Government of South Australia
Eyre Peninsula Natural Resources Management Board

MEDIA RELEASE

1/10/10

Native bees help increase crop yields

LEADA's "Annual Spring Crop Walk" held during September was honoured to have a special guest speaker from the United Kingdom. Funded through the Eyre Peninsula Natural Resources Management Board, entomologist, Mike Edwards visited Eyre Peninsula, to research and build his knowledge and understanding of our native pollinators, beneficial species and their preferred food sources, nesting and habitat requirements. Recent experiences in the United Kingdom and Europe has highlighted the impact from reduced and degraded native habitat areas.

Increased pest problems and a greater reliance on managed honey bees for crop pollination are two significant issues which could be addressed by enhancing our native habitats and local species. Pollination of pulses and canola is a major contributing factor in yield production and is often left to chance and/or farmer's use of introduced honey bees to do the job.

While recent trials have indicated that significant increases in yield can occur with a saturation of honey bees, they are more effective in harvesting pollen than the act of pollinating our crops. During the honey bees harvesting process it carries it's pollen in a wet sack, this in turn sterilises most of the pollen making it unviable.

Native bee species matched to the specific crop type have shown to be far more effective in crop pollination than honey bees.

Most native bees forage for pollen and not honey production, during a 4 to 6 week period and carry dry live pollen, therefore, making them efficient pollinators. They also have a brush abdomen, and smaller body to pollinate legumes unlike those of the honey producing bees.

Matching pollinator host plants to the flower properties of the target crop is critical in building population levels of suitable native pollinators. Provision of suitable nesting conditions and habitat is critical in building native pollinator populations.

A very small percentage of host plant area, to target crop area, is needed to build pollinator populations to achieve adequate crop pollination.

Native bee species identified so far have been mining bees; these are visiting Brassicaceae (canola type flowers) and Fabaceae (bean and lentils) with no native bees found to during his visit on Lupins (most likely due to the overcast cool conditions).

Likely nesting sites for native bees are bare ground, in sunny position (facing north or west for warmth). Most bees are active from 10:30 am to 3:30 pm in sunny warm conditions and preferring to forage in sunny areas sheltered from wind.

Targeting insecticide applications during the early morning, late in the afternoon, or on dull overcast days and increasing or protecting low ground covering flowering shrubs will aid in the preservation of these valuable workers.

Designing & providing suitable nesting conditions and the supply of adequate annual food supply to maintain these native bee pollination species and quantifying improvement in grain quantity and quality from effective native pollination are some of the future challengers of this research.

For more information on Mike's visit or for identification of native bee and/or unknown species visiting targeted crops, contact Neil Ackland, Farming Systems Officer EPNRM on 86883401