Food and Agriculture Organization of the United Nations

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INNOVATIVE PARTICIPATORY APPROACH TO CONTROL RED PALM WEEVIL ON DATE PALMS IN MAURITANIA

The Red Palm Weevil (RPW), *Rhynchophorus ferrugineus* (Olivier) is the most destructive pest of palms, causing widespread damage to several palm species in diverse agro-ecosystems worldwide. The RPW originates from South and Southeast Asia and is now spreading to nearly all Near East, North Africa, and Mediterranean countries. This invasive pest moves from one country to another mainly through infested planting material.

In North Africa, the RPW poses a serious threat to date palm cultivation, which accounts for 15 percent of global date production.

In Mauritania, the RPW was detected for the first time in late December 2015 - in the Tidjikja oasis in Tagant Wilaya, which covers nearly 20 000 ha with around 2.6 million date palm trees. This was the first time the RPW was detected in the Maghreb Region. By March 2016, around 70 infestations had been detected in Tidjikja. Detection is extremely difficult during early stages of an infestation due to the way the RPW burrows into the palm tree. Usually weevils are detected on palms in later stages of infestation when adults emerge, triggering new infestations, and spread of the weevil.

INNOVATIVE PARTICIPATORY PEST CONTROL APPROACH

The Government of Mauritania requested FAO's technical assistance to control the RPW outbreak in the country. The technical cooperation project *"Assistance d'urgence pour contrôler le charançon rouge du palmier dans les oasis de la Mauritanie"* was launched in March 2016 to support the government to contain the spread and eradicate the pest. The Integrated Pest Management (IPM) approach, based on extensive preventive measures and collaborative practices, was adopted in the project to control the pest. A participatory pest management action plan was put in place, along with a communication strategy, supported by adequate human and financial resources from FAO, the Ministry of Agriculture, and farmers' organizations.

KEY FACTS

RED PALM WEEVIL

RPW IS ONE OF THE WORLD'S MAJOR INVASIVE PEST SPECIES AND IS THE SINGLE MOST DESTRUCTIVE PEST OF SOME 40 PALM SPECIES WORLDWIDE

RPW WAS DETECTED IN THE GULF REGION DURING THE MID-EIGHTIES. OVER THE LAST THREE DECADES THE WEEVIL HAS SPREAD RAPIDLY THROUGH THE MIDDLE EAST AND NORTH AFRICA, AFFECTING ALMOST EVERY COUNTRY IN THE REGION

RPW ATTACKS YOUNG, SOFT TREES THAT ARE LESS THAN 20 YEARS OLD. AROUND HALF OF THE 100 MILLION DATE PALM TREES FIT THESE CRITERIA AND ARE THEREFORE VULNERABLE

RPW IS VERY DIFFICULT TO DETECT IN THE EARLY STAGES OF AN INFESTATION DUE TO THE VERY FEW EXTERNALLY-VISIBLE SIGNS: AROUND 80 PERCENT OF THE PEST'S LIFE-CYCLE TAKES PLACE HIDDEN INSIDE THE TREE

INTEGRATED PEST CONTROL METHODS INCLUDE REMOVAL OF ALL INFESTED PALMS, REDUCED USE OF INSECTICIDES, USE OF BIO-PESTICIDES, LOW COST, AND HIGHLY SENSITIVE MICROPHONES TO DETECT LARVAE FEEDING INSIDE A TREE, PHEROMONE TRAPS, DRONES, REMOTE-SENSING, SNIFFER DOGS

FAO-RED PALM WEEVIL

E-MAIL

Food-Chain-Crisis@fao.org

WEBSITES

http://www.fao.org/food-chain-crisis/how-we-work/plant-protection/red-palm-weevil/en/

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Well-structured IPM national and local programmes for the RPW were established with regular inspection of palm trees, pheromone trapping, targeted insecticide treatments, internal quarantine, and public awareness initiatives.

Theoretical and practical trainings were organized involving the local authorities (Governor, Municipality Head), technical department heads (Agriculture, Environment), farmers' organizations and NGOs. During the training, the risks the pest posed to the economy and to the oasis itself were highlighted.

FARMERS OF TIDJIKJA PROTECT THEIR OASIS

Farmers in Tidjikja, with special focus on youth, were trained on all IPM activities, including inspection for early detection, treatment techniques, trap management and date palm cleaning.

In early 2016, Tidjikja farmers created the group ISOT (Initiative pour la Sauvegarde de l'Oasis de Tidjikja) to mobilize resources, and start awareness and advocacy campaigns to eradicate the pest and protect their oasis.

A well-coordinated network was established comprising the entire Tidjikja farming community. The network used social media to share up-to-date information on the pest, coordinate their actions and mobilize resources.

The Federation of Farmer Associations in Tidjikja mobilized farmers to engage in the IPM action plan. The Federation also played a leading role in the coordination and communication with other national and international organizations to get technical and financial support to farmers. The government set up a national steering committee to monitor the RPW programme and report to the Minister of Agriculture. A communication plan was developed and implemented through different media (TV, radio, newsletters, social media, etc.).

SUCCESS OF IPM TO CONTROL RED PALM WEEVIL

The immediate and well-structured action initiated by the Government of Mauritania in implementing the IPM programme with the support of FAO, resulted in containing the pest in the original foci of infestation within one year with no further spread. The lead and pro-active participation and high commitment and cooperation of farmers and farmer cooperatives was key to the success of the action. Also, applying preventive measures, systematic coordination, planning and monitoring among all stakeholders facilitated RPW control in the oasis.

The successful pest integrated management resulted in an early pest eradication and the potential declaration of Tidjikja as a RPW free area.