



Using this "Flea Beetle Release Site Information Form" is not a requirement for using biological control, but it is a good idea.

Using the form will allow you to keep track of your sites and compare success between different sites. It will also get you thinking about the kinds of things that make a good release site. In addition, information on the form might help identify factors that are limiting your success with biocontrol.

You might want to consider taking pictures of all your release sites and attaching them to these forms, then keeping a file of the forms. That way, you'll have permanent written and photographic records of your release sites.

**To use:** Print as many copies as you want, or print then copy.

## Flea Beetle Release Site Information

- Site location: \_\_\_\_\_
- Township/section/range: \_\_\_\_\_
- Latitude & longitude (if known): \_\_\_\_\_
- Release date: \_\_\_\_\_ Number released: \_\_\_\_\_
- Species of flea beetle released:     A. lacertosa (black)             A. nigriscutis (brown)             Mixed
  - Date collected/obtained: \_\_\_\_\_
  - Where collected/obtained? \_\_\_\_\_
- New release site?  yes     no
  - If no, list date & type of insects used in previous release(s): \_\_\_\_\_

### Physical Characteristics

- **Elevation** = \_\_\_\_\_
- **Soil Type**
  - Sandy                       Loamy sand
  - Loam/sandy loam     Silt loam
  - Silty Clay Loam     Silty Clay
- **Soil Drainage**
  - Well-drained
  - Moderately well-drained
  - Poorly drained
- **Topographic Position**
  - Upper slope     Back slope
  - Toe slope         Riparian
  - Upland             Draw slope
  - Draw bottom     Flood plain
- **Risk of Spring Flooding**
  - None             Low to moderate
  - High             Standing water?
- **Annual Precipitation**
  - < 10 inches     10-15 inches
  - 15-20 inches    > 20 inches

### Cultural Characteristics

- **Current land use**
  - Pasture/grazing
  - Recreational
  - Roadside/right of way/etc.
  - Idle cropland
  - Other: \_\_\_\_\_

### Other Control Efforts

- **Herbicides**
  - Applied within last two years?
  - Applied within last 10 years?
  - Herbicides used: \_\_\_\_\_
- **Other treatments in last two years:**
  - Grazing?
    - Cattle?
    - Sheep and/or goats?
  - Mowing?
  - Burning?
  - Insecticides?

### Biological Characteristics

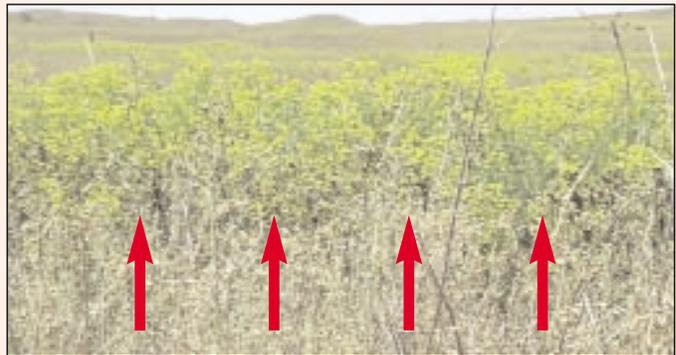
- **Spurge Height**
  - .25 meter     .5 meter
  - 1 Meter       > 1 meter
- **Spurge density**
  - 0-25 stems/meter squared
  - 26-100 stems/meter squared
  - 100+ stems/meter squared
- **Size of Infestation**
  - One acre or less
  - 1-10 acres
  - 10 or more acres
- **Vegetation Type**
  - Prairie/grassland
  - Shrub/grassland
  - Woodland/grassland
  - Other
- **Other Vegetation Present (list if known):** \_\_\_\_\_

# Flea Beetle Release Form Cheat Sheet

## Things to Remember

1. Have your release sites picked out **BEFORE** you get flea beetles.
2. Things to think about when picking release sites include...
  - Sunny, warm and dry is better than shady, cool and moist!
  - Dense patches of spurge are not good places to make releases. It's better to make releases on the edges of dense patches, or at thin spots inside of dense patches.
  - South facing slopes are better than north facing slopes.
  - Avoid areas that are prone to standing water.
3. Don't wait until the last minute to find a source for flea beetles. If possible, have your source lined up several weeks before you want to collect and redistribute.
4. Once you get your flea beetles, release them **AS QUICKLY AS POSSIBLE!** It's a good idea to keep your flea beetles in a cooler with blue ice until they can be released.
5. Things to think about when releasing flea beetles include...
  - More is **ALWAYS** better. Try to release a minimum of 1,000 flea beetles at each "drop."
  - Don't scatter or sprinkle!
  - Make releases as early in the season as possible so females can lay eggs at the new release site.

The "Release Site Information Form" and "Cheat Sheet" are designed to provide you with an easy way to keep track of your release sites, and with a few quick tips to keep in mind as you head to the field to release leafy spurge flea beetles.



Note how the flea beetles are moving from the outside into a dense patch of spurge. The point is simple: The places where you most want and need good control — i.e., the really dense, ugly patches — are not good places to try and get a population started. Release your flea beetles on the edges of dense patches and give them a chance to work their way in.



This is an extremely dense — but not uncommon — leafy spurge infestation. In situations like this, it's best to look for openings (like those marked with the red arrow) in dense patches to make flea beetle releases. Some people have had success by cutting a "hole" in heavy patches of spurge several weeks prior to releasing flea beetles.