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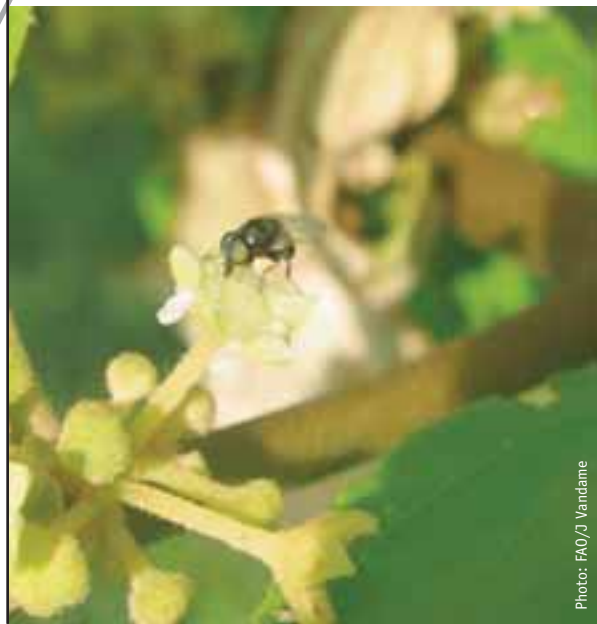
POLLINATION IN AGRICULTURE

THE IMPORTANCE OF **POLLINATION** FOR AGRICULTURE

Pollinators provide an essential ecosystem service to both natural and agricultural ecosystems. Growing evidences suggests that healthy pollination services are threatened in many parts of the world. Pollinators ensure reproduction, fruit set development and dispersal in the vast majority plants, both in agro-ecosystems and natural ecosystems. In turn, plants provide food and nesting resources for pollinators. Some pollinators such as bees also provide food and additional income for rural families, in the form of honey and other by-products – thus, declining pollinator populations impact on the sustainable livelihoods of rural families. A decline in pollinator populations also affects plant biodiversity. Native pollinator species may decrease when their nesting habitats are destroyed, when they find less wild flowering plants to forage on throughout their life cycle, and when they are impacted by injudicious use of pesticides.

At least one-third of the world's agricultural crops depend upon pollination provided by insects and other animals. As farm fields have become larger, and the use of agricultural chemicals increases, mounting evidence points to a potentially serious decline in pollinators. In Asia, the domesticated honeybee, Apis mellifera (and its several Asian relatives) have been utilized to provide managed pollination systems, but for many crops, honeybees are either not effective or are optimal pollinators. The process of securing effective pollinators to service agricultural fields is not always easy, and there is a renewed interest in ensuring pollination services through practices that support wild pollinators.

In response to these realizations, during the development of the National Agricultural Biodiversity Programme (NABP) - as part of the NABP thematic area of crop-associated biodiversity - the issue of conducting activities related to the conservation and sustainable use of pollinators was given priority. Government priorities for the activities on pollinators focused on fruits and vegetables of importance to Lao PDR. The documentation of local knowledge and building capacity was also seen as a priority.



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POLLINATION MANAGEMENT
AND BUILDING CAPACITY **IN LAO PDR** – A PRIORITY

In order to raise awareness on the issue of pollinators in Lao PDR – and more specifically, to build capacity and document knowledge on pollinators and pollination management for agricultural production, a series of activities were undertaken. After a first evaluation period, which took stock the level of understanding of ten participants and permitted the adaptation of curricular material to the needs of the national team, three set of curricular material were sent to the participants to permit them to master basic concepts of classification, flowering plants and pollinators. Participants studied the material and responded to questions, through a distance learning format.

The next step was the implementation of a series of field-based activities for collecting, identifying and mounting pollinators, and measuring their abundance, diversity and impact on the yield of three crops. Following field training sessions with an instructor, the national team continued to work on these measurements and compare data with the references collected in the literature. Information collected was used during a second stage to edit reference documents on the pollination of loofah, cucumber and jujube in the vicinity of Vientiane Capital (Lao PDR).

Through these activities on pollinators, awareness of the importance of pollination has been raised, and more importantly, technical officers at NAFRI have been trained in basic notions of pollination management. Recognizing the need for improved understanding of pollination management, today, these technical officers are equipped with the basic knowledge of how to train other technical officers, and to use this training to raise awareness, and develop pollinator management at the farm level, with farmers and extension agents.

Photo: FAO/J. Vandame

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