

Improve the communication between NPPOs and notify farmers about the locust location in real time.

Improve the response capacities for locust outbreak.

### How?

Using the information from the Mobile App, through the Locust Alert System and the implementation of a website.

## 2) Locust Alert System



### Advantages:

- Constant and synchronized communication between NPPOs
- Fast decision making
- Countries can increase anticipation capacity and response
- Communication with the stakeholders



### 3) GIS Locust



#### What for?

To improve the management of the information, response capacities, risk assessment, decision making and pest control

#### How?

Through the system to analyze surveillance data and manage information to facilitate decision making and pest control.

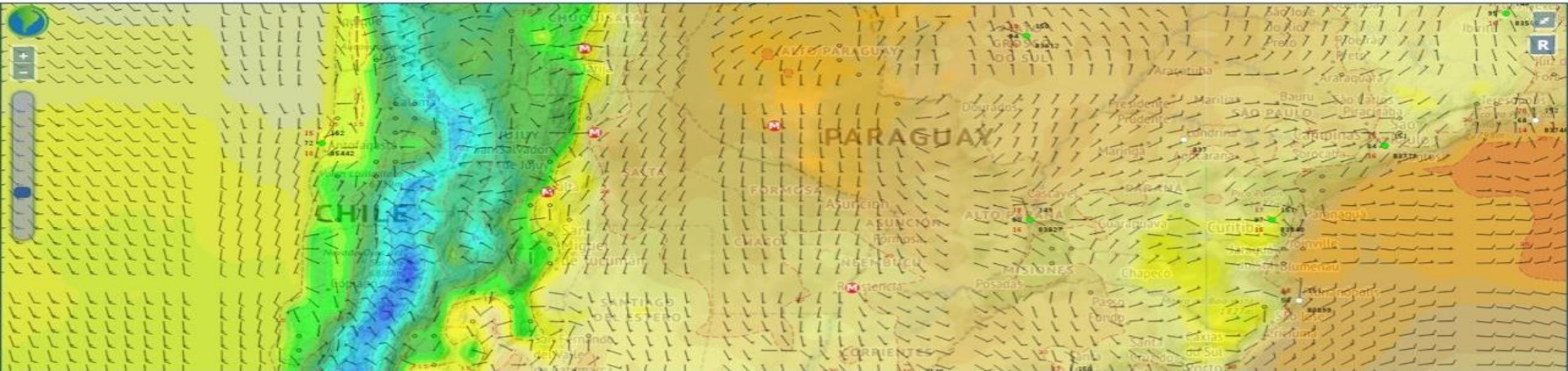
### 3) GIS Locust



Sistema desarrollado por SENASA Argentina con el apoyo de IICA



Bienvenido hmedina

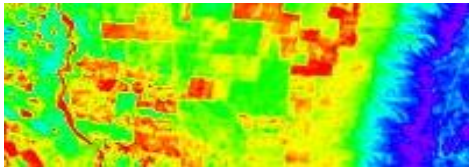


### 3) GIS Locust



#### Features:

- Integrated GIS System.
- Analyze, manage and download data.
- Upload layers in kml, csv, txt. formats.
- Share information and layers with users.
- Collect information from other systems.
- Incorporate information through WMS.



# Conclusions



- System available for pest surveillance, management and alerts of Locust in South America
- Easy system to be used by experts of different countries
- Integrated System to Strengthen Pest Outbreak Alert and Response Systems

# Next steps



- Improve and develop the system, adding new features
- Use the system for other pests, E.g HLB, *Lobesia botrana*, Fruit Fly in Argentina
- Implement this system at continental level (or similar system), through Inter American Coordinating Group in Plant Protection (GICSV)



Thanks for your time

