



Agriculture and
Agri-Food Canada

Research
Branch

Agriculture et
Agroalimentaire Canada

Direction générale
de la recherche

Mr. Warren Baker
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March 9, 2003

Dear Warren:

The four main crop pest grasshoppers on the Canadian Prairies all accept bran bait and are killed by application of carbaryl-based bait such as your product, Eco Bran . Field and laboratory trials confirm this. The top three range and pasture pest grasshopper species also accept bait. There are a few species of grasshoppers that are less likely to eat bran, but these are mainly in the slant-faced grasshopper group, and not pests. For this reason, bait application fits well into an integrated pest management program. In 1985-88, I found that bait application to strips, roadsides, hot spots and other focused areas was a sound method of control. Reductions of 100% should never be the objective of grasshopper control.

In field tests with Sevin-based bait produced at the Lethbridge Research Centre, we determined the species and ages of the 17 species of grasshoppers present (Johnson and Henry. 1987. Journal of Economic Entomology 80: 685-689). The most common grasshopper in the 6 blocks and 24 roadside was the less migratory grasshopper (78% of the grasshoppers present), followed by the clear-winged grasshopper (12%). Both of these were killed, with an overall reduction of 76%. Because of the presence of some non-pest species, this probably indicates a reduction of more than 80%, in the difficult conditions of roadside treatment.

In late July, 2002, I used a truck-mounted applicator built at LRC to apply your Eco bran product to an infestation of the clear-winged and two-striped grasshopper in southern Alberta. Before treatment, there were 40 to 70 mature or nearly mature grasshoppers per square metre in the plots. Reductions were 80 to 85%, ranging from 62% to 90%, of both species within 3 days. Paralysis and death of the clear-winged grasshoppers were still evident 10 days later.

Sincerely,

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