2024-4633
2024-10-17

**(Container)**

**GROUP 3 HERBICIDE**

# NCS SIKA 480 Herbicide

A selective liquid herbicide for preplant soil incorporated weed control in many field crops, vegetables and ornamentals.

COMMERCIAL (AGRICULTURAL)

READ THE LABEL AND BOOKLET BEFORE USING
KEEP OUT OF REACH OF CHILDREN

ACTIVE INGREDIENT: trifluralin 480 g/L
Emulsifiable concentrate

REGISTRATION NO. 35320 PEST CONTROL PRODUCTS ACT

**HARMFUL IF SWALLOWED OR ABSORBED THROUGH THE SKIN**

**POISON**

**WARNING**
**EYE AND SKIN IRRITANT**
**POTENTIAL SKIN SENSITIZER**

**FAILURE TO FOLLOW LABEL INSTRUCTIONS MAY RESULT IN ERRATIC WEED CONTROL OR CROP DAMAGE. READ ALL DIRECTIONS CAREFULLY BEFORE APPLYING.**

NET CONTENTS: 9.45 L – 1000 L

Northern CropScience Inc.
Suite 300, 336 Sheppard Avenue East
North York, Ontario
M2N 3B4
1-437-880-8283

FOR CHEMICAL EMERGENCY: spill, leak, fire, exposure or accident, call CHEMTREC 1-800-424-9300.
For product and use information, call Northern CropScience Inc.: 1-437880-8283.

**PRECAUTIONS**
**KEEP OUT OF REACH OF CHILDREN**
Harmful or fatal if swallowed. Causes eye irritation. DO NOT get in eyes. May irritate skin and potential skin sensitizer. Avoid contact with skin. Do not store near heat or flame. Avoid contamination of foodstuffs, feeds and fish ponds.

Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair. In addition, wear protective eyewear (goggles or face shield) during mixing, loading, clean-up and repair. Gloves are not required during application within a closed cab.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

Apply only when the potential for drift beyond the area to be treated is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings.

**FIRST AID**
Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.
**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.
**If inhaled**: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.
**If in eyes**: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

**TOXICOLOGICAL INFORMATION**
The decision of whether to induce vomiting or not should be made by an attending physician. If lavage is performed, endotracheal and/or oesophageal control is suggested. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Employ supportive care. Treatment should be based on judgment of the physician in response to reactions of the patient.

**AGRICULTURAL CHEMICAL**
Do not ship or store with food, feeds, drugs or clothing.

**ENVIRONMENTAL PRECAUTIONS**
This product contains an active ingredient and aromatic petroleum distillates, which are TOXIC to aquatic organisms. TOXIC to non-target terrestrial plants. Observe spray buffer zones specified under DIRECTIONS FOR USE.
To reduce runoff from treated areas into aquatic habitats, avoid application to areas with a moderate to steep slope, compacted soil or clay.
Avoid application when heavy rain is forecast.
Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative filter strip between the treated area and the edge of the water body.

**STORAGE**
Store this product away from food or feed. DO NOT FREEZE. Store NCS SIKA 480 Herbicide in heated storage. Active ingredient crystallization may occur at temperatures below 5°C. If stored below 5°C, check for crystals in the bottom of each container. If crystals are present, place the container in a warm area (at

least 15°C) for several hours. For smaller containers, agitate contents by inverting several times and return it to the upright position. For larger containers, circulate contents. After several hours, if any crystals remain, agitate or circulate container contents again.
**Ensure any crystals are dissolved before adding to spray tank.**

**DISPOSAL**
**Recyclable Containers:**
DO NOT reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial/territorial requirements.

**Returnable Containers:**
DO NOT reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

**For containers that <u>can be refilled</u> for the user by the distributor/dealer:**
For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. DO NOT reuse this container for any other purpose.

**Disp<u>osal of unused, unwanted product:</u>**
For information on disposal of unused, unwanted product, contact the manufacturer or the provincial/territorial regulatory agency. Contact the manufacturer and the provincial/territorial regulatory agency in case of a spill, and for clean-up of spills.

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

(Booklet)

**GROUP 3 HERBICIDE**

# NCS SIKA 480 Herbicide

A selective liquid herbicide for preplant soil incorporated weed control in many field crops, vegetables and ornamentals.

COMMERCIAL (AGRICULTURAL)

READ THE LABEL AND BOOKLET BEFORE USING
KEEP OUT OF REACH OF CHILDREN

ACTIVE INGREDIENT: trifluralin 480 g/L
Emulsifiable concentrate

REGISTRATION NO. 35320 PEST CONTROL PRODUCTS ACT

**HARMFUL IF SWALLOWED OR ABSORBED THROUGH THE SKIN**

**POISON**

**WARNING**
**EYE AND SKIN IRRITANT**
**POTENTIAL SKIN SENSITIZER**

**FAILURE TO FOLLOW LABEL INSTRUCTIONS MAY RESULT IN ERRATIC WEED CONTROL OR CROP DAMAGE. READ ALL DIRECTIONS CAREFULLY BEFORE APPLYING.**

NET CONTENTS: 9.45 L - 1000 L

Northern CropScience Inc.
Suite 300, 336 Sheppard Avenue East
North York, Ontario
M2N 3B4
1-437-880-8283

FOR CHEMICAL EMERGENCY: spill, leak, fire, exposure or accident, call CHEMTREC 1-800-424-9300.
For product and use information, call Northern CropScience Inc.: 1-437880-8283.

**PRECAUTIONS**

**KEEP OUT OF REACH OF CHILDREN**

Harmful or fatal if swallowed. Causes eye irritation. DO NOT get in eyes. May irritate skin and potential skin sensitizer. Avoid contact with skin. Do not store near heat or flame. Avoid contamination of foodstuffs, feeds and fish ponds.

Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes during mixing, loading, application, clean-up and repair. In addition, wear protective eyewear (goggles or face shield) during mixing, loading, clean-up and repair. Gloves are not required during application within a closed cab.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

Apply only when the potential for drift beyond the area to be treated is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings.

**FIRST AID**

**Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.**

**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

**If inhaled**: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**If in eyes**: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

**TOXICOLOGICAL INFORMATION**

The decision of whether to induce vomiting or not should be made by an attending physician. If lavage is performed, endotracheal and/or oesophageal control is suggested. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Employ supportive care. Treatment should be based on judgment of the physician in response to reactions of the patient.

**AGRICULTURAL CHEMICAL**

Do not ship or store with food, feeds, drugs or clothing.

**ENVIRONMENTAL PRECAUTIONS**

This product contains an active ingredient and aromatic petroleum distillates, which are TOXIC to aquatic organisms. TOXIC to non-target terrestrial plants. Observe spray buffer zones specified under DIRECTIONS FOR USE.

To reduce runoff from treated areas into aquatic habitats, avoid application to areas with a moderate to steep slope, compacted soil or clay.

Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative filter strip between the treated area and the edge of the water body.

**STORAGE**

Store this product away from food or feed. DO NOT FREEZE. Store NCS SIKA 480 Herbicide in heated storage. Active ingredient crystallization may occur at temperatures below 5°C. If stored below 5°C, check for crystals in the bottom of each container. If crystals are present, place the container in a warm area (at least 15°C) for several hours. For smaller containers, agitate contents by inverting several times and

return it to the upright position. For larger containers, circulate contents. After several hours, if any crystals remain, agitate or circulate container contents again.
**Ensure any crystals are dissolved before adding to spray tank.**

**DISPOSAL**
**Recyclable Containers:**
DO NOT reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial/territorial requirements.

**Returnable Containers:**
DO NOT reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

**For containers that <u>can be refilled</u> for the user by the distributor/dealer:**
For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. DO NOT reuse this container for any other purpose.

**Disp<u>osal of unused, unwanted product:</u>**
For information on disposal of unused, unwanted product, contact the manufacturer or the provincial/territorial regulatory agency. Contact the manufacturer and the provincial/territorial regulatory agency in case of a spill, and for clean-up of spills.

**INSTRUCTIONS**
FAILURE TO FOLLOW LABEL INSTRUCTION MAY RESULT IN ERRATIC WEED CONTROL OR CROP DAMAGE. USUAL OR STANDARD SEEDING PRACTICES MAY NOT SUFFICE. READ ALL DIRECTIONS CAREFULLY BEFORE APPLYING.

**WARNINGS**
**Application**

- Do not apply NCS SIKA 480 Herbicide to peat or muck soil, or soils which contain more than 15% organic matter.
- Do not apply to fields spread with manure within the last 12 months. After this period, ensure the manure has been thoroughly disintegrated and mixed into the soil to a depth of 10 to 15cm.
- If the swath or stubble is removed by burning, cultivate once to remove the charcoal layer from the soil surface prior to NCS SIKA 480 Herbicide application.
- Application to soils subject to prolonged periods of flooding may result in accelerated herbicide breakdown. Additionally, application to wet soils or soils in poor working condition could result in reduced weed control. See Land Preparation section of this label for further precautions.
- Do not apply to soils with less than 2% organic matter. Application to eroded knolls or grey-wooded soils with highly variable texture or organic matter may result in reduced crop stand, delayed development or reduced yields in either the treated crop or rotational crop.
- Apply uniformly at the recommended rates. Over-application caused by overlapping, improper calibration or uneven application may reduce crop stands in the treated crop or rotational crop.
- DO NOT APPLY BY AIR.
- To avoid potential injury to future wheat rotational crops, growers should avoid applying trifluralin and/or ethalfluralin on the same land at an oilseed/special crop/barley rate for two consecutive crops.

**Crop Year**

- Applied and incorporated according to directions, NCS SIKA 480 Herbicide will not harm the treated or rotational crop. However, seedling disease, deep planting, excessive moisture, high salt concentration, soil compaction or drought may weaken crop seedlings and increase the risk of injury, which may result in delayed crop development or reduced yields.
- To reduce the possibility of injury to the treated crop, use good quality certified seed. Seed shallow into a warm, moist firm seedbed using recommended agronomic practices which will promote rapid and even crop germination and emergence.
- Each crop has a specific seeding depth requirement, and seeding deeper than recommended can increase the potential risk of damage to the seedling. Refer to industry or government extension published documents which outline recommended seeding practices/depths for each crop.
- CAUTION: Do not graze the treated immature crops or cut for hay; there are not sufficient data available to support such use.

**Rotational Crop**

- Applied and incorporated according to label directions, NCS SIKA 480 Herbicide will not harm rotational crops. However, seedling disease, cold weather, deep planting, excessive moisture, high salt concentrations, soil compaction or drought may weaken seedlings and increase the risk of injury, which may result in delayed crop development or reduced yields.
- As a precaution, oats, sugar beets and small-seeded grasses such as timothy, canary seed grass and creeping red fescue should not be grown in rotation following a crop treated with NCS SIKA 480 Herbicide
- The persistence of NCS SIKA 480 Herbicide is influenced by soil moisture and the majority of breakdown occurs during the growing season. If drought or extended dry periods were present in the previous year, higher levels of NCS SIKA 480 Herbicide may be present in the soil. To reduce the possibility of injury to rotational crops, seed shallow into a warm moist seedbed using recommended agronomic practices and seeding depths. As an additional safety precaution seeding rate may be increased slightly (10%).
- **Western Canada Only** - Do not seed wheat as a rotational crop on land if trifluralin and/or ethalfluralin has been used at an oilseed/special crop/barley rate for two consecutive crops.
- **Western Canada Only** - Do not direct seed (zero till) a rotational crop into standing stubble on land that has been treated with trifluralin or ethalfluralin for the previous crop. A cultivation prior to seeding of the rotational crop is strongly recommended to help aerate the soil and promote seedbed conditions which will enhance seed germination.
- When seeding a rotational crop, use good quality certified seed. Seed shallow into a warm, moist firm seedbed using recommended agronomic practices which will promote rapid and even crop germination and emergence. **Avoid deep seeding, loose seedbeds and seeding into cold soils.**
- Each crop has a specific seeding depth requirement and seeding deeper than recommended can increase the potential risk of damage to the seedling. Refer to industry or government extension published documents which outline recommended seeding practices/depths for each crop.

**Weed Resistance**

Populations of green foxtail tolerant to trifluralin have developed in a number of fields in Western Canada with a long history of repeated trifluralin use. Trifluralin or ethalfluralin containing products (e.g., NCS SIKA 480 Herbicide, Triflurex 40 EC Herbicide, Rival Emulsifiable Concentrate Liquid Herbicide, Fortress MicroActiv Herbicide, and Edge Granular Herbicide) will not control trifluralin tolerant green foxtail. To delay selection or reduce the spread of trifluralin tolerant green foxtail, avoid the use of these products repeatedly in the same field or use a separate herbicide application for control of trifluralin tolerant green foxtail. As a preventative measure, Northern CropScience Inc. strongly recommends rotating the use of herbicides that have different modes of action. Consult provincial extension personnel for more information.

**DIRECTIONS FOR USE**

NCS SIKA 480 Herbicide is a preemergent herbicide which is mixed (incorporated) into the soil to provide long-lasting control of many annual grasses and broadleaved weeds. NCS SIKA 480 Herbicide controls susceptible weeds by killing seedlings as they germinate. It does not control established weeds.

- DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.
- Discard clothing or other absorbent materials that have been heaving contaminated with this product. DO NOT reuse them.
- Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.
- DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.
- To minimize the release of trifluralin into the environment due to volatilization, trifluralin should only be applied on cool mornings and evenings when air temperatures are 15°C or lower. To further reduce volatilization to the atmosphere, incorporation into the soil should occur concurrently with application.

**Field sprayer application**

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) medium classification. Boom height must be 60 cm or less above the crop or ground.

DO NOT apply by air.

**SPRAY BUFFER ZONES**

A spray buffer zone is NOT required for:

- uses with hand-held application equipment permitted on this label,
- low-clearance hooded or shielded sprayers that prevent spray contact with crop, fruit or foliage.

The spray buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

| **Method of Application** | **Crop** | **Spray Buffer Zones (metres) Required for the Protection of:** | | | | |
|---|---|---|---|---|---|---|
| Field sprayer | | **Freshwater Habitat of Depths:** | | **Estuarine/Marine Habitat of Depths:** | | **Terrestrial Habitat** |
| | | **Less than 1 m** | **Greater than 1 m** | **Less than 1 m** | **Greater than 1 m** | |
| | Fall-seeded wheat, rye and triticale grown in rotation with tobacco | 35 | 4 | 3 | 1 | 0 |

| | | | | | |
|---|---|---|---|---|---|
| Rutabaga, forage legumes, Saskatoon berries, carrots, peppers, strawberries, tomatoes, summer fallow followed by spring or durum wheat, white turnips, forage kale, forage rape, and first year apple, apricot, cherry, peach, plum and pear trees | 55 | 5 | 4 | 2 | 1 |
| Brussels sprouts, cauliflower and crambe, sainfoin and sweet clover | 70 | 10 | 5 | 2 | 1 |
| Alfalfa, beans (common, dry, kidney, black, Lima), fababeans, snapbeans, peas, soybeans, sunflowers, lentils, barley and wheat, canola/rapeseed, triazine tolerant canola/rapeseed, flax, mustard and safflower | 80 | 10 | 5 | 3 | 1 |
| Asparagus, broccoli and cabbage | 90 | 10 | 5 | 3 | 1 |
| Woody and perennial ornamental planting and nursery stock (field and container grown), shelterbelts (American elm, caragana, green ash, Scotch pine, Siberian elm) | 120 | 20 | 15 | 5 | 1 |

When tank mixes are permitted, consult the labels of the tank-mix partners and observe the largest (most restrictive) spray buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

The spray buffer zones for this product, with the following exceptions, can be modified based on weather conditions and spray equipment configuration by accessing the Spray Buffer Zone Calculator on the Pesticides portion of the Canada.ca website. Spray buffer zones of 120 m (field sprayer) CANNOT be modified.

**Tank Mixing**

This product may be tank mixed with (a fertilizer, a supplement, or with) registered pest control products, whose labels also allow tank mixing, provided the entirety of both labels, including Directions For Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones are followed for each product. In cases where these requirements differ between the tank mix partner labels, the most restrictive label must be followed. Do not tank mix products containing the same active ingredient unless specifically listed on this label.

In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact Northern CropScience Inc. at 1-437880-8283 for information before applying any tank mix that is not specifically recommended on this label.

**Land Preparation**

Cultivate to destroy existing weeds and ensure that large clods are broken before NCS SIKA 480 Herbicide application. When applying to stubble fields, chop and thoroughly mix crop residues into soil to a depth of 10 cm. Disc type implements provide the best results. Swath windrows should be evenly spread before cultivation to avoid strips of concentrated trash cover. NCS SIKA 480 Herbicide should

not be sprayed on a soil surface with more than 25% trash cover. To avoid concentrating wild oat seeds below the treated layer, do not plow (moldboard) land prior to NCS SIKA 480 Herbicide application. If a swath has been removed by burning, cultivate once to remove the charcoal layer prior to application of NCS SIKA 480 Herbicide.

### Application

- Add the recommended amount of NCS SIKA 480 Herbicide to clean water in the spray tank during the filling operation and agitate thoroughly. Apply with at least 100 L of water per hectare (broadcast basis) using any properly calibrated low-pressure herbicide sprayer that will apply the spray uniformly. Check the sprayer daily to ensure proper calibration and uniform application over the field. Apply NCS SIKA 480 Herbicide to soil surface and incorporate in the same operation if possible. Ensure that large clods are broken.
- Do not delay incorporation more than 24 hours after application. When applied as directed, NCS SIKA 480 Herbicide will not harm the treated crop or crops that follow in rotation; however, an overapplication caused by overlapping, letting the sprayer run in one spot, improper calibration, non-uniform application, etc., may reduce stands of treated crops or crops that follow in rotation.

### Incorporation

- To incorporate, work NCS SIKA 480 Herbicide into the soil in two different directions. Use a tandem disc, discer or field (vibrashank type) cultivator set to work 8 to 10 cm deep for the first incorporation. A field cultivator (vibrashank type) is defined as an implement with 3 or 4 rows of sweeps spaced at intervals of 20 cm or less and staggered so that no soil is left unturned. The second incorporation should be a discing or cultivation in a cross direction at the same depth any time prior to planting.
- Operate disc implements 7 to 10 km/hr and cultivators at 10 to 13 km/hr. Failure to operate implements at recommended speeds may result in erratic weed control due to poor distribution of NCS SIKA 480 Herbicide in the soil. **(Deep tillage cultivator not recommended).**
- NCS SIKA 480 Herbicide should not be incorporated with a field cultivator when the soil is crusted, lumpy or too wet for good mixing action.
- Disc type implements are preferred on stubble to ensure a 10 cm depth of operation.
- Incorporation with implements set to cut less than 8 cm deep or more than 10 cm deep may result in erratic weed control, crop damage or rotational crop damage.
- Rod weeders, harrows, deep tillage cultivators, chisel plows or hoe drills will not properly incorporate NCS SIKA 480 Herbicide

## NCS SIKA 480 HERBICIDE FOR USE IN PRAIRIE PROVINCES

### GENERAL INFORMATION FOR OILSEED AND SPECIAL CROPS - PRAIRIE PROVINCES

### Crops Registered

alfalfa establishment (flax and canola cover crops only)
asparagus - established 3 years
black beans
canola
crambe
dry common beans (white or kidney)
faba beans (horsebeans)
flax (summer and fall application only)
forage legumes

- seedling alsike clover
- red clover
- cicer milkvetch
- bird’s-foot trefoil

lentils (fall only)
mustard
peas (field and canning)

safflower
sainfoin
Saskatoon berries
soybeans
strawberries (spring application only)
sunflowers
sweet clover (spring only)
transplanted shelterbelts
triazine tolerant canola
vegetables (see special instructions)

**Weeds Controlled**

**Annual Grasses**

annual blue grass
barnyard grass
brome grass
cheat grass
crab grass
goose grass
Persian darnel
stink grass
wild millet (green* and yellow foxtail)

**Annual Broadleaves**

carpetweed
chickweed
cow cockle
knotweed
lamb's-quarters
pigweed
purslane
wild buckwheat

*NCS SIKA 480 Herbicide will not control trifluralin tolerant green foxtail. See specific recommendations in **WARNINGS** section of the label under the subheading **Weed Resistance**.

**Weeds Suppressed**

wild oats

**NOTE:** When used as directed, NCS SIKA 480 Herbicide will provide commercially acceptable control of the above weeds. Some wild buckwheat may escape the herbicide action of NCS SIKA 480 Herbicide but will be retarded in growth and will provide little competition to the crop.

**Spring Application**

NCS SIKA 480 Herbicide can be applied immediately prior to planting or up to three weeks before planting.

**Summer Application**

NCS SIKA 480 Herbicide can be applied to summerfallow between June 1 and September 1 for weed control in canola or flax the following year. Apply the summer rate and incorporate as above. Not recommended for sand and sandy loam soils.

NCS SIKA 480 Herbicide must be incorporated at least twice with the implement operated in two different directions. The initial incorporation must be done within 24 hours after application. The second incorporation (and subsequent incorporations) may be done whenever necessary to destroy resistant

weed growth during the remainder of the fallow season. Shallow tillage (5 to 8 cm) is necessary in the spring prior to planting (refer to Spring Tillage for Seedbed Preparation).

**Fall Application**

NCS SIKA 480 Herbicide can be applied in the fall between September 1 and prior to soil freeze-up for weed control the following year. Apply fall rates and incorporate as above. The initial incorporation must be done within 24 hours after application. It is preferred to do both incorporations in the fall followed by tillage (5 to 8 cm) in the spring prior to planting. However, one incorporation may be done in the fall and the second in the spring at the time of seedbed preparation, provided both operations are done at the recommended depth (refer to Spring Tillage for Seedbed Preparation).

**Spring Tillage for Seedbed Preparation**

Spring tillage following summer or fall application of NCS SIKA 480 Herbicide should be done prior to seeding when the soil is warm enough to promote germination. Use a disc or field cultivator (vibrashank) set to cut at 5 to 8 cm deep. For optimum weed control in soils with heavy wild oat populations prework early in the spring with a shallow cultivation to promote weed seed germination, followed by a 5 to 8 cm deep cultivation prior to seeding to destroy existing green growth. Avoid transplanting weed seedlings; seed into a weed-free seedbed using accepted cultural practices. Avoid excessive compaction of the soil layer treated with NCS SIKA 480 Herbicide. Any operation that results in a more shallow or compacted treated layer may allow weeds to emerge. This compaction may result from tractor wheel tracks, implement wheels, drill press wheels or other field operations done after incorporation. Soils are more susceptible to compaction when they are moist.

**SPECIAL INSTRUCTIONS FOR FLAX AND LENTILS**

1. Both incorporations of NCS SIKA 480 Herbicide must be done in the season of application prior to seeding flax in the spring.
2. The seedbed should be shallowly tilled (5 to 8 cm) and packed just prior to seeding in the spring to ensure a firm seedbed and accurate depth of planting.
3. Seeding should be done with a press drill or hoe drill. Seed into a moist seedbed no more than 4 cm deep.
4. Do not seed flax early in May when soil conditions are cold. Seeding should generally not be prior to May 15.
5. Refer to Warning statement regarding stresses that can lead to crop injury or yield reduction.

**USE OF NCS SIKA 480 HERBICIDE FOR OILSEED AND SPECIAL CROPS**
**Recommended Rates of NCS SIKA 480 Herbicide**

<table>
<tr><th rowspan="3">Crop</th><th rowspan="3">Soil Zones and Soil Organic Matter</th><th colspan="3">Soil Texture</th></tr>
<tr><th>Light</th><th>Medium</th><th>Heavy</th></tr>
<tr><td>sand<br>sandy loam</td><td>Loam<br>Silt loam<br>Silt<br>Sandy clay loam</td><td>Silty clay loam<br>Clay loam<br>Silty clay<br>Clay</td></tr>
<tr><td rowspan="2">Spring<br>canola, T.T. canola, mustard, dry common beans (white and kidney), soybeans, faba beans, black beans, peas, sunflower, safflower, crambe, alfalfa est., sainfoin, sweet clover</td><td>brown, dark brown or black<br>2-6% O.M.</td><td>1.7 L/ha</td><td colspan="2">2.3 L/ha</td></tr>
<tr><td>black or deep black<br>6-15% O.M.</td><td>2.3 L/ha</td><td colspan="2">2.3-3.0 L/ha<br>(use 3.0 L/ha for heavy wild oat infestations)</td></tr>
<tr><td>Summer<br>canola, T.T. canola, flax, safflower</td><td>brown, dark brown, black or deep black</td><td>Not recommended</td><td colspan="2">3.4 L/ha</td></tr>
</table>

| | | | |
|---|---|---|---|
| **Fall**<br>canola, T.T. canola, mustard, dry common beans (white and kidney), flax, soybeans, faba beans, black beans, peas, lentils, sunflower, safflower, alfalfa est. | brown, dark brown or black 2-6% O.M. | 2.3 L/ha | 3.0 L/ha |
| | black or deep black 6-15% O.M. | 3.0 L/ha | 3.0-3.4 L/ha<br>(use 3.4 L/ha for heavy wild oat infestations) |

**NOTE:** Do not delay first incorporation more than 24 hours after application.

**APPLICATION OF NCS SIKA 480 HERBICIDE WITH FLUID FERTILIZERS**

NCS SIKA 480 Herbicide may be mixed with liquid nitrogen fertilizer (e.g., 28-0-0) for application either preplant soil incorporated or postplant incorporated. All label recommendations of NCS SIKA 480 Herbicide regarding rates per hectare, approved crops, incorporation, special instructions, cautions and special precautions must be followed.

NCS SIKA 480 Herbicide should be poured directly into the liquid fertilizer, mixed thoroughly and applied as soon as possible. Constant agitation is needed until application is complete. Apply the NCS SIKA 480 Herbicide/fertilizer mixture with properly calibrated equipment suitable for liquid fertilizer application. Ensure that the material is applied uniformly to the soil surface. Follow normal incorporation procedures for NCS SIKA 480 Herbicide

Small quantities of liquid fertilizer and herbicide should be tested for compatibility prior to tankmixing. Use the compatibility test as follows:

1. Put 500 mL of liquid fertilizer into a 1 L jar.
2. Add 10 mL of NCS SIKA 480 Herbicide
3. Close jar and shake well.
4. The herbicide and fertilizer are compatible if the herbicide remains in suspension after five minutes.
5. If the herbicide settles out quickly but goes into suspension easily upon shaking, the mixture may be used provided constant agitation is utilized.
6. A compatibility test is also recommended when there is a change in fertilizer supplies, fertilizer formulations and climatic temperatures.

**NCS SIKA 480 HERBICIDE IMPREGNATED/COATED ONTO DRY GRANULAR FERTILIZER**

Dry bulk fertilizer may be impregnated or coated with NCS SIKA 480 Herbicide. Application should be made as soon as possible after blending. All NCS SIKA 480 Herbicide label recommendations regarding rates per hectare, approved crops, incorporation, special instructions, cautions and special precautions must be followed.

To obtain commercially acceptable weed control with NCS SIKA 480 Herbicide impregnated on fertilizer, the following minimum rates of fertilizer must be used:

Spring Application 330kg/ha
Fall Application 250 kg/ha

Mix and blend dry fertilizer and NCS SIKA 480 Herbicide in any commonly used dry fertilizer blender. Ensure that uniform spray coverage is obtained. Sufficient blending/mixing time should be allowed to obtain uniform coverage of dry fertilizer with NCS SIKA 480 Herbicide

Spread the fertilizer/NCS SIKA 480 Herbicide mixture with a properly calibrated granular fertilizer applicator. Be certain the blended material is applied uniformly to the soil surface. The first incorporation should be completed as soon as possible (within 24 hours) after fertilizer application. It is recommended to **delay the second incorporation for a period of at least six days** to ensure optimum dissipation of NCS SIKA 480 Herbicide within the soil.

**CAUTION:** Any commonly used dry fertilizer can be used for the impregnation of NCS SIKA 480 Herbicide **except** ammonium nitrate. Use with nitrate fertilizers may cause explosion and fire.

**NOTE:** Compliance with the Fertilizer Act and Regulations (Agriculture and Agri-Food Canada) is the responsibility of the individual/company selling the NCS SIKA 480 Herbicide/fertilizer mixture.

**USE OF NCS SIKA 480 HERBICIDE FOR SOYBEANS**

For NCS SIKA 480 Herbicide on soybeans refer to Use of NCS SIKA 480 Herbicide for Oilseed and Special Crops. A tank-mix combination of NCS SIKA 480 Herbicide plus Sencor 75 DF may be used for weed control in soybeans.

**NOTE:** Do not plant soybean varieties Ace, Apache, Baron, DAC Eramosa, Maple Amber, Maple Ridge, Nottawa, OAC Eramosa or Portage on areas treated with Sencor 75 DF as unacceptable injury may result.

**NCS SIKA 480 HERBICIDE PLUS SENCOR 75 DF (TANK-MIX): PREPLANT INCORPORATED**

NCS SIKA 480 Herbicide may be applied in a tank-mix combination with Sencor 75 DF as a preplant incorporated broadcast application to soybeans for the control of many annual grasses and broadleaved weeds.

**Weeds Controlled by NCS SIKA 480 Herbicide Plus Sencor 75DF**

In addition to those weeds controlled by NCS SIKA 480 Herbicide alone, the NCS SIKA 480 Herbicide + Sencor 75DF tank-mix will control the following:

green smartweed
hemp-nettle
lady's-thumb
shepherd's-purse
stinkweed
volunteer canola (non-triazine tolerant)
wild mustard

**Application**

Select the proper rates of NCS SIKA 480 Herbicide and Sencor 75 DF as shown based on soil type and percent organic matter. Follow all land preparation, mixing, spraying, incorporation directions and precautions on this label.

**Mixing Sequence**

**It is important to follow the correct sequence when mixing NCS SIKA 480 Herbicide and Sencor 75 DF in the spray tank.**

The following steps are essential when combining NCS SIKA 480 Herbicide with Sencor 75 DF:

1. Fill the spray tank 1/4 to 1/3 full with clean water.
2. While continuing to fill the spray tank and with the agitation and recirculating system operating, slowly add the full amount of Sencor 75 DF for that tankload.
3. Fill the spray tank to the desired level with clean water, while maintaining constant agitation of the mixture.
4. After the full amount of Sencor 75 DF is thoroughly mixed, add the calculated amount of NCS SIKA 480 Herbicide to the tank and agitate thoroughly.
5. To avoid any compatibility problems, spray immediately. Continuous agitation is required until the mixture is sprayed out. Do not allow the sprayer to stand without agitation or settling will occur and vigorous mixing with a paddle will be necessary to remix the chemical in the spray tank.

Use the Rinse, Drain and Disposal Procedure section instructions to ensure all contents are removed from containers prior to disposal.

**Spray Application**

Apply the tank-mix of NCS SIKA 480 Herbicide and Sencor 75 DF to the soil surface and incorporate in the same operation, if possible. Do not delay first incorporation more than 24 hours after application. Apply the tank-mix in at least 100 L of water per hectare (broadcast basis) using any properly calibrated low-pressure herbicide sprayer that will apply the spray uniformly. Application may be made with any properly calibrated commercial tractor-drawn or self-propelled field sprayer equipped with the following:

1. Nozzle tips no finer than 6502, 8002 or TK2 with nozzle screens no finer than 0.3 mm (50 mesh).
2. A 0.3 mm or larger line strainer(s) or screen.
3. A pump of sufficient capacity to provide adequate volume through the by-pass and/or jet agitation system to provide a uniform spray mixture even while the booms are operating.

**NOTE:** Felt filters, small nozzle tips or smaller screens will become clogged.

**Sprayer Clean-up**

Spray equipment must be thoroughly cleaned to remove remaining traces of herbicide that might injure other crops to be sprayed. Drain any remaining spray solution of Sencor 75 DF and NCS SIKA 480 Herbicide from the spray tank and discard in non-crop areas away from water supplies. Rinse the spray tank and refill with water, adding a heavy-duty detergent at the rate of 250 mL/100 L of water. Recycle this mixture through the equipment for 5 minutes and spray out. Repeat this procedure twice. Fill the spray tank with clean water, recycle for 5 minutes and spray out. Clean pump and nozzle screens thoroughly. Wash away any spray mixture from the outside of the spray tank, nozzles or spray rig.

**Incorporation**

Refer to General Information for Oilseed and Special Crops.

**NOTE:** NCS SIKA 480 Herbicide and Sencor 75 DF can be applied in the fall prior to soil freeze-up for weed control the following year. Apply fall rates and incorporate as above. The initial incorporation must be done within 24 hours after application. It is preferred to do both incorporations in the fall followed by tillage (5 to 8 cm) in the spring prior to planting. However, one incorporation may be done in the fall and the second in the spring at the time of seedbed preparation, provided both operations are done at the recommended depth (refer to Spring Tillage and Seedbed Preparation).

**Spring Tillage and Seedbed Preparation**

Spring tillage following fall application of NCS SIKA 480 Herbicide and Sencor 75 DF should be done when the soil is warm enough to promote germination. Use a disc or vibrashank cultivator operated at 5 to 8 cm deep. Avoid transplanting weed seedlings. Seed into a weed-free seedbed using accepted cultural practices.

**Spring Application**

**Recommended Rates of Product per Hectare**

| **NCS SIKA 480 Herbicide** | **Soil Texture** | | |
|---|---|---|---|
| | **Light** | **Medium** | **Heavy** |
| Soil Zones and Soil Organic Matter | sand<br>sandy loam | Loam<br>Silt loam<br>Sandy clay loam | Silty clay loam<br>Silt<br>Clay loam<br>Silty clay<br>Clay |
| 2-6% O.M. | 1.7 L/ha | 2.3 L/ha | |
| 6-15% O.M. | 2.3 L/ha | 2.3-3.0 L/ha♦ | |

| **Sencor 75 DF** | |
|---|---|
| **O.M.** | **Rate** |
| 2-3% | 275 g/ha |
| 3-6% | 375 g/ha |
| 6-10% | 375-550 g/ha |

| | |
|---|---|
| 10%+ | 550+ g/ha |

♦Use the 3.0 L/ha rate of NCS SIKA 480 Herbicide for heavy wild oat infestation.

**Fall Application**
**Recommended Rates of Product per Hectare**

| NCS SIKA 480 Herbicide | Soil Texture | | |
|---|---|---|---|
| | **Light** | **Medium** | **Heavy** |
| Soil Zones and Soil Organic Matter | sand<br>sandy loam | Loam<br>Silt loam<br>Sandy clay loam | Silty clay loam<br>Silt<br>Clay loam<br>Silty clay<br>Clay |
| 2-6% O.M. | 2.3 L/ha | 3.0 L/ha | |
| 6-15% O.M. | 3.0 L/ha | 3.0-3.4 L/ha♦ | |

| **Sencor 75 DF** | |
|---|---|
| **O.M.** | **Rate** |
| 2-3% | 375 g/ha |
| 3-6% | 475 g/ha |
| 6-10% | 475-550 g/ha |
| 10%+ | 550+ g/ha |

♦Use the 3.4 L/ha rate of NCS SIKA 480 Herbicide for heavy wild oat infestation.

**NOTE:**

1. On variable soils with light sandy areas, some injury may occur on the sandy areas if the rate used is for the heavier soil type in the field.
2. Do not use on soils with less than 2% organic matter.
3. On soils with 10% organic matter and higher, broadleaved weed control may not be adequate.
4. Uneven application or improper soil incorporation of NCS SIKA 480 Herbicide and Sencor 75 DF may result in erratic weed control or crop injury depending on rate used.
5. Stress conditions such as seedling disease, cold weather, deep planting, excessive moisture, high salt concentration or drought may weaken soybean seedlings and increase the possibility of damage from NCS SIKA 480 Herbicide and Sencor 75 DF. Temporary lightening in colour may occur on the margins of cotyledons and a slight delay in crop development may be observed. This is quickly outgrown and usually has no lasting effect.

**IMPORTANT:** Rotation crops such as onions, celery, peppers, cole crops, lettuce and spinach, sugar beets, table beets and turnips, pumpkin and squash, cucumbers and melons, tobacco and canola (non- triazine tolerant) are sensitive to Sencor 75 DF and may be injured if planted in soil treated with Sencor 75 DF during the year of application and following crop year. After harvest, tillage practices that provide thorough mixing of the soil may be helpful in reducing the chance of injury to succeeding crops.

As a precaution, oats, sugar beets and small-seeded annual grasses such as timothy, canaryseed grass and creeping red fescue should not be grown in rotation following a crop treated with NCS SIKA 480 Herbicide

**USE OF NCS SIKA 480 HERBICIDE ON WHEAT AND BARLEY: POSTPLANT INCORPORATED (HARROWED IN AFTER SEEDING)**

**Crops Registered**
hard red spring wheat
durum wheat
soft white spring wheat
barley

**Weeds Controlled**

wild millet (green♦ and yellow foxtail)

♦NCS SIKA 480 Herbicide will not control trifluralin tolerant green foxtail. See specific recommendations in **WARNINGS** section of the label under the subheading **Weed Resistance**.

**Mode of Action**

NCS SIKA 480 Herbicide is applied and incorporated in the soil in the spring after planting and prior to the emergence of the wheat and barley for the control of wild millet (green and yellow foxtail). Weed control is achieved by establishing a shallow (2 cm), treated layer of NCS SIKA 480 Herbicide near the soil surface.

Within this layer, NCS SIKA 480 Herbicide controls weed seeds by killing them as they germinate. Generally, the majority of wild millet seeds germinate from this depth. However, in some years due to climatic conditions, wild millet may germinate from a deeper depth. Consequently, deep-seeded wild millet seeds germinating below the NCS SIKA 480 Herbicide layer may not be controlled. Crop safety is maintained since the wheat and barley seeds are located in the untreated soil beneath the layer of NCS SIKA 480 Herbicide

**Land Preparation**

Plant your wheat and barley as you normally do. Wheat and barley should be seeded to a depth of 5 to 8 cm in a well-tilled seedbed.

**Application and Incorporation**

**NCS SIKA 480 Herbicide (Harrowed in After Seeding) Rate per Hectare**

| NCS SIKA 480 Herbicide | Soil Texture | |
|---|---|---|
| | **Light to Medium** | **Heavy** |
| | 1.2 L/ha | 1.7 L/ha |

1. Add the recommended amount of NCS SIKA 480 Herbicide to clean water in the spray tank during the filling operation and agitate thoroughly. Apply at least 100 L/ha of water (broadcast basis) using any properly calibrated low-pressure herbicide sprayer. Check the sprayer daily to ensure proper calibration and uniform application.
2. Apply NCS SIKA 480 Herbicide as soon as possible after seeding and before crop emerges.
3. Apply NCS SIKA 480 Herbicide to soil surface which is free of trash or was fallowed the previous year. NCS SIKA 480 Herbicide should not be sprayed or incorporated when the soil is crusted, lumpy or too wet for good mixing action.
4. Application and the first incorporation should be done in the same operation if possible. Incorporate to a shallow depth with diamond harrows or tyne harrows in two different directions at speeds of 8 to 11 km/hr. Both incorporations must be done within 24 hours of application of NCS SIKA 480 Herbicide. Uneven incorporation may result in some wild millet escapes in the bottom of furrows left by the last row of the harrows if the depth of the NCS SIKA 480 Herbicide treated layer in these troughs is not sufficient to prevent emergence of wild millet. To obtain a more uniform layer of treated soil, operate tyne harrows inclined at least 45 degrees backwards and harrow at a speed which minimizes the amount of soil ridging by the harrows.

**CAUTION:** Wheat or barley may be injured if seeded through a treated layer or into a deeply-incorporated layer of NCS SIKA 480 Herbicide. Applied according to directions and under normal growing conditions, NCS SIKA 480 Herbicide will not adversely affect wheat or barley. Seedling disease, cold weather, improper seeding depth, excessive moisture, high salt concentration or drought may weaken crop seedlings and increase the possibility of damage from NCS SIKA 480 Herbicide.

Under these conditions, delayed crop development or reduced yields may result. This treatment of NCS SIKA 480 Herbicide may not provide adequate control of weeds other than wild millet (green foxtail and yellow foxtail).

**USE OF NCS SIKA 480 HERBICIDE FOR STRAWBERRIES, SASKATOON BERRIES AND ESTABLISHED ASPARAGUS**

**Strawberries**

Apply NCS SIKA 480 Herbicide prior to planting transplanted strawberries. Follow recommended soil preparation, application and incorporation procedures for NCS SIKA 480 Herbicide. Apply only in the spring. Do not exceed the maximum application rate of 2.3 L/ha. Over-application may delay establishment of runner plants.

**Saskatoon Berries**

Apply NCS SIKA 480 Herbicide prior to planting transplanted Saskatoon berries. Follow recommended soil preparation, application and incorporation procedures for NCS SIKA 480 Herbicide. Apply only in the spring.
Do not exceed maximum application rate of 2.3 L/ha.

**Asparagus (Established Three Years)**

Follow recommended soil preparation, application and incorporation procedures for NCS SIKA 480 Herbicide. Apply to established asparagus in the early spring after ferns are removed but before spear emergence. Or apply after harvest in the late spring or early summer before ferning begins.

**CAUTION:** Set implements so asparagus crowns are not injured during soil preparation and incorporation.

**USE OF NCS SIKA 480 HERBICIDE FOR SHELTERBELTS**

Apply NCS SIKA 480 Herbicide prior to transplanting seedlings. The higher rate of application will result in better weed control and longer persistence in the soil.

Refer to General Information for Oilseed and Special Crops for details on application and incorporation.

**Recommended Rates of NCS SIKA 480 Herbicide (Litres per Hectare)**

<table>
<tr><th rowspan="3">Crop</th><th rowspan="3">Soil Zones and Soil Organic Matter</th><th colspan="3">Soil Texture</th></tr>
<tr><th>Light</th><th>Medium</th><th>Heavy</th></tr>
<tr><td>sand<br>sandy loam</td><td>Loam<br>Silt loam<br>Silt<br>Sandy clay loam</td><td>Silty clay loam<br>Clay loam<br>Silty clay<br>Clay</td></tr>
<tr><td rowspan="2">strawberries*<br>Saskatoon berries*<br><br>*Spring Application Only</td><td>brown, dark brown or black<br>2-6% O.M.</td><td>1.7 L/ha</td><td colspan="2">2.3 L/ha</td></tr>
<tr><td>black or deep black<br>6-15% O.M.</td><td>2.3 L/ha</td><td colspan="2">2.3 L/ha</td></tr>
<tr><td>asparagus - established three years</td><td></td><td>2.0 L/ha</td><td colspan="2">3.1-4.2 L/ha♦</td></tr>
<tr><td>American elm<br>caragana<br>green ash<br>Scotch pine<br>Siberian elm</td><td></td><td>4.7 L/ha<br>(2-6% O.M.)</td><td colspan="2">9.3 L/ha<br>(6-15% O.M.)</td></tr>
</table>

♦Use the higher rate for season long weed control.

**NOTE:** NCS SIKA 480 Herbicide at 2.3 L/ha may be applied preplant incorporated one week prior to sowing Siberian elm seed for annual grass and broadleaved weed control.

The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than Northern CropScience Inc. under the User Requested Minor Use Label Expansion program. For these uses, Northern CropScience Inc. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

**NCS SIKA 480 HERBICIDE PLUS SENCOR 75 DF (TANK-MIX) IN SHELTERBELTS**

**Crops Registered**

caragana
villosa lilac
Saskatoon berry
green ash
chokecherry
poplar
sea-buckthorn

**Weeds Controlled**

witchgrass
lamb's-quarters
purslane
shepherd's purse
green foxtail
Russian thistle
wild buckwheat
stinkweed
prostrate
pigweed

**Weeds Suppressed**

Wild oats

**DIRECTIONS FOR USE**

Make one application, pre-plant incorporated. Apply as a ground treatment. Apply at a rate of 5.2 L/ha NCS SIKA 480 Herbicide plus 400 g/ha Sencor 75 DF in 100-225 L water/ha. IMPORTANT: Refer to the NCS SIKA 480 Herbicide label for correct sequence when mixing NCS SIKA 480 Herbicide and Sencor 75 DF in the spray tank.

Refer to the Sencor 75 DF label for directions for use and special precautions.

**USE OF NCS SIKA 480 HERBICIDE FOR VEGETABLES**

Apply NCS SIKA 480 Herbicide prior to planting. Follow all recommended soil preparation, application and incorporation procedures for NCS SIKA 480 Herbicide. Apply only in spring.

**USE OF NCS SIKA 480 HERBICIDE FOR VEGETABLE CROPS (SPRING APPLICATION ONLY)**

**Recommended Rates of NCS SIKA 480 Herbicide (Litres per Hectare)**

| Crop | Soil Zones and Soil Organic Matter | Soil Texture | | |
|---|---|---|---|---|
| | | Light | Medium | Heavy |
| | | sand<br>sandy loam | Loam<br>Silt loam<br>Silt<br>Sandy clay loam | Silty clay loam<br>Clay loam<br>Silty clay<br>Clay |

| | | | |
|---|---|---|---|
| carrots<br>snap beans, common<br>rutabaga<br>tomatoes<br>broccoli[7]<br>Brussels sprouts[7]<br>cauliflower♦<br>cabbage♦ | brown, dark brown or black 2-6% OM | 1.7 L/ha | 2.3 L/ha |
| | black or deep black 6-15% OM | 2.3 L/ha | 2.3-3.0 L/ha[t] |

♦Direct seeded or transplanted.

[7]Transplants only.

[t]Use the 3.0 L/ha rate for heavy wild oat infestations (cole crops only).

**USE OF NCS SIKA 480 HERBICIDE FOR FORAGE LEGUMES (SEED PRODUCTION/FORAGE)**

Apply NCS SIKA 480 Herbicide prior to seeding. Follow recommended soil preparation, application and incorporation procedures for NCS SIKA 480 Herbicide. Apply only in the spring. Do not exceed the maximum application rate of 2.3 L/ha.

**Recommended Rates of NCS SIKA 480 Herbicide (Litres per Hectare)**

| Crop | Soil Zones and Soil Organic Matter | Soil Texture | |
|---|---|---|---|
| | | Light | Medium to Heavy |
| | | sand<br>sandy loam | loam<br>silty clay loam<br>silt loam<br>clay loam silt<br>silty clay<br>sandy clay loam<br>clay |
| seedling alsike clover<br>red clover<br>cicer<br>milkvetch<br>bird's-foot trefoil | brown, dark brown or black 2-6% OM | 1.7 L/ha | 2.3 L/ha |
| | black or deep black 6-15% OM | 2.3 L/ha | 2.3 L/ha |

**NCS SIKA 480 HERBICIDE FOR USE IN EASTERN CANADA AND BRITISH COLUMBIA GENERAL INFORMATION**

**Crops Registered**

soybeans
dry common beans (white or kidney)
faba beans
snap beans common
Lima beans
black beans
canola
triazine tolerant canola (Pedigreed seed only)
forage rape
forage kale
direct-seeded cabbage and cauliflower
ornamentals (woody nursery stock), perennials
sunflowers
stubble turnips (white) –for feed only
peas (field and canning)
mustard
alfalfa establishment (direct seeded)
winter wheat, fall rye and fall triticale (loose silky bentgrass control only)
transplanted shelterbelts
rutabaga

transplants of tomatoes, peppers, Brussels sprouts, broccoli, cabbage, cauliflower and strawberries (spring application only)

crambe

carrots

asparagus - established 3 years

first year apple, apricot, cherry, peach, plum and pear trees

**Weeds Controlled**

**Annual Grasses**

green and yellow foxtail
barnyard grass
crab grass
brome grass
cheat
stink grass
goose grass
annual bluegrass
fall panicum
loose silky bentgrass

**Annual Broadleaved Weeds**

pigweed♦
lamb's-quarters♦
chickweed
purslane
knotweed
carpetweed

♦Triazine tolerant varieties as well

**Weeds Suppressed**

Wild oats

**NOTE:** When used as directed, NCS SIKA 480 Herbicide will provide commercially acceptable control of the above weeds.

**Recommended Rates Per Hectare of NCS SIKA 480 Herbicide - Eastern Canada and British Columbia**

| Crop | Soil Texture | | |
|---|---|---|---|
| | **Light** | **Medium** | **Heavy** |
| | sand<br>sandy loam | loam<br>silt loam<br>silt<br>sandy clay loam | silty clay loam<br>clay loam<br>silty clay<br>clay |
| All crops registered (except for asparagus, winter cereals, peas and Lima beans) | 1.2 L | 1.7 L | 2.4 L |

The rates outlined in the previous table are general recommended rates of NCS SIKA 480 Herbicide. There are specific remarks which refer to individual crops that are noted as follows:

- In Lima beans and peas do not exceed 1.2 L/ha in medium textured soils and 1.7 L/ha in heavy textured soils.
- NCS SIKA 480 Herbicide should not be applied to turnips and mustard on sandy and sandy loam soils.
- Direct-seeded cole crops have exhibited marginal tolerance to recommended rates of NCS SIKA 480 Herbicide. Stunting or reduced stand may occur.

- For strawberries, NCS SIKA 480 Herbicide should be applied prior to planting transplants.
- With ornamentals and established woody nursery stock, spray the soil and incorporate as closely as possible to plants without causing damage to roots.
- NCS SIKA 480 Herbicide should not be applied on ornamental ground covers such as Ajuga, Myrtle and Pachysandra, as injury may result.
- Unless otherwise directed, use the general rates of NCS SIKA 480 Herbicide. Apply and incorporate immediately prior to or up to 3 weeks before planting.

**NCS SIKA 480 HERBICIDE APPLICATION WITH FLUID FERTILIZERS**

NCS SIKA 480 Herbicide may be mixed with liquid nitrogen fertilizer (e.g., 28-0-0) for application preplant soil incorporated. All NCS SIKA 480 Herbicide label recommendations regarding rates per hectare, approved crops, incorporation, special instructions, cautions and special precautions must be followed.

NCS SIKA 480 Herbicide should be poured directly into the liquid fertilizer, mixed thoroughly and applied as soon as possible. Constant agitation is needed until application is complete. Apply the NCS SIKA 480 Herbicide/fertilizer mixture with a properly calibrated sprayer. Ensure that the material is applied uniformly to the soil surface. Follow normal NCS SIKA 480 Herbicide incorporation procedures.

**Compatibility Test**

Small quantities of liquid fertilizer and herbicide should be tested for compatibility prior to tank-mixing.

1. Put 500 mL of liquid fertilizer into a 1 L jar.
2. Add 10 mL of NCS SIKA 480 Herbicide
3. Close jar and shake well.
4. The herbicide and fertilizer are compatible if the herbicide remains in suspension after five minutes. If the herbicide settles out quickly but goes into suspension easily upon shaking, the mixture may be used provided constant agitation is utilized.
5. A compatibility test is also recommended when there is a change in fertilizer supplies, fertilizer formulations and climatic temperatures.

**NCS SIKA 480 HERBICIDE IMPREGNATED/COATED ONTO DRY GRANULAR FERTILIZER**

Dry bulk fertilizer may be impregnated or coated with NCS SIKA 480 Herbicide. Application should be made as soon as possible after blending. All NCS SIKA 480 Herbicide label recommendations regarding rates per hectare, approved crops, incorporation, special instructions, cautions and special precautions must be followed.

A minimum of 300 kg/ha of dry bulk fertilizer impregnated/coated with NCS SIKA 480 Herbicide at the recommended rate must be applied. Mix and blend dry fertilizer and NCS SIKA 480 Herbicide in any commonly used dry fertilizer blender, providing uniform spray coverage is obtained. Sufficient blending/mixing time should be allowed to ensure uniform coverage of dry fertilizer with NCS SIKA 480 Herbicide.

Spread the fertilizer/NCS SIKA 480 Herbicide mixture with a properly calibrated granular fertilizer applicator. Be certain the blended material is applied uniformly to the soil surface. The first incorporation should be completed as soon as possible (within 24 hours) after fertilizer application. It is recommended to **delay the second incorporation for a period of at least three days** to ensure optimum NCS SIKA 480 Herbicide dissipation within the soil.

**CAUTION:** Ammonium nitrate must not be impregnated with NCS SIKA 480 Herbicide All other commonly used dry fertilizers may be used for NCS SIKA 480 Herbicide impregnation.

**NOTE:** Compliance with the Fertilizer Act and Regulations (Agriculture and Agri-Food Canada) is the responsibility of the individual/company selling the NCS SIKA 480 Herbicide/fertilizer mixture.

**NCS SIKA 480 HERBICIDE FOR USE IN SOYBEANS**

NCS SIKA 480 Herbicide incorporated before planting soybeans will control most annual grasses and many broadleaved weeds. To control more weeds, use NCS SIKA 480 Herbicide in combination with the following:

**NCS SIKA 480 HERBICIDE PLUS SENCOR 75 DF OR LEXONE DF HERBICIDE DISPERSIBLE GRANULES (TANK-MIX)**

**Rate per Hectare**

| Product | Soil Texture | | |
|---|---|---|---|
| | Light | Medium | Heavy |
| NCS SIKA 480 Herbicide | 1.2 L | 1.7 L | 2.4 L |
| Sencor 75 DF | 550 g | 750 g | 750 g |
| Lexone DF Herbicide Dispersible Granules | - | 550 g | 700 g |

- Tank-mix combinations control all the weeds listed on the NCS SIKA 480 Herbicide label plus many additional broadleaved weeds including smartweed, velvetleaf, wild mustard and common ragweed.
- Control of cocklebur may be erratic ranging from fair to excellent depending on soil temperature, time of weed germination, depth of weed seed in the soil and the amount and timing of soil moisture. Cultivation may improve control.
- Tank-mixes of NCS SIKA 480 Herbicide and Sencor 75 DF or Lexone DF Herbicide Dispersible Granules may be applied up to 10 days before planting.
- Do not use on light soils with less than 2% organic matter.
- Applied according to directions and under normal growing conditions, tank-mixed NCS SIKA 480 Herbicide and Sencor 75 DF or Lexone DF Herbicide Dispersible Granules will not reduce soybean yields.
- However, Sencor 75 DF or Lexone DF Herbicide Dispersible Granules alone has limited crop tolerance and initial crop injury may occur under certain conditions.
- Over-application may result in stunting, crop injury or soil residue.
- Uneven application or improper soil incorporation of the tank-mix can result in erratic weed control or crop injury depending on rate used.
- Seedling disease, cold weather, deep planting, excessive moisture, high soil pH (above 7.5), high salt concentration or drought may weaken soybean seedlings and increase the possibility of damage from NCS SIKA 480 Herbicide and Sencor 75 DF or Lexone DF Herbicide Dispersible Granules. Under these conditions, delayed crop development or reduced yields may result.
- On variable soils with light sandy areas, some injury may occur on sandy areas if the rate used is for the heavier soil type in the field. Sandy loam and silty clay loam soils are transitional soils and may be classified as medium textured soils in some regions.
- Do not plant metribuzin-sensitive soybean varieties Ace, Apache, Baron, Maple Amber, Maple Ridge, OAC Eramosa, IA 1003, S-240 or Nottawa on areas treated with Sencor 75 DF or Lexone DF Herbicide Dispersible Granules as unacceptable injury may result.
- Refer to the Sencor 75 DF and Lexone DF Herbicide Dispersible Granules labels for directions on use and special precautions. Do not use foliage from soybeans treated with the combination for forage.

IT IS IMPORTANT TO FOLLOW THE CORRECT SEQUENCE WHEN MIXING NCS SIKA 480 HERBICIDE AND SENCOR 75 DF OR LEXONE DF HERBICIDE DISPERSIBLE GRANULES IN THE SPRAY TANK. THE FOLLOWING STEPS ARE ESSENTIAL:

1. Fill the spray tank 1/4 to 1/3 full with clean water.
2. While continuing to fill the spray tank and with the agitation and recirculating system operating, slowly add the full amount of Sencor 75 DF or Lexone DF Herbicide Dispersible Granules for that tankload.
3. Fill the spray tank to the desired level with clean water, while maintaining constant agitation of the mixture.

4. After the full amount of Sencor 75 DF or Lexone DF Herbicide Dispersible Granules is thoroughly mixed, add the calculated amount of NCS SIKA 480 Herbicide to the tank and agitate thoroughly.
5. Continuous agitation is required until the mixture is sprayed out. Do not allow the sprayer to stand without agitation or settling will occur and vigorous mixing with a paddle will be necessary to remix the chemical in the spray tank.

Variations in this mixing sequence may lead to incompatibilities.

**NCS SIKA 480 HERBICIDE FOLLOWED BY LOROX L HERBICIDE OR AFOLAN F HERBICIDE** (SPLIT APPLICATION)

**Rate per Hectare**

| Application / Product | Soil Texture | | |
|---|---|---|---|
| | Light | Medium | Heavy |
| Preplant Incorporated / NCS SIKA 480 | 1.2 L | 1.7 L | 2.4 L |
| Preemergence / Afolan F Herbicide | - | 2.0 L | 2.7 L |
| Preemergence / Lorox L Herbicide | - | 1.75 L | 2.25 L |

- Do not use Afolan F Herbicide on sand low in organic matter (less than 3%). Make a single application of Afolan F Herbicide.
- Use Afolan F Herbicide as a band or broadcast spray after planting soybeans (at least 5 cm deep) but before soybeans emerge. Refer to the Afolan F Herbicide label for specific recommendations and precautions.
- Use the 1.75 L rate of Lorox L Herbicide on light coloured soils with moderate organic matter (2 to 5%). Do not use Lorox L Herbicide on coarse textured soils low in organic matter, as crop injury may result. Refer to the Lorox L Herbicide label for specific recommendations.

**NCS SIKA 480 HERBICIDE FOLLOWED BY BASAGRAN LIQUID HERBICIDE PLUS ASSIST OIL CONCENTRATE (SPLIT APPLICATION)**

**Rate per Hectare**

| Application / Product | Soil Texture | | |
|---|---|---|---|
| | Light | Medium | Heavy |
| Preplant Incorporated / NCS SIKA 480 | 1.2 L | 1.7 L | 2.4 L |
| Postemergence / Basagran Liquid Herbicide plus Assist Oil Concentrate (1/2 - 1% of the spray volume) | 1.75 - 2.25 L | | |

- Use Basagran Liquid Herbicide as a postemergence treatment at the 1.75 to 2.25 L/ha rate (depending upon weeds present) plus Assist Oil Concentrate at 1/2 to 1% of the spray volume. Refer to the Basagran Liquid Herbicide label for stage of crop for optimum weed control and specific recommendations.

**NCS SIKA 480 HERBICIDE FOR USE IN DRY COMMON BEANS (WHITE OR KIDNEY)**

NCS SIKA 480 Herbicide incorporated before planting dry common beans (white and kidney) will control most annual grasses and many broadleaved weeds. To control more weeds, use NCS SIKA 480 Herbicide in combination with one of the following:

**NCS SIKA 480 HERBICIDE PLUS EPTAM LIQUID EC HERBICIDE (TANK-MIX)**

**Rate per Hectare**

| Application / Product | Soil Texture | | |
|---|---|---|---|
| | Light | Medium | Heavy |
| Preplant Incorporated / NCS SIKA 480 Herbicide | 1.2 L | 1.2 L | 2.0 L |
| Eptam Liquid EC Herbicide | 2.5-3.75 L | | |

- Do not use Eptam Herbicide plus NCS SIKA 480 Herbicide tank mixture on Adzuki beans, cow peas (blackeye peas, blackeye beans), soybeans, Lima beans or other flat podded beans except Romano. Under abnormal weather conditions stunting may occur on Gratiot, Michilite, Sanilac, Seafarer and Seaway varieties. Do not use on muck or charcoal soils. Read and observe all directions and cautions on the label for Eptam Herbicide.

**NCS SIKA 480 HERBICIDE FOLLOWED BY BASAGRAN LIQUID HERBICIDE PLUS ASSIST OIL CONCENTRATE**

Refer to soybean section for NCS SIKA 480 Herbicide followed by a postemergent treatment of Basagran Liquid Herbicide plus Assist Oil Concentrate.

The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than Northern CropScience Inc. under the User Requested Minor Use Label Expansion program. For these uses, Northern CropScience Inc. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

**DIRECTIONS FOR USE**

**NCS SIKA 480 HERBICIDE PLUS PURSUIT HERBICIDE (TANK-MIX) PREPLANT INCORPORATED FOR USE IN WHITE BEANS**

A NCS SIKA 480 Herbicide plus Pursuit Herbicide tank-mix provides broadleaf weed and grass control in white beans. Refer to the product labels for a complete list of weeds controlled. Only one application may be made per season. Apply by pre-plant incorporation, ground application.

**Application rates:**

NCS SIKA 480 Herbicide: 1.25 - 2.4 L/ha
Pursuit Herbicide: 313 mL/ha

Refer to the main NCS SIKA 480 Herbicide and Pursuit Herbicide labels for specific instructions, recommendations and precautions.

READ THE ROTATIONAL CROPPING RESTRICTIONS ON THE FULL LABEL BEFORE USING.

**NCS SIKA 480 HERBICIDE FOR STANDARD SPRING AND TRIAZINE TOLERANT CANOLA**

**Standard Canola**

NCS SIKA 480 Herbicide incorporated alone before planting canola will control most annual grasses and many broadleaved weeds. Refer to General Information for rates and recommendations.

**Triazine Tolerant Canola**

NCS SIKA 480 Herbicide incorporated before planting canola will control most annual grasses and many broadleaved weeds. To control more weeds, use NCS SIKA 480 Herbicide in combination with the following:

**NCS SIKA 480 HERBICIDE PLUS A REGISTERED POSTEMERGENCE TRIAZINE HERBICIDE FOR TRIAZINE TOLERANT CANOLA**

**NOTE:** THIS TREATMENT FOR USE ONLY ON TRIAZINE TOLERANT CANOLA. NON-TRIAZINE TOLERANT CANOLA WILL BE KILLED BY THIS COMBINATION.

NCS SIKA 480 Herbicide may be applied in the spring for triazine tolerant canola. A postemergence triazine herbicide registered for this use may then be applied after crop emergence to control several additional weeds. Refer to individual labels of the postemergence herbicides for specific recommendations and follow warnings and precautions as stated.

**NCS SIKA 480 HERBICIDE FOR USE IN TOMATOES**

NCS SIKA 480 Herbicide, incorporated before planting tomatoes, will control most annual grasses and many broadleaved weeds. To control more weeds, use NCS SIKA 480 Herbicide in combination with Sencor 75 DF for the following:

**NCS SIKA 480 HERBICIDE PLUS SENCOR 75 DF IN TRANSPLANTED TOMATOES (GROWN FOR PROCESSING ONLY)**

**Rate per Hectare**

| Application / Product | Soil Texture | | |
|---|---|---|---|
| | Light | Medium | Heavy |
| Preplant Incorporated / NCS SIKA 480 Herbicide | 1.2 L | 1.7 L | 2.4 L |
| Preplant Incorporated♦ / Sencor 75 DF | 330-400 g | 500-750 g | 800-900 g |
| Followed by Postemergence / Sencor 75 DF | 600 g | 750 g | 800-900 g |

♦Tank-mix with NCS SIKA 480 Herbicide

- A postemergence directed application of Sencor 75 DF is used to control any weed escapes before they exceed 2.5 cm in height and 3 weeks or more after transplanting tomatoes. This should also leave a residual amount of Sencor 75 DF to maintain season-long control.
- This follow-up Sencor 75 DF application is usually timed for early July, but should not be applied earlier than 21 days after transplanting tomatoes or no later than 60 days before harvesting.
- Refer to the Sencor 75 DF label for additional instructions and precautions.
- NCS SIKA 480 Herbicide may damage transplants weakened by any cause which may result in reduced crop yield. To prevent damage, plant only healthy transplants; do not plant when cool, wet or unfavourable growing conditions exist. Follow all application and incorporation directions exactly.

**NCS SIKA 480 HERBICIDE USE FOR ASPARAGUS - ESTABLISHED THREE YEARS**

Follow recommended soil preparation, application and incorporation procedures for NCS SIKA 480 Herbicide. Apply to established asparagus in the early spring after ferns are removed but before spear extension from the crowns. Or apply after harvest in the late spring or early summer before ferning begins.

**CAUTION:** Set implements so asparagus crowns are not injured during soil preparation and incorporation.

**Rate per Hectare**

| | Soil Texture | | |
|---|---|---|---|
| | Light | Medium | Heavy |
| NCS SIKA 480 Herbicide | 2.0 L | 3.1 L | 4.2 L |

**NCS SIKA 480 HERBICIDE FOR USE ON FALL CEREALS GROWN IN ROTATION WITH FLUE-CURED TOBACCO TO CONTROL LOOSE SILKY BENTGRASS**

**POSTPLANT INCORPORATED (HARROWED IN AFTER SEEDING)**

**Crops Registered**

winter wheat
fall rye
fall triticale

NCS SIKA 480 Herbicide is applied and incorporated in the soil in the fall as soon as possible **after planting** and prior to the emergence of the fall cereal for the control of loose silky bentgrass. Weed control is achieved by establishing a shallow (2 cm) layer of NCS SIKA 480 Herbicide near the soil

surface. Within this layer, NCS SIKA 480 Herbicide controls loose silky bentgrass by stopping growth as the seeds germinate. Crop safety is maintained since the fall cereal seeds are located in the untreated soil beneath the NCS SIKA 480 Herbicide layer.

**Application and Incorporation**

Fall cereals should be seeded to a depth of 5 to 8 cm in a well-tilled seedbed. Apply NCS SIKA 480 Herbicide at a rate of 0.8 to 1.2 L/ha product in a minimum of 100 L/ha water with a properly calibrated herbicide sprayer. Use the 1.2 L/ha rate for heavy infestations of loose silky bentgrass. Apply NCS SIKA 480 Herbicide as soon as possible after seeding and before crop emerges, to soil surface which is free of trash. Incorporate to a shallow depth with diamond harrows or tyne harrows in two different directions at speeds of at least 8 km/hr. Both incorporations must be done within 24 hours of application.

**NCS SIKA 480 HERBICIDE USE FOR FIRST YEAR APPLE, APRICOT, CHERRY, PEACH, PLUM AND PEAR TREES**

NCS SIKA 480 Herbicide applied and incorporated before transplanting fruit trees will control most annual grasses and many broadleaved weeds. For the control of additional weeds, NCS SIKA 480 Herbicide may be tank-mixed with Sencor 75 DF. Do not apply more than one application per year.

**Recommended Rates per Hectare**

| Product | Soil Texture | | |
|---|---|---|---|
| | **Light** | **Medium** | **Heavy** |
| | sand<br>sandy loam | loam<br>silt loam<br>silt<br>sandy clay loam | silty clay loam<br>clay loam<br>silty clay<br>clay |
| NCS SIKA 480 Herbicide | 1.2 L | 1.7 L | 2.4 L |
| Sencor 75 DF | 550 g | 750 g | 750 g |

Refer to the Sencor 75 DF label for directions on use and special precautions.

The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than Northern CropScience Inc. under the User Requested Minor Use Label Expansion program. For these uses, Northern CropScience Inc. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

**NCS SIKA 480 HERBICIDE PLUS DUAL MAGNUM HERBICIDE OR DUAL II MAGNUM HERBICIDE PLUS SENCOR 75 DF (TANK-MIX) PREPLANT INCORPORATED FOR USE IN TRANSPLANTED TOMATOES**

**DIRECTIONS FOR USE**

A NCS SIKA 480 Herbicide + Dual Magnum or Dual II Magnum Herbicide + Sencor 75 DF tank-mix provides control of broadleaved weeds (including triazine tolerant biotypes), annual grasses and Eastern black nightshade. Only one application may be made per year. **DO NOT USE ON DIRECT-SEEDED TOMATOES.** Under cold, wet conditions or conditions that may adversely affect good transplant establishment: apply the spray solution and shallow incorporate (5-7.5 cm deep), then plant transplants 5- 10 cm deep. Do not harvest crop within 60 days after application. Follow the rates listed in Table 1.

Table 1: Recommended Rates of NCS SIKA 480 Herbicide + Dual Magnum Herbicide or Dual II Magnum Herbicide + Sencor 75 DF Tank-Mix for Use in Transplanted Tomatoes

| **Tank Mix Component** | **Rates per Hectare for Specific Soil Textures** | |
|---|---|---|
| | Light | Medium to Heavy |
| **NCS SIKA 480 Herbicide** | 1.1 L | 2.1 L |
| **Dual Magnum Herbicide or Dual II Magnum Herbicide** | 1.0 L | 1.25 L ♦ |
| **Sencor 75 DF** | 330 g | 670 g |

♦use the higher rate of Dual Magnum Herbicide or Dual II Magnum Herbicide for Eastern black nightshade control.

Refer to the Dual Magnum Herbicide, Dual II Magnum Herbicide, and Sencor 75 DF labels for specific recommendations and precautions.

**Mixing Sequence**

**It is important to follow the correct sequence when mixing NCS SIKA 480 Herbicide, Sencor 75 DF and Dual Magnum Herbicide or Dual II Magnum Herbicide in the spray tank.**

The following steps are essential when combining NCS SIKA 480 Herbicide with Sencor 75 DF and Dual Magnum Herbicide or Dual II Magnum Herbicide:

1. Fill the spray tank 1/4 to 1/3 full with clean water.
2. While continuing to fill the spray tank and with the agitation and recirculating system operating, slowly add the full amount of Sencor 75 DF for that tankload.
3. Fill the spray tank to the desired level with clean water, while maintaining constant agitation of the mixture.
4. After the full amount of Sencor 75 DF is thoroughly mixed, add the calculated amount of NCS SIKA 480 Herbicide to the tank and agitate thoroughly.
5. Add the calculated amount of Dual Magnum Herbicide or Dual II Magnum Herbicide to the tank and agitate thoroughly.
6. To avoid any compatibility problems, spray immediately. Continuous agitation is required until the mixture is sprayed out. Do not allow the sprayer to stand without agitation or settling will occur and vigorous mixing with a paddle will be necessary to remix the chemical in the spray tank.

**RESISTANCE MANAGEMENT RECOMMENDATIONS**

For resistance management, NCS SIKA 480 Herbicide is a Group 3 herbicide. Any weed population may contain or develop plants naturally resistant to NCS SIKA 480 Herbicide and other Group 3 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance:

- Where possible, rotate the use of NCS SIKA 480 Herbicide or other Group 3 herbicides within a growing season (sequence) or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group when such use is permitted. To delay resistance, the less resistance-prone partner should control the target weed(s) as effectively as the more resistance-prone partner.
- Herbicide use should be based on an integrated weed management program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical control methods), cultural (for example, higher crop seeding rates; precision

fertilizer application method and timing to favour the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.

- Monitor weed populations after herbicide application for signs of resistance development (for example, only one weed species on the herbicide label not controlled). If resistance is suspected, prevent weed seed production in the affected area if possible by an alternative herbicide from a different group. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- Have suspected resistant weed seeds tested by a qualified laboratory to confirm resistance and identify alternative herbicide options.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Northern CropScience Inc. at 1-437880-8283.

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.