

POTATO AND HORSERADISH - COARSE (LESS THAN 3% ORGANIC MATTER)

General Information

Movement Dissolved in Runoff or through Soil.

DO NOT apply under conditions which favor runoff. DO NOT apply to impervious substrates such as paved or highly compacted surfaces or frozen soils. Groundwater contamination may occur in areas where soils are permeable or coarse and groundwater is near the surface. To minimize the possibility of groundwater contamination, carefully follow application rate as affected by soil type in the Application Instructions section of this label. DO NOT apply if all three criteria exist: coarse soils classified as sand (does not include loamy sand or sandy loam), less than 3% organic matter (as determined by soil tests, if not known), and where depth to groundwater is 30 feet or less.

Movement by Water Erosion of Treated Soil.

DO NOT apply or incorporate this product by flood or furrow irrigation. Ensure treated areas have received at least 0.5 inch of rainfall before using tailwater for subsequent irrigation of other fields.

Endangered Species Protection

This product may have effects on federally listed threatened or endangered plant species or their critical habitat. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county or parish in which you are applying the pesticide. To determine if your county or parish has a Bulletin, and to obtain that Bulletin, consult <http://www.epa.gov/espp/>, or call 1-844-447-3813 no more than 6 months before using this product. Applicators must use Bulletins that are in effect in the month in which the pesticide will be applied. New Bulletins will generally be available from the above sources 6 months before their effective dates.

To avoid adverse effects on endangered plant species, applicators must comply with the following mitigation measures when endangered plant species are known to occur in proximity of the application site:

- Aerial Application - Leave a 150-foot untreated buffer between treatment area and

endangered plant populations.

- Ground Application - Use low-pressure nozzles according to the manufacturer's specifications that produce only medium-to-coarse or very coarse droplets AND leave a 35-foot untreated buffer between treatment area and known endangered plant populations.

Product Information

Outlook herbicide is a selective residual herbicide for controlling many annual grass weeds, annual broadleaf weeds, and sedge as they germinate (see Table 1 of the label). Outlook can be used in agricultural field and row crops including bean (dry), beet (sugar), corn [field corn (grain, seed, silage), fresh sweet corn, popcorn], cotton, fallow, garlic, hops, horseradish, onions (dry bulb, green), peanut, perennial grasses grown for seed, potato, shallots (dry bulb), sorghum (grain), soybean, and winter squash.

Mode of Action

Outlook is a root-and-shoot growth inhibitor that controls susceptible germinating seedlings before or soon after they emerge from the soil. Dimethenamid-P is a chloroacetamide herbicide belonging to the herbicide mode-of-action Group 15 (WSSA)/Group K3 (HRAC).

Application Instructions

Outlook provides most effective weed control when applied by ground or aerial equipment and subsequently incorporated into soil by rainfall, sprinkler irrigation, or mechanical tillage before weed seedling emergence from soil. Outlook can also be applied through chemigation. Outlook may be applied as a preplant incorporated, preplant surface, preemergence, early postemergence, or layby (corn) treatment. Outlook may be applied using water or sprayable fluid fertilizer as the spray carrier.

Additionally, Outlook may be impregnated on and applied with dry bulk fertilizer. Sprayable fluid fertilizer as a carrier is not recommended for use after crop emergence. Refer to Additives for more information.

Application Rate

Application rates for Outlook when applied alone, in tank mix, or in sequential applications are given in Table 2. Refer to Crop-specific Information for additional rate information.

Application rates of Outlook vary by soil texture and organic matter. Soil texture groups used in this label are coarse (sand, loamy sand, sandy loam), medium (silt, silt loam, loam, sandy clay loam), and fine (sandy clay, silty clay, silty clay loam, clay loam, and clay).

DO NOT apply on coarse soils classified as sand (does not include loamy sand or sandy loam) with less than 3% organic matter (as determined by soil tests, if not known), and where depth to groundwater is 30 feet or less. When use rates are expressed in ranges, use the lower rate for more coarsely textured soils lower in organic matter; use the higher rate for more finely textured soils high in organic matter.

Preplant Incorporated Application

Apply Outlook and incorporate into the upper (1 to 2 inches) soil surface up to 2 weeks before planting. Use a harrow, rolling cultivator, finishing disk, or other implement capable of giving uniform shallow incorporation. Avoid deeper incorporation or reduced weed control or crop injury may result.

Preplant Surface Application

For use in minimum tillage or no-till production systems, apply Outlook alone or in tank mixes up to 45 days before planting. When making early preplant application (15 to 45 days before planting), use the highest rate specified for the specific soil type. Early preplant applications are not for use on coarse-texture soils or in areas where average annual rainfall (or rainfall plus irrigation) typically exceeds 40 inches. Early preplant applications may be applied as part of a split application program where the second application is made after planting (use 2/3 of Outlook herbicide rate early followed by 1/3 of rate after planting).

A split application is recommended when the initial application is made more than 30 days before planting. Tank mixes with postemergence herbicides registered for use on the specific crop such as glyphosate, Touchdown herbicide (glyphosate), or Gramoxone Inteon herbicide (paraquat) must be used when weeds are present at the time of application.

Preemergence Surface Application

Broadcast treatment uniformly to the soil surface after planting and before crop emergence. Rainfall, sprinkler irrigation, or shallow mechanical incorporation after application is required to move this product into the upper soil surface where weed

seeds germinate. If adequate rainfall or irrigation does not occur and weed seedling emergence begins, a shallow cultivation or rotary hoeing will improve performance.

Early Postemergence Application

Outlook must be applied before weed seedling emergence or in a tank mix with products registered for use on the specific crop on this label that control the emerged weeds. Refer to Crop-specific Information for specific postemergence applications by crop.

Layby Application

Use Outlook in field corn, seed corn, and popcorn. See Crop-specific Information - Corn for more details on layby application.

Split Application

Outlook may be used in split application programs where applications are made as part of the methods described above. If applications are less than 2 weeks apart, the total Outlook rate used must not exceed the maximum rate given for each specific soil type. If applications are 2 weeks or more apart, a total Outlook application rate of up to 21 fl ozs/A per year may be used on any soil type in all labeled crops except corn, cotton, sugar beet, and soybean. See Crop-specific Information section for maximum seasonal application rate in corn, cotton, sugar beet, and soybean.

Fall Application

For use only in the following states: Iowa, Minnesota, North Dakota, South Dakota, Wisconsin, north of Highway 136 in Illinois, and north of Highway 91 in Nebraska.

Outlook may be used in fall applications to control weeds in minimum tillage or no-till corn or soybean production systems planted the following spring. Apply up to 21 fl ozs/A of Outlook to medium-texture and fine-texture soils with greater than 2.5% organic matter.

Fall applications must be made after October 1. Apply Outlook in the fall after crop harvest when soil temperature at the 4-inch depth is sustained at less than 55° F and before the ground freezes.

Tillage operations may be conducted before or after applying Outlook. If following an application, tillage should be no more than 2 to 3 inches deep to uniformly incorporate the herbicide into the upper soil surface. If a sequential application

program (fall application followed by spring application of Outlook) is used, the maximum combined rate of Outlook that may be applied is 21 fl ozs/A per crop season.

Aerial Application Method and Equipment

Water Volume. Use 2 or more gallons of water per acre. The actual minimum spray volume per acre is determined by the spray equipment used. Use adequate spray volume to provide accurate and uniform distribution of spray particles over the treated area and to avoid spray drift.

Ground Application (Banding)

When applying Outlook herbicide by banding, calculate the amount of herbicide and water volume per acre needed using the formula given in the label.

Ground Application (Broadcast)

Water Volume. Use 5 or more gallons of water per acre. The actual minimum spray volume per acre is determined by the spray equipment used. Use adequate spray volume for accurate and uniform distribution of spray particles over the treated area and to avoid spray drift.

Cleaning Spray Equipment

Clean application equipment thoroughly by using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions and then triple rinsing the equipment before and after applying this product.

Ground Application (Dry Bulk Fertilizer)

Outlook herbicide may be impregnated or coated onto dry bulk granular fertilizer carriers for preplant surface, preplant incorporated, or preemergence application.

Impregnation or coating may be conducted by the in-plant bulk system or the on-board system. When impregnated onto some dry fertilizer blends, Outlook may exhibit a strong odor. Perform the mixing operation in a well-ventilated area.

Outlook may also be applied in herbicide tank mixes where the tank mix companion product is also registered for these application systems. Individuals or agents selling Outlook in these application systems are responsible for following all state and local regulations regarding fertilizer and herbicide blending.

Addition of a drying agent may be necessary if the fertilizer and herbicide blend is too wet for uniform application because of high humidity, high urea concentration, or low fertilizer use rate. Slowly add the drying agent to the blend until a flowable mixture is obtained. Drying agents are not recommended for use with on-board impregnation systems.

Under some conditions, fertilizer impregnated with Outlook may clog air tubes or deflector plates on pneumatic application systems. Mineral oil may be added to Outlook before blending with fertilizer to reduce plugging.

DO NOT use drying agents when mineral oil is used. To avoid separation of Outlook and mineral oil mixes in cold temperatures, either keep mixture heated or agitated before blending with fertilizer. Mineral oil may be used at in-plant blending stations or on-board injection systems. Apply 200 to 750 pounds of the fertilizer and herbicide blend per acre. Application must be made uniformly to the soil to prevent possible crop injury and for satisfactory weed control. Impregnated fertilizer spread at 1/2 rate and overlapped to obtain a full rate will offer a more uniform distribution. For granular fertilizer application to protect small birds and mammals, soil incorporation of the granules is required. A shallow (1 to 2 inches) incorporation is desirable for improved weed control. Deeper incorporation may result in unsatisfactory weed control.

Incompatible Mixtures

DO NOT impregnate Outlook or Outlook mixes on ammonium nitrate, potassium nitrate, or sodium nitrate fertilizers or fertilizer blends. Single superphosphate (0-20-0) and triple superphosphate (0-46-0) may be impregnated only with Outlook alone.

Chemigation Application via Sprinkler Irrigation Systems

Outlook may be applied as a chemigation treatment through sprinkler irrigation systems. Apply this product ONLY through a sprinkler irrigation system of the following type: center pivot, end tow, hand move, lateral move, side (wheel) roll, or solid set. DO NOT apply this product through any other type of sprinkler irrigation system. Application may be made alone or in tank mixtures with other herbicides on this label registered for use in specified sprinkler irrigation systems. Application must be made within specific crop stage timings and product use rates given in the container label Directions For Use. Uniform distribution of Outlook-treated irrigation water is the sole responsibility of the applicator and is required to avoid crop injury,

lack of herbicide effectiveness, or illegal pesticide residue in the crop. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers, or other experts.

Proper calibration is the responsibility of the applicator. The system must be properly calibrated (with water only) to ensure the amount of Outlook applied corresponds to the specified rate. Apply Outlook in volume minimums of 0.33 to 0.67 inch of water using the lower volume for coarse-texture soils and the higher volume for fine- texture soils. Application made in high volumes of water (more than 1 inch) may result in reduced weed control. Meter herbicide dilution into irrigation water through the entire time of water application for center pivot and lateral move sprinkler systems. For solid-set and hand-move sprinkler irrigation systems, apply Outlook through the system at the beginning of the set; then follow with additional water to reach volume minimums as listed by soil type. To increase calibration accuracy of injection metering equipment, dilute Outlook in a minimum of 3 parts water to 1 part Outlook. Maintain agitation in injection nurse tanks to keep a uniform herbicide suspension during application.

Special instructions for chemigation:

1. DO NOT apply when wind speed favors drift beyond the area intended for treatment.
2. DO NOT connect an irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
3. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
4. Recirculate and/or contain tail water (runoff water) from chemigation that contains Outlook in the field in a cistern or holding reservoir from the initial application and/or used only on adjacent, approved crops for which Outlook is registered for this type of application.
5. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. It must also contain a functional, normally closed, solenoid-operated valve located on

the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

6. The sprinkler chemigation system must contain a functional check valve, vacuum-relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow. In addition, systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

7. The sprinkler chemigation system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

8. The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Chemigation systems connected to public water systems:

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, discharge the water from the public water system into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

3. All chemigation systems connected to public water systems must also follow restrictions listed in the preceding section.

Additives

Spray adjuvants have little or no influence on Outlook herbicide performance when application is made before weed emergence. However, several tank mixes with Outlook require adjuvants to improve burndown of emerged weeds. Therefore, surfactants and/or low rate fertilizer [28%, 30%, or 32% urea ammonium nitrate (UAN) or ammonium sulfate (AMS)], or crop oil concentrate (COC) may be used with Outlook tank mixes applied preplant, preemergence, or early postemergence to the crop. Follow the adjuvant directions on the tank mix partner's label.

When an adjuvant (or a specific adjuvant product, such as a drift control agent) is to be used with this product, BASF recommends the use of a Chemical Producers and Distributors Association (CPDA) certified adjuvant for use on food crops.

Oil Concentrate

A crop oil concentrate must contain either a petroleum-oil or vegetable-oil base and must meet all of the following criteria:

- Nonphytotoxic
- Contain only EPA-exempt ingredients
- Provide good mixing quality in the jar test
- Successful in local experience

The exact composition of suitable products will vary; however, vegetable-oil and petroleum-oil concentrates should contain emulsifiers to provide good mixing quality.

Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oils. For additional information, see Compatibility Test for Mix Components.

The use of adjuvants containing penetrants, such as petroleum-based oils, after corn emergence may cause crop injury.

Nitrogen Source

Urea Ammonium Nitrate (UAN). Use 1 to 2 gallons of UAN (28%, 30%, or 32% nitrogen solution) per acre. DO NOT use brass or aluminum nozzles when spraying UAN.

Ammonium Sulfate (AMS). AMS at 8 to 17 pounds per 100 gallons of spray solution may be substituted for UAN. Use high-quality AMS (spray grade) to avoid nozzle plugging. Other sources of nitrogen are not as effective as those mentioned. BASF does not recommend applying AMS if applied in less than 10 gallons per acre because of potential problems with precipitation in reduced volumes. Use AMS only if it has been demonstrated to be successful in local experience.

Nonionic Surfactant (NIS)

The standard label recommendation is 1 to 2 quarts of an 80% active (NIS) per 100 gallons of water. For certain weeds, a higher spray surfactant rate is recommended.

Use Restrictions

- Maximum seasonal application rate - DO NOT apply more than a total of 0.98 pound of active ingredient dimethenamid-P (21 fl ozs of Outlook) per acre per season in all labeled crops except corn, sugar beet, and soybean. See Crop-specific Information section for maximum seasonal application rate in corn, sugar beet, and soybean.
- Preharvest Interval (PHI) - Refer to Crop-specific Information for crop-specific preharvest intervals and feeding and grazing restrictions.
- Outlook is not for sale, distribution, or use in Nassau and Suffolk counties in New York State.
- DO NOT contaminate irrigation ditches or water used for domestic purposes.

Use Precautions

- Emergency replanting intervals
- If any labeled crop treated with Outlook is lost to adverse weather or for other reasons, the area treated may be replanted to any of the labeled crops immediately, unless specified otherwise in the Crop-specific Information section of this label.
- If the original Outlook treatment was broadcast, DO NOT make a second application of Outlook.
- If the original application was banded and the second crop is planted in the row

middles, a second band application may be applied.

- Stress - Application to crops under stress because of lack of moisture, hail damage, flooding, herbicide injury, mechanical injury, or widely fluctuating temperatures may result in crop injury.

Crop Rotation Intervals

Refer to Table 3 to determine the proper interval between Outlook application and the planting of rotational crops. Determine the rotational crop interval for tank mix products and use the most restrictive interval of all products applied.

Limitations, Restrictions, and Exceptions

Potato and Horseradish

Use not permitted on horseradish in California. Outlook may be used as part of a weed management program in horse radish and potato.

In potato, apply Outlook preemergence (after planting or after drag-off). In horseradish, apply Outlook postemergence from the 2-leaf stage to the 8-leaf stage of plant development. Outlook may only be applied in a single application in horseradish and potato. In cold and wet growing conditions, Outlook application may result in delayed emergence or early season stunting of horseradish and potato.

Outlook maximum application rates in a single application are 12 to 18 fl ozs/A on coarse-texture soils and 14 to 21 fl ozs/A on medium-texture or fine-texture soils, but are also influenced by soil organic matter content. Refer to Table 2 for specific maximum application rates of Outlook depending on soil type and organic matter content. DO NOT exceed the specified rate by soil type in a single application.

Crop-specific Recropping and Rotational Cropping

If Outlook has been applied to horseradish and potato, and crop failure occurs because of adverse weather or other reasons, replanting (recropping) horseradish and potato is not recommended. If replanting a crop is necessary, plant any crop (e.g. corn, dry bean, grain sorghum, soybean) where soil application of Outlook is registered.

Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Soil incorporation](#)

[Band](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Soil incorporation](#)

[Band](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Soil incorporation](#)

[Band](#)

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Soil incorporation](#)

[Band](#)

Pre-Harvest Interval

40 days

Rates

[field rates 0](#)

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Restricted Entry Interval

12 hours

EXCEPTION: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

Soils

[Coarse](#)

[Loamy Sand](#)

[Sandy Loam](#)

[Sand](#)

Timings

[Postemergence \(Crop\)](#)

Preemergence (Crop)

Postplant

After drag-off.