



ENVIRONMENTAL STEWARDSHIP GUIDELINES

 **Furadan.4f**
insecticide/nematicide



RESPONSIBLE PESTICIDE USE REDUCES RISKS TO THE ENVIRONMENT

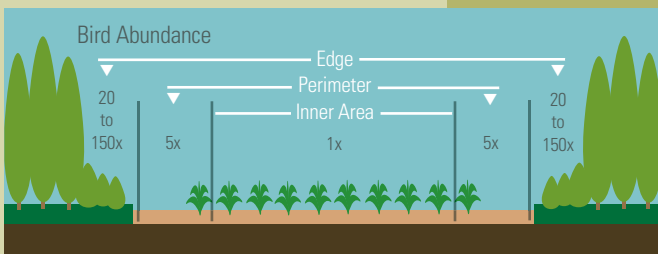
Frequently, farmland borders wildlife habitats which provide shelter and food for a variety of birds and other wildlife. Special attention is required when applying pesticides to maintain a balance between agricultural productivity and natural resources. Proper pesticide use allows farmers to continue farming efficiently and to continue using the products they need to maintain consistently favorable yields. Understanding and abiding by the product label is the most important step to product stewardship.

PROTECTING BIRDS AND WILDLIFE

Studies show that more birds are found at the perimeter and edge of the field than in the inner field area. These studies from prairie and woodland habitats in Iowa and Illinois found five times as many birds at the field perimeter and 20 times more birds at the edge in a prairie habitat and 150 times more birds at the edge in a woodland habitat.

Following are a few important tips to protect birds and wildlife from the effects of pesticide exposure:

- **Avoid** spraying or chemical drift outside of the treatment area.
- When maintaining or cleaning sprayers or applying pesticides, **avoid** chemical puddling. If puddling occurs, decontaminate the rinsate with lime and chlorine, rake it and bury it.
- **Do not** apply pesticides immediately before or during irrigation on fields near waterfowl nesting areas or in fields where waterfowl are known to repeatedly feed.
- Be sensitive to edge habitats. Turn off the sprayer rig when turning on end rows, and spray end rows after the field is sprayed.
- For foliar treatment of Furadan® 4F insecticide/nematicide to fields where a prior mature crop failure or seed head shattering has resulted in excessive surface residues of crop seed, till the field to bury the seed prior to making application.



PROTECTING AQUATIC ORGANISMS

Drift and runoff from treated areas may be hazardous to

Data from Best, Whitmore & Booth, American Midland Naturalist. Average number of birds based on census data from three farms each in Iowa and Illinois.

fish. There are a number of simple steps to take to prevent runoff from entering streams, lakes, rivers and ponds:

- **Do not** apply Furadan® 4F insecticide/nematicide directly to water.
- Fill, calibrate and rinse chemical application equipment a safe distance from water supplies.
- Leave no-spray buffer strips around surface water supplies, wells or irrigation ditches.
- Maintain grass waterways and grass or forage strips in fields as buffers to help retard the runoff of soil and agricultural chemicals into water supplies.
- Use contour farming or no-till farming on erodible lands to help keep runoff out of nearby bodies of water.

PROTECTING BEES

Honeybees are a vital part of our agricultural system because of the role they play in pollinating crops. Many plants produce nectar and/or pollen which are attractive to foraging bees. Pools and puddles of water, especially in dry periods, also attract bees. Bees may be attracted to a crop that is in bloom, or they may be attracted into treated fields by the presence of blooming weeds even though the crop itself is not in bloom.

Furadan 4F is highly toxic to bees when exposed to direct treatment or residues on crops. Many potential bee poisoning problems can be prevented by better communication and cooperation among the grower, pesticide applicator and the beekeeper. To improve communication



and protect bees from the effects of pesticide exposure, consider:

- *Bees forage up to three miles or more from their hive under some conditions, and they begin foraging early in the day. Accordingly, if the beekeeper is to move or confine his bees, he must do so the night before any treatment. Notifying the beekeeper at least the evening before the insecticide is to be applied can help to avoid problems.*
- *Since many decisions to use an insecticide are made only a few hours before the application is made, growers and applicators should be aware of the locations of hives within three miles of their crops. Local county Extension personnel may be of assistance in providing access to the names of beekeepers in your area, or the contact number for a State Apiary Inspector, or equivalent official.*

If insecticides are to be used, the following steps can help reduce potential harm to bees:

- **Do not** apply pesticides or allow them to drift to blooming crops or weeds if bees are in the treatment area.
- Apply insecticides in the late evening, night or early morning when fewer bees will be foraging.
- **Do not** spray when winds favor drifting.

Additional protective information may be obtained from your Cooperative Agricultural Extension Service.

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REDUCING SPRAY DRIFT

It is the applicator's responsibility to manage spray drift. Maintaining your equipment and choosing the proper application timing will help minimize drift and avoid adverse effects to nearby fields or wildlife. To reduce spray drift:

- *Use high flow rate nozzles to apply the highest spray volume.*
- *Use the lower spray pressures recommended for the nozzle.*
- *Use a nozzle type that is designed for the intended application.*
- *Set the boom height at the lowest labeled height (if specified) that provides uniform coverage. With ground applications, the boom height should remain level with the crop and have minimal bounce.*
- *Apply when drift potential is lowest – wind speeds between 2-10 mph.*
- *When applying in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.*
- *Replace inappropriate or worn nozzles.*
- **Do not** apply during temperature inversions.
- **Avoid** spraying when wind direction is toward sensitive and/or known habitats of endangered/threatened species.

ANTI-BAITING MEASURES

Illegal use of pesticides for predator baiting is not only unlawful, it poses a risk to other non-target species, including birds and livestock, and it poses a threat to the continued availability of products. To continue providing the American farmer the best products possible, please help to combat the use of pesticides for baiting.

Signs of pesticide misuse for baiting include:

- *Attempts by non-certified applicators to purchase federally registered restricted use pesticides.*
- *Unusual purchase amounts or purchases of pesticides at unusual times of the year.*

The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) alone carries criminal penalties of up to one year in jail with a maximum fine of \$50,000. Recent convictions have upheld the maximum penalty. Plus, violators could also face losing certain rights, such as their right to grazing on public lands. If protected or threatened species are exposed to pesticides due to baiting, additional jail terms and penalties may be imposed.

Proper stewardship of the environment is everyone's responsibility. Always read and follow label directions.



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