Release of a new biological control agent, *Cotesia urabae*, against *Uraba lugens* in New Zealand

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In July 2010, the Environmental Risk Management Authority New Zealand gave approval to Scion to release the parasitoid *Cotesia urabae* (Hymenoptera: Braconidae) as a biological control agent for the gum leaf skeletonizer, *Uraba lugens* (Lepidoptera: Noctuidae), in New Zealand as part of a project supported by the Sustainable Farming Fund. To date four releases of the biological control agent have been made, three at the Auckland Domain and one at the Manukau Memorial Gardens. Further releases will be made to ensure establishment. Three *C. urabae* cocoons were found 1 month after the first release, suggesting initial establishment. Monitoring is continuing to determine if the population persists. It is predicted that the introduction of *C. urabae* into New Zealand will (1) lead to a decrease in the existing population of *U. lugens*, (2) have no impacts on non-target species, and (3) provide socio-economic benefits, such as reducing the number of encounters between humans and caterpillars (and therefore decreasing the incidence of allergic responses) and reducing the substantial costs associated with maintaining the utility of eucalypts for wood and pulp production and the costs of protecting or replacing amenity trees.

Introducing *Asobara persimilis* for control of *Scaptomyza flava* in South Island brassica crops

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Scaptomyza flava (Diptera: Drosophilidae), known as European leaf miner, has recently been identified as the pest species causing major damage to seed and other brassica crops grown in the South Island. This pest is particularly damaging to hybrid Asian brassica seed crops but is also a major pest of seedlings of radish, turnip and broccoli plants. A larval/pupal parasitoid, *Asobara persimilis* (Hymenoptera: Braconidae), is an effective natural enemy of *S. flava* at Pukekohe at certain times of the year. A project funded by MAF Sustainable Farming Fund involves mass-rearing the parasitoids in Auckland and releasing them in unsprayed brassica crops in Canterbury and North Otago. A total of 6550 pupae and 760 emerged adults were released over fortnightly periods at 4–6 sites from October 2010 to April 2011. The pupae included about 80% parasitised pupae and 20% that were unparasitised as a source of hosts for emerging parasitoids. Over-wintering surveys and further releases are planned for 2011/12 to try and establish this natural enemy as part of the ongoing development of IPM tools for seed, forage and vegetable brassica crops grown in the South Island.