Conservation biocontrol in the macadamia orchard – insectaries in the inter row

Case Study – cover cropping and beneficial insects, northern New South Wales

Row width - 14 m
Centre strip width - 6m
Excellent light to the orchard floor.

Plant species ID – seasonal seed mixes combining cover crops suitable for the macadamia orchard (vetch, smart radish, millet, crimson clover, sorghum, sunflower, flax, sunn hemp, rye corn, and many more). Different seed mixes for under the drip-line and the centre strip.

Comments – Dedicated cover cropping system with specialised machinery and long-term soil health management. Specific planning and scheduling of seasonal reseeding year-round. Reseeding alternate rows to limit disturbance of insectary. In conjunction with conservation biocontrol, there are strong ecosystem services for soil microbiology, water storage, carbon sequestration, and more.

This is a specialised system and further details and grower recommendations will be available from BioResources in 2020-21.

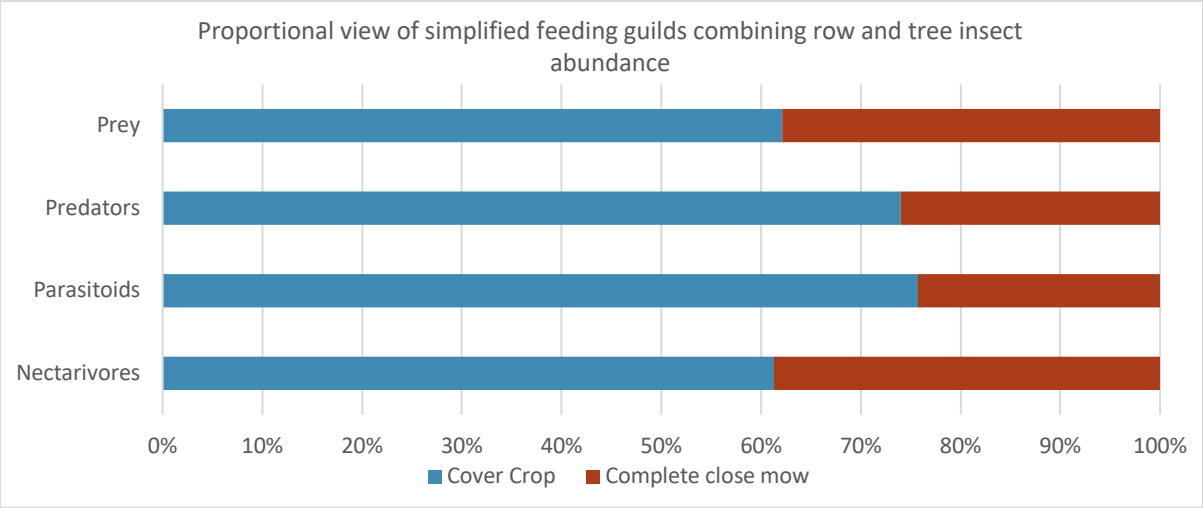

Chart 1: Comparison of simplified feeding guilds of beneficial insects – prey, predators, parasitoids and nectarivores (potential pollinators). More beneficial insects were caught in the cover crop.

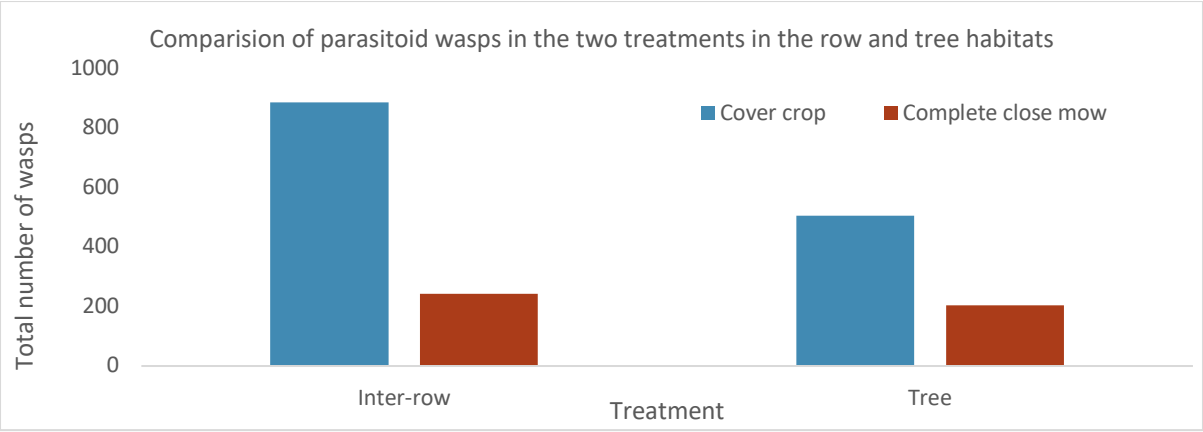

Chart 2: Comparison of the number of parasitoids caught in the inter-row and trees by treatment. The cover crop environment supports more parasitoids in both the inter-row and tree. Parasitoids are crucial beneficial insects in macadamia IPM.

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