Recommendations for Spraying 2, 4-D in Crops

Leonard Schrader
### Recommendations for Spraying 2, 4-D in Crops

**Prepared by Leonard Schrader, Extension Weed Specialist**

**Extension Leaflet 122**

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<table>
<thead>
<tr>
<th>Crop</th>
<th>Time to Spray Weeds</th>
<th>Rate of Application</th>
<th>Precautions and Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Small Grain:</strong></td>
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<tr>
<td>Wheat</td>
<td>Before crop fully stooled</td>
<td>¼ to ½ lb. per acre</td>
<td>Do not spray during boot and dough stage.</td>
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<tr>
<td>Oats</td>
<td>After crop fully stooled but before boot begins to swell.</td>
<td>½ to ¾ lb. per acre</td>
<td>Possible injury: abnormal heads, onion leaf and lodging.</td>
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<tr>
<td>Barley</td>
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<td>Barley tends to be most sensitive.</td>
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<td><strong>Flax:</strong></td>
<td>Spray when weed growth makes it practical. (When flax is 3 to 6 inches high.)</td>
<td>Maximum of ¼ lb. per acre. (with esters, use ½ as much.)</td>
<td>Yields reduced when sprayed in bud or bloom stage of growth.</td>
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<td>Can spray: Kota, Dakota, Redwing, Royal and Sheyenne.</td>
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<td>Don’t spray: Crystal, B5128 or Minerva.</td>
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<tr>
<td><strong>Corn and Sorghum:</strong></td>
<td>When majority of weeds have emerged and before weeds damage corn. Treat at any stage of growth except during tasseling.</td>
<td>¼ to ½ lb. of acid per acre. (Use esters at lower rate.)</td>
<td>Possible injury that may occur: brittleness, lodging, stalk curvature, absence of brace roots.</td>
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<td>Don’t cultivate until 5 to 10 days after spraying. Varieties differ in tolerance.</td>
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<td><strong>Perennial Grasses:</strong></td>
<td>At any stage of growth, except new seedlings during seedling stage.</td>
<td>Rates necessary to control and eliminate weeds will not affect well-established grass.</td>
<td>Bent and buffalo grass slightly susceptible. Grasses to be harvested for seed should be treated before heads appear.</td>
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</tbody>
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**Other Crops:**

- Sugar beets
- Soybeans, Peas
- Potatoes, Legumes
- Garden Crops

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<tr>
<td></td>
<td>Not recommended</td>
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<td>Take extreme care to prevent drift and volatile fumes from contacting these plants.</td>
</tr>
</tbody>
</table>

**NOTES:**

- Greatest injury to crops result during periods of high temperature and high humidity—this also is best time to kill weeds.
- Spray with 2,4-D when temperature is above 60° F. and below 100° F. (75° F. to 85° F. is best temperature.)
- Nozzle extensions may be practical on tall corn and small weeds to concentrate spray on weeds below leaves of corn.
- Esters cause injury to more plant species—amines and sodium safer to use for perennial weed control in crops. Vapors of esters and some amines are injurious to crop plants and may cause damage several hours after spraying.
- Flush and test equipment before using other chemicals on crops susceptible to 2,4-D.
- For more detailed information, see Experiment Station Bulletin 69, “Chemical Control of Weeds.” For weed control methods other than by 2,4-D, see S. D. Extension Leaflet 118, “Weed Control Methods.”


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Growth Stages of Small Grain and Flax

**SMALL GRAIN Spraying Guide**

- **SEEDLING**
  - Don't Spray

- **EARLY STOOLING**
  - Safe to Spray
  - ½ lb. per Acre

- **COMPLETELY STOOLED**
  - Safe to Spray

- **JOINTING STAGE**
  - Danger Period

- **BOOT & DOUGH STAGE**
  - Do Not Spray

- **MATURE**
  - Can Spray

**FLAX Spraying Guide**

- **TWO-LEAFED STAGE**
  - True Leaf

- **FIRST TRUE LEAF**
  - First True Leaf

- **FAST GROWING STAGE**
  - True Leaf

- **BUD STAGE**
  - Bud

- **BLOSSOMING STAGE**
  - Flower

- **MATURE**

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