

EMPRES

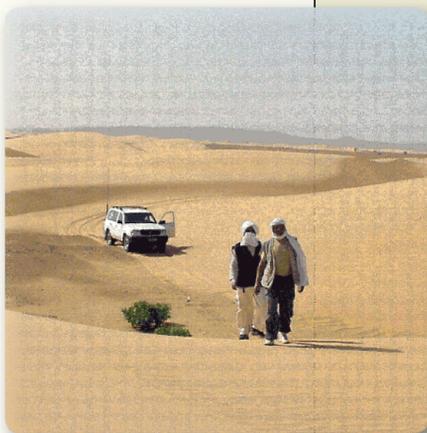
Building national capacity

Regional cooperation makes sense against plant pests capable of striking across national boundaries. FAO established the Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases - Desert Locust Component in 1994 to foster that

cooperation while building national capacity to manage the pest. EMPRES's first field programme covered the Red Sea region. As of 2006, EMPRES is concentrating on helping countries in West and Northwest Africa become proficient in the core locust-management activities described below.

Surveys

Early detection takes place when survey teams investigating likely locust areas find evidence that the insects are multiplying and starting to act as a group. EMPRES courses teach national locust trainers from affected countries the latest survey methods so they can teach others how to conduct surveys. EMPRES also sponsors joint surveys so locust officers from neighbouring countries can learn to work together.



Improved communications

Reliable communications are a critical component of an early warning system. Global Positioning Systems, satellite phones, high-frequency radios and hand-held data input devices allow rapid and precise reporting of locust activity and environmental conditions. Weather maps and satellite imagery of cloud cover and vegetation can point survey teams to suitable locust habitats and likely locust infestations. EMPRES provides training and equipment in these areas.



Contingency planning

Countries must plan ahead before an emergency develops. Contingency planning includes using field and classroom exercises, and computer simulations, to estimate financial and equipment requirements to rapidly deploy survey and control teams. National locust managers learn how to develop meaningful and realistic plans that address the variety of problems that may be encountered during a real emergency. Shortcomings are identified that may require assistance from donors.



Control

Control campaigns must consider a variety of issues: spraying efficiency, coordination between survey and spraying teams, deciding priority targets, support of aerial operations, health of all campaign staff and environmental safety.



Research

Operational research into how to improve locust management must be done during both recessions and emergencies. EMPRES encourages national and international research activities in such areas as bio-control, population dynamics, survey methodology, barrier treatment, and economic impact and environmental issues.



New technologies

New technologies such as seasonal weather forecasts to predict rainfall up to six months in advance, geographic information systems to manage and analyze data and high resolution remote sensing imagery to identify areas of green vegetation are being refined continually and incorporated into national locust programmes under EMPRES. FAO's locust Web pages, Locust Watch, contain the latest information on EMPRES activities.



Safeguarding health and the environment

EMPRES activities focus on establishing safe handling, storage and disposal procedures for pesticides, monitoring worker exposure, and training special teams to check control operations. FAO is actively seeking alternatives to conventional pesticides that can be integrated into Desert Locust control programmes. Field trials are being conducted with non-chemical products such as a natural fungus (*Metarhizium anisopliae*) specific to locusts and grasshoppers, a locust pheromone (phenylacetone nitrile or PAN) that affects gregarization behaviour, and an insect growth regulator that stops hopper development.