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## Aphthona spp. movement and leafy spurge control along railroad right-of-ways

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(\*Article begins on following page.)

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Leafy spurge (Euphorbia esula L.) is often found in long narrow corridors such as railroad right-of-ways and is difficult to treat. Two experiments were conducted to determine the establishment, population increase, and movement of Aphthona species flea beetles in confined area of leafy spurge. A. nigriscutis was released in a dense stand of leafy spurge along a railroad corridor on June 28, 1993. There were five treatments consisting of 100, 200, 300, 400, and 500 adult insects released per treatment, plots were 80 m apart, and replicated three times along a 4 km stretch of railroad right-of-way. A. nigriscutis flea beetles were found in all treatments each year after release and leafy spurge stem density began to decline the second year after release. The greatest stem density decrease was 72% when 500 beetles/plot were released. A. nigriscutis rate of spread from the release point was similar regardless of the initial release number. A similar experiment was established on July 10, 1995 with a mixed population of A. czwalinae/lacertosa on a separate corridor. The number of insects released was increased to 500, 1000, 1500, and 2000 adults per treatment. A. czwalinae/lacertosa were found at all release points one year after release. The average stem density declined 71, 48, 60, and 23% within three m of the release point for the 2000, 1500, 1000, and 500 insect treatments, respectively. A. czwalinae/lacertosa were found at least 21 m from the release point within 2 years of the release. Aphthona spp established along the railroad right-of-ways and the rate of spread was similar regardless of the initial release number. However, the larger the release number the more rapid the leafy spurge stem density declined.