

Using Reflex Herbicide to Control Weeds in Winter and Summer Squash



WHAT IS REFLEX HERBICIDE?

Reflex herbicide is a selective preemergence herbicide for broadleaf weed control in summer and winter squash.

Reflex herbicide has been used for many years East of the Rocky Mountains, but only recently was registered in the PNW on potato. A new label allows Reflex herbicide use in winter and summer squash production. The active ingredient in Reflex is fomesafen, a PPO inhibitor in the same group of herbicides (14) as Cobra, Goal, SureGuard, Chateau, and Spartan. Reflex has both soil and foliar activity, but it is only labeled for preemergence use in squash.

WHAT WEEDS ARE CONTROLLED?

Broadleaved weeds, including puncturevine and nutsedge are the main targets of this herbicide. Expect exceptional control of pigweed, nightshade, and common purslane, acceptable control of common lambsquarters, and suppression of field bindweed and nutsedge at the 1 pt rate. Do not expect the ½ pt rate to control all broadleaf weeds.

TIMING AND RATE

Reflex should be applied after planting and well before squash seeds have germinated or seedling have begun to emerge. Like many other preemergence herbicides, Reflex herbicide must be activated with about 1/3 to 1/2 inch of water after it is applied. This 'activation' takes the herbicide into the soil and next to the weed seed where it does its work. Failure to incorporate the herbicide also increases the risk of damage to the crop if there is a heavy downpour as the squash seedlings emerge. Downpours just as the crop is emerging will cause the most damage to squash; activating the herbicide will alleviate some of this risk. Squash will typically recover from this injury very quickly and produce normal yields.

The rate range for Reflex is ½ to 1 pint/A. Use the higher rate on heavier soils and the lower rate on lighter soils. You also may find the lower rate adequate if tankmixing Reflex with herbicides such as Outlook (only labeled on Golden Delicious squash). If using this tankmix, it may be helpful to decrease the rate of Outlook as well.

Precautions

DIFFERENCES AMONG CUCURBIT SPECIES AND VARIETIES

Most of the research with Reflex at OSU focused on tolerance of Golden Delicious squash to Reflex herbicide, a Hubbard type of the genus and species *Cucurbita maxima*. This is a large seeded species that allows deeper planting than some of the other smaller seeded cucurbits, and therefore a greater degree of crop safety.



Butternut types (including Dickinson and other buckskin types) are typically more sensitive to Reflex herbicide than Golden Delicious. Zucchini and other summer squashes are tolerant of Reflex herbicide. Cucumbers, it turns out, are easily injured by Reflex, and are not included on this label. Much of this tolerance has to do with planting depth, so the deeper you plant the seeds, the more tolerant the crop will be to Reflex.

CARRYOVER POTENTIAL

Reflex herbicide is persistent, especially in dry climates. Please pay careful attention to the label. There are clear directions for the crops that can be planted after using Reflex. Research at OSU indicated no injury to winter wheat planted 4 months after application, or cabbage and sweet corn planted 12 months after application. However, injury to beets was visible at the 2 pt/A rate 12 months after Reflex herbicide was applied.

INDEMNIFIED LABEL AND HOW TO FIND IT

The label for Reflex is a Special Local Need (24c) indemnified label for Oregon and you must sign a waiver of liability to access it. Syngenta uses an online process. Follow these simple steps to find the Reflex label.

1. Go to <http://www.farmassist.com/> and under products click on indemnified labels.
2. If you have not registered as a user previously, do so now, then login.
3. Select the state (OR) and the product (Reflex).
4. A new page will come up and you will select the crop.
5. The next page is the waiver of liability. Go to the bottom of the page and click 'I accept' (if the conditions are acceptable of course).
6. Then print the label from the next screen. You must have this printed label in hand to use this product on your squash.

RESTRICTIONS AND PRECAUTIONS OF NOTE

- Avoid planting and application of Reflex herbicide before long cold and wet periods.
- If applying to Dickinson or butternut squash, consider applying to a small area to become familiar with crop safety on your soil type.
- **Alternate year applications.** A maximum of 1 pint of Reflex Herbicide may be applied per acre in **ALTERNATE** years in Oregon.
- Do not exceed 1 pint per acre of Reflex Herbicide on winter squash or summer squash per season.
- Preharvest interval (PHI): 32 days

Rotational intervals after applying Reflex herbicide	
<i>Crop To Be Planted</i>	<i>Months after Last Reflex Herbicide Application</i>
Beets, table or sugar	18
Brassica crops	18
Pea (succulent)	4
Pepper (transplanted only)	4
Potato	0
Pumpkin	4
Small grains	4
Snap bean	0
Squash	0
Sweet corn	10
Tomato (transplanted only)	4
All other crops not listed above	18