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Adapted by the Montana Weed Control Association Biological Control of Weeds Coordinating Committee.

# How to harvest leafy spurge flea beetle sites

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#### 1. Look for visual signs of flea beetle activity

- stunted spurge growth at or near the release point as compared to adjacent areas
- a reduced number of flowering plants or a thinning of the stand
- dead stems from last year, with stunted or no current growth
- feeding damage on leaves [shredded appearance of leaves]
- flea beetles observed on leaves and stems

### 2. Assessing flea beetle populations

- peak adult populations will generally occur between June 15th and July 15th, with some variation, depending on weather conditions
- select a hot, sunny day to check for flea beetles and sample during the mid-day, when the beetles are most active
- conditions that will reduce success in monitoring populations are: strong winds, cool temperatures, overcast skies, and wet vegetation

## 3. Sweeping techniques to determine if the site can be harvested

- select a day with optimum conditions and try to sample during mid-day
- take 5 sweeps where there are visual indications of flea beetle activity [use a strong sweep net and sweep hard]
- if you catch more than 10 beetles in 5 sweeps, continue sweeping until you have caught 500 to 1000 beetles and redistribute to a new site [500 to 1000 insects per site is a good number]
- redistribute to as many sites as possible
- IMPORTANT NOTE: if you do not catch at least 500 beetles in 5 minutes or less, do not redistribute from the site at this time

#### 4. How to move flea beetles to new sites

- insects can be moved in cardboard containers or paper bags; if they are to be moved long distances or kept for several days [do not hold for more than 3 days], be sure they have a lot of leafy spurge plant material in the container, that the container is sealed well with tape and that the insects are kept cool [in a refrigerator or on blue ice]
- flea beetles will slow down considerably if kept cold, eating less and causing less damage to those in the container
- DO NOT FREEZE. DO NOT ALLOW TO BECOME WET [do not use block or cube ice unless the insects are kept well above the melting ice]

#### 5. If you are unsuccessful in your sweeping efforts

- sweep again in a different area [check up hill or down hill] or on a different day
- you may have sampled too early or late, sample at a variety of times