Emergency Prevention System

©FAO/G. NAPOLITANO

EMPRES Animal Health

©FAO/I. SPELL

EMPRES Plant Protection

©FAO/D. WHITE

EMPRES Food Safety

©FAO/S. SARKAR

Prevention

saves **lives**

saves **livelihoods**

saves **money**

FOOD CHAIN CRISIS
Management Framework

EMPRES
EMERGENCY PREVENTION SYSTEM

FAO FIAT PANIS

Prevention

saves **lives, livelihoods** and **money**

Billions of dollars could be saved by stepping up prevention and control of high impact animal diseases, plant pests and diseases and food safety incidents, some of which pose a direct or indirect threat to human health and the environment.

These threats invariably impact negatively people's livelihoods, food security and economic development:

Animal health

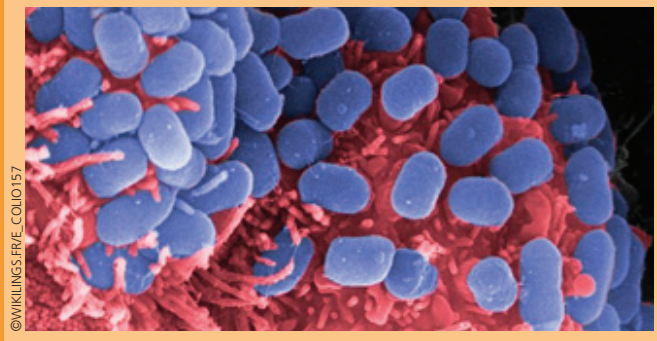
Influenza viruses (e.g. H5N1, H1N1), foot-and-mouth disease, Rift Valley fever, African swine fever, *peste des petits ruminants* and rabies have recently raised alarm because of active spread.

Plant protection

Locusts, armyworm, fruit flies, banana and cassava diseases and wheat rusts are among the most destructive transboundary plant pests and diseases.

Food safety

Recent food safety incidents, such as *Escherichia coli*, hepatitis A contaminated green onions and semi-dried tomatoes, salmonellosis outbreak with peanuts, dioxin contaminated pork and melamine contamination of foods resulted in human morbidity and mortalities, trade disruptions and huge economic losses.



©WIKILINGS.FR/E_COLIO157

The outbreak of *Escherichia coli* O104:H4 in 2011 took 50 lives in Germany, and 4 075 cases were reported in sixteen countries in Europe and North America.

©FAO/G. NAPOLITANO

The global cost of H5N1 Highly Pathogenic Avian Influenza was estimated in 2005 at over USD 10 billion, yet losses continue today – as do human fatalities in a few countries.

Controlling the 2003-2005 upsurge of Desert Locust in West Africa cost USD 400 million. Harvest losses were valued at USD 2.5 million.

Dioxin contaminated Irish pork in 2008 exposed consumers to dioxin up to 2 000 times over the safety limits. Economic losses were estimated at over USD 1 billion.

The 2002-2003 severe acute respiratory syndrome outbreak was estimated to have cost China, Hong Kong, Singapore and Canada around USD 50 billion.

Economic losses due to fruit flies are estimated to several million dollars per year.

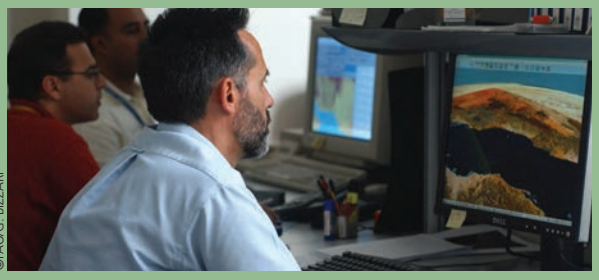
Protection against animal and plant diseases and pests and food safety threats – and preventing their spread – is one of the keys to fighting hunger, malnutrition and poverty.

Prevention and early warning

The Emergency Prevention System (EMPRES) addresses prevention and early warning across the entire food chain. It promotes the effective containment and management of the most serious epidemic pests and diseases and food safety threats through international cooperation involving early detection, early warning, preparedness and timely reaction, coordination and communication, and capacity development.

This is achieved through three thematic systems:

- **EMPRES** Animal Health
- **EMPRES** Plant Protection
- **EMPRES** Food Safety



©FAO/G. BIZZARI

Monitoring global weather, vegetation and locust data at the FAO Desert Locust Information Service in Rome. Data arrives directly from field locations through GPS transmitting devices. Combined with global satellite data, it is analyzed by locust forecast experts.

Early detection

EMPRES promotes event reporting.

EMPRES enhances the capabilities of laboratories and specialized units within the ministries of Agriculture.

Early warning

EMPRES monitors trends and tracks events.

Preparedness and timely reaction

EMPRES contributes to simulation exercises and practiced contingency plans.

EMPRES develops and introduces new and environmentally sound control technologies.

Coordination and communication

EMPRES ensures close collaboration and partnership with affected countries and national and international agricultural research centres and other international institutions, as well as inter-agency coordination.

EMPRES is at the centre of communication with all stakeholders, internally, across agencies and with the public.

Capacity development

Capacity development at the international, regional, national and local levels, ensures that EMPRES tools are operational and adapted to the needs on the ground.

EMPRES

The Emergency Prevention System (EMPRES) was established by FAO with the goal of enhancing world food security, fighting transboundary animal and plant pests and diseases and reducing the adverse impact of food safety threats.

EMPRES has proven that investment in emergency prevention is more cost effective, livelihoods saving and ecologically less devastating than responding to fully developed food chain crises.

©FAO/G. TORTOLI

Features of one single locust help determine a potential threat of the actual locust population.

National Locust Control Units in the Western Region of Africa

- EMPRES, through the FAO Commission for Controlling the Desert Locust in the Western Region (CLCPRO), has supported the establishment of National Locust Control Units within the ministries of Agriculture in Chad, Mali, Mauritania and Niger.
- Thanks to these National Locust Control Units, four desert locust outbreaks were successfully controlled, in Mauritania (2008, 2009 and 2010-11) and in Niger (2009).
- No external assistance was needed for these control campaigns.
- EMPRES good practices have been adopted. Combined with biopesticides, less pesticides are used during control operations.

Adapted to the food chain

EMPRES – Animal Health, Plant Protection and Food Safety – works with FAO members and other partners to prevent food chain emergencies.

EMPRES is a fundamental component of FAO's Food Chain Crisis Management Framework (FCC). The FCC supports FAO member countries in the fight against threats to the human food chain – including animal health, plant protection and food safety – at all stages, from production to consumption.

©FAO/G. NAPOLITANO

©FAO/G. NAPOLITANO

©FAO/P. JOHNSON

EMPRES
EMERGENCY PREVENTION SYSTEM

Emergency Prevention System (EMPRES)
Food and Agriculture Organization of the United Nations
Viale delle Terme di Caracalla, 00153 Rome, Italy
www.fao.org/EMPRES