



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

February 24, 2015

Cherilyn Moore  
Regulatory Specialist III  
Syngenta Crop Protection, LLC  
PO Box 18300  
Greensboro, NC 27419

Subject: Label Notification per PRN 98-10 – Addition of Resistance Management  
Language and New York State-specific Restriction  
Product Name: Expert Herbicide  
EPA Registration Number: 100-1161  
Application Date: January 15, 2015  
Decision Number: 499426

Dear Ms. Moore:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped “Notification” and will be placed in our records.

If you have any questions, you may contact Sarah Meadows at 703-347-0505 or via email at meadows.sarah@epa.gov.

Sincerely,

A handwritten signature in cursive script that reads "Mindy Ondish".

Mindy Ondish  
Acting Product Manager 25  
Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

[Booklet]

**RESTRICTED USE PESTICIDE**  
**(GROUND AND SURFACE WATER CONCERNS)**  
**FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.**  
**THIS PRODUCT IS A RESTRICTED-USE HERBICIDE DUE TO GROUND AND SURFACE WATER CONCERNS. USERS MUST READ AND FOLLOW ALL PRECAUTIONARY STATEMENTS AND INSTRUCTIONS FOR USE IN ORDER TO MINIMIZE POTENTIAL FOR ATRAZINE TO REACH GROUND AND SURFACE WATER.**

**GROUP 5 15 9 HERBICIDES**

Sale, use and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

**Expert® Herbicide**

For control of various broadleaf weeds and grasses before emergence of corn and grain or forage sorghum and after emergence of Roundup Ready® corn.

Active Ingredients:

Atrazine (CAS No. 1912-24-9) .....	22.5%
Atrazine related compounds.....	0.4%
S-metolachlor* (CAS No. 87392-12-9) .....	18.6%
Glyphosate, in the form of the isopropylamine salt** (CAS No. 38641-94-0) .....	10.8%
Other Ingredients:	47.7%
<hr/> Total:	<hr/> 100.0%

\*Includes R-enantiomer

\*\*This product contains 8.0% glyphosate acid equivalents.

Expert contains 1.74 **lbs.** of S-metolachlor; 2.14 **lbs.** of atrazine + relateds; and 1.0 **lbs.** of the isopropylamine salt of glyphosate active ingredient per gallon.

Expert Herbicide is formulated as a suspension concentrate (SC).

**KEEP OUT OF REACH OF CHILDREN.**

**CAUTION**

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-1161

**SHAKE WELL BEFORE USING**

\_\_\_\_\_ gallons  
Net Contents

**NOTIFICATION**

100-1161

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

02/24/2015

<b>FIRST AID</b>	
<b>If swallowed</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
<b>If in eyes</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If inhaled</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>HOT LINE NUMBER</b> For 24 Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident), Call <b>1-800-888-8372</b>	

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## **PRECAUTIONARY STATEMENTS**

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### **Hazards to Humans and Domestic Animals**

#### **CAUTION**

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. ~~This product may cause skin sensitization reactions in some people.~~

### **Personal Protective Equipment (PPE)**

Some materials that are chemical-resistant to this product are: barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride (PVC), and Viton®. If you want more options, follow instructions for "Category A" on the EPA chemical-resistant category selection chart.

**Mixers, Loaders, Applicators and other handlers not using Engineering Controls must wear:**

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- A chemical-resistant apron when cleaning equipment, mixing, or loading

Aerial application is prohibited.

See **Engineering Controls** for additional requirements.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

**Engineering Control Statements**

When applicators use enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(5)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**IMPORTANT:** When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for **Applicators and other handlers not using engineering controls**, and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

Aerial application is prohibited.

**User Safety Recommendations**

**Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**Environmental Hazards**

This pesticide is toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark.

Do not contaminate water when disposing of equipment wash water or rinsate. This pesticide contains atrazine, which has been shown to be toxic to aquatic invertebrates. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply when weather conditions favor drift from treated areas.

Care must be taken when using this product to prevent back-siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures, or rinsates.

Check-valves or antisiphoning devices must be used on all mixing equipment.

This product must not be mixed/loaded or used within 50 ft of all wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 ft of any well are prohibited, unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash water, and rain water that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site.

Additional State imposed requirements regarding well-head setbacks and operational area containment must be observed.

This product must not be mixed or loaded within 50 ft of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. Do not apply within 66 ft of points of entry of field surface water runoff to perennial or intermittent streams and rivers. If land is highly erodible, the buffer must be planted to the crop or seeded with grass or other suitable crop. Do not apply within 200 ft of natural or impounded lakes and reservoirs.

### **Tile-Outletted Terraced Fields Containing Standpipes**

One of the following restrictions must be used in applying atrazine to tile-terraced fields containing standpipes:

1. Do not apply this product within 66 ft of standpipes in the tile-outletted terraced fields.

2. Apply this product to the entire tile-outletted terraced field and immediately incorporate it to a depth of 2-3 inches in the entire field.
3. Apply this product to the entire tile-outletted terraced field under a no-till practice only when a high crop residue management practice is practiced. High crop residue management is described as a crop management practice where little or no crop residue is removed from the field during and after crop harvest.

### **Ground Water Advisory**

Expert contains the active ingredients atrazine, S-metolachlor, and the isopropylamine salt of glyphosate.

Atrazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Atrazine has been found in ground water. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (ground water) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

S-metolachlor has the potential to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

### **Surface Water Advisory**

S-metolachlor has the potential to contaminate surface water through ground spray drift. Under some conditions, S-metolachlor may also have a high potential for runoff into surface water (primarily via dissolution in runoff water) for several months post-application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlaying tile drainage systems that drain to surface water.

### **Physical or Chemical Hazards**

Spray solutions of this product should be mixed, stored and applied only in stainless steel, aluminum, fiberglass, plastic and plastic-lined steel containers.

**DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS.** This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing

serious personal injury, if ignited by open flames, sparks, welder's torch, lighted cigarette or other ignition sources.

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## CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and, (2) Buyer and User assume the risk of any such use. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.**

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.



## DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

ANY USE OF THIS PRODUCT IN AN AREA WHERE USE IS PROHIBITED IS A VIOLATION OF FEDERAL LAW. Before using this product, you must consult the Atrazine Watershed Information Center (AWIC) to determine whether the use of this product is prohibited in your watershed. AWIC can be accessed through [www.atrazine-watershed.info](http://www.atrazine-watershed.info) or 1-866-365-3014. If use of this product is prohibited in your watershed, you may return this product to your point of purchase or contact Syngenta Crop Protection, LLC for a refund.

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. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 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.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves made of any waterproof material
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposures

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND USE PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.**

**Sale, use and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.**

**Note: ~~Not for sale, use or distribution in Nassau County or Suffolk County, New York.~~**

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## GENERAL INFORMATION

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Expert is a herbicide that may be applied before or after weed emergence for control of many annual grass and broadleaf weeds in corn. This product will also provide in-season control of certain emerged perennial weeds. Expert may be applied up to 30 days before, during, or after planting all types of corn grown under no-tillage or other reduced tillage practices, **but prior to emergence of corn that is not specifically designated as Roundup Ready**. Expert can also be used before crop emergence for control of many annual grass and broadleaf weeds in grain or forage sorghum, provided the sorghum seed has been properly treated by the seed company with Concep® III. This product may be tank mixed with other herbicides specified on this label for weed control in conventional, minimum-till, and no-till corn, grain sorghum, or forage sorghum.

**USE PRECAUTIONS: DO NOT APPLY EXPERT AFTER SORGHUM EMERGES. DO NOT APPLY EXPERT AFTER CORN EMERGES UNLESS THE CORN SEED IS SPECIFICALLY DESIGNATED AS ROUNDUP READY. FAILURE TO COMPLY WITH THIS USE PRECAUTION WILL CAUSE SEVERE INJURY OR DEATH TO NON-ROUNDUP READY CORN AND SORGHUM PLANTS.**

**Note:** Tank mixtures are permitted only in those states and crops and where the tank mix partner is registered. Follow the label of each product used for precautionary statements, directions for use, geographic and other restrictions.

When tank mixing or sequentially applying atrazine or products containing atrazine to corn or sorghum, the total pounds of atrazine applied (lb. a.i. per acre) must not exceed 2.5 pounds active ingredient per acre.

Before corn or sorghum emerges, water or fluid fertilizer (28%-32% nitrogen solutions only) may be used as the carrier when applying Expert alone or in tank mixtures approved on this label. **Control of emerged weeds, especially perennial species, may be reduced if fluid fertilizer is used as the carrier. Do not use complex fluid fertilizers such as 10-34-0 as the spray carrier when applying Expert.** Expert may be applied to Roundup Ready corn after emergence up to a corn height of 12 inches tall. Use only water as a carrier when applying Expert after Roundup Ready corn emergence. **Do not apply Expert in tank mixture with any other products after crop emergence.**

Where reference is made to weeds partially controlled, partial control means significant activity, but not always at a level generally considered acceptable for commercial weed control.

*Use Precautions: (1) If sorghum seed is not properly pretreated with Concep, Expert may severely injure the crop. (2) Injury may occur to sorghum following the use of Expert under abnormally high soil moisture conditions during early development of the crop.*

Expert alone or in tank mixture with Dual II Magnum®, AAtrex® 4L or AAtrex Nine-O® (atrazine), Princep® 4L or Princep Caliber® 90 (simazine), Touchdown® or Roundup® (glyphosate), Python®, Hornet®, Prowl® (pendimethalin), Banvel® or Clarity® (dicamba), or 2,4-D may be applied to corn preplant or preemergence, in water or fluid fertilizer.

Expert alone or in combination with Touchdown or Roundup (glyphosate) may be applied to sorghum preplant or preemergence in water or fluid fertilizer, provided the sorghum seed has been properly treated by the seed company with Concep III.

Triazine resistant biotypes of some weeds have developed following many years of continuous use of atrazine (one of the ingredients in Expert) and other triazines. For best results, where triazine resistant biotypes are known or suspected to exist with other weeds, Syngenta recommends the use of Expert after emergence of resistant biotypes. Consult with your State Agricultural Extension Service for specific recommendations.

### **Resistant Weed Management**

Expert Herbicide contains the active ingredients atrazine which inhibits the photosynthetic pathway of photosystem II (PSII, Site of Action Group 5), S-metolachlor which inhibits the formation of very long chain fatty acids (VLCFA, Site of Action Group 15), and glyphosate which inhibits the enzyme 5-enolpyruvylshikimate-3-phosphate synthase (EPSP, Site of Action Group 9). Some naturally occurring weed populations have been identified as resistant to Group 5, 15 and 9 herbicides. Selection of resistant biotypes, through repeated use of these herbicides or lower than recommended use rates in the same field, may result in weed control failures. A resistant biotype may be present where poor performance cannot be attributed to adverse environmental conditions or improper application methods. If resistance is suspected, contact your local Syngenta representative and/or agricultural advisor for assistance.

#### **General principles of herbicide resistant weed management:**

- **Employ integrated weed management practices. Use multiple herbicide sites-of-action with overlapping weed spectrums in rotation, sequences, or mixtures.**

- Use the full recommended herbicide rate and proper application timing for the hardest to control weed species present in the field.
- Scout fields after herbicide application to ensure control has been achieved. Avoid allowing weeds to reproduce by seed or to proliferate vegetatively.
- Monitor site and clean equipment between sites.
- Start with a clean field and control weeds early by using a burndown treatment or tillage in combination with a preemergence residual herbicide as appropriate.
- Use cultural practices such as cultivation and crop rotation, where appropriate.
- Use good agronomic principles that enhance crop competitiveness.

### Soil Texture Information

Within rate ranges on all tables in this label, use the lower rate on soil relatively coarse-textured or low in organic matter; use the higher rate on soil relatively fine-textured or high in organic matter and where weed pressure, particularly from grasses, is expected to be especially heavy.

**Recommendations are based upon soil textures, which are defined as follows:**

<b>COARSE</b>	Sand, loamy sand, sandy loam
<b>MEDIUM</b>	Loam, silt loam, silt
<b>FINE</b>	Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay

### Use Precautions

To reduce the potential for crop injury, avoid all direct or indirect contact of Expert with corn and sorghum seed.

Do not apply metolachlor containing products, such as Inter 8E II or Inter Plus II, in tank mixture or as a sequential application with Expert.

To avoid spray drift, do not apply if wind is in excess of 10 mph or if winds are gusty. If sensitive crops or plants are growing downwind, do not apply if wind speed is in excess of 5 mph or gusty. (See **Recommendations to Avoid Spray Drift** section).

Do not apply this product by aerial equipment.

Avoid spray overlap, as crop injury may result.

Do not apply Expert through any type of irrigation system.

Do not apply under conditions that favor runoff or wind erosion of soil containing Expert to non-target areas.

Do not apply this product in a greenhouse.

Do not graze or feed forage from treated areas for 60 days following application for all types of corn except sweet corn. For sweet corn, do not graze or feed forage from treated areas for 45 days following application.

Postemergence applications to corn must be made before crop reaches 12 inches in height. Do not harvest forage, grain, or stover within 60 days after last application.

To prevent off-site movement due to runoff or wind erosion:

1. Avoid treating powdery dry or light sand soils when conditions are favorable for wind erosion. Under these conditions, the soil should first be settled by rainfall or irrigation.
2. Do not apply to impervious substrates, such as paved or highly compacted surfaces.
3. Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non-target crops, unless at least ½ inch of rainfall has occurred between application and the first irrigation.

Rainfall or sprinkler irrigation within 2 hours of application may reduce control of emerged weeds.

Dry weather following preemergence application of Expert alone or in tank mixtures may reduce effectiveness. Reduced control of emerged weeds may occur when weeds are under poor growing conditions such as from drought stress, cool temperatures or cloudy weather, when applications follow recent mowing, or when excess amounts of dust cover plants.

Thoroughly clean sprayer before using. Dispose of cleaning solution in a responsible manner. Do not use a sprayer contaminated with other materials, or crop injury or sprayer clogging may occur.

### **Expert Applied Alone**

The addition of ammonium sulfate in the spray solution may increase the performance of Expert and recommended tank mixtures of emerged annual weeds growing under adverse conditions. If desired, add spray grade, dry ammonium sulfate at 2% by weight or 17 ~~lbs.~~/100 ~~gals.~~ of water. Ammonium sulfate should be added to the water in the spray tank and completely dissolved prior to adding any herbicides. **Do not mix**

**ammonium sulfate in any fluid fertilizer solutions.** Additional surfactants are not required with this product.

When applied as directed in this label, Expert will provide control or partial control of the following annual weeds **BEFORE EMERGENCE**.

## **ANNUAL GRASSES AND YELLOW NUTSEDGE**

### **Annual Grasses Controlled Before Emergence**

Barnyardgrass (*Echinochloa crus-galli*)  
Crabgrass, large (*Digitaria sanguinalis*)  
Crabgrass, smooth (*Digitaria ischaemum*)  
Crowfootgrass (*Dactyloctenium aegyptium*)  
Cupgrass, prairie (*Eriochloa contracta*)  
Cupgrass, southwestern (*Eriochloa gracilis*)  
Foxtail, bristly (*Setaria verticillata*)  
Foxtail, giant (*Setaria faberi*)  
Foxtail, green (*Setaria viridis*)  
Foxtail, robust (*Setaria viridis*)  
Foxtail, yellow (*Setaria glauca*)  
Goosegrass (*Eleusine indica*)  
Millet, foxtail (*Setaria italica*)  
Panicum, fall (*Panicum dichotomiflorum*)  
Rice, red (*Oryza sativa*)  
Witchgrass (*Panicum capillare*)

### **Sedges Controlled Before Emergence**

Nutsedge, yellow (*Cyperus esculentus*)

### **Annual Grasses Partially Controlled\* Before Emergence**

Cupgrass, woolly (*Eriochloa villosa*)  
Johnsongrass, seedling (*Sorghum halepense*)  
Millet, wild proso (*Panicum miliaceum*)  
Panicum, Texas (*Panicum texanum*)  
Sandbur, field (*Cenchrus incertus*)  
Shattercane (*Sorghum bicolor*)  
Signalgrass, broadleaf (*Brachiaria platyphylla*)  
Sorghum, volunteer (*Sorghum bicolor*)

## ANNUAL BROADLEAF WEEDS

### Annual Broadleaf Weeds Controlled Before Emergence

Amaranth, Palmer (*Amaranthus palmeri*)  
Amaranth, Powell (*Amaranthus powellii*)  
Anoda, spurred (*Anoda cristata*)  
Carpetweed (*Mollugo verticillata*)  
Chickweed, common (*Stellaria media*)  
Galinsoga (*Galinsoga ciliata*)  
Henbit (*Lamium amplexicaule*)  
Jimsonweed (*Datura stramonium*)  
Kochia (*Kochia scoparia*)  
Lambsquarters, common (*Chenopodium album*)  
Marestail/Horseweed (*Conyza canadensis*)  
Mustard, wild (*Brassica kaber*)  
Nightshade, black (*Solanum nigrum*)  
Nightshade, eastern black (*Solanum ptycanthum*)  
Pigweed, redroot (*Amaranthus retroflexus*)  
Pigweed, smooth (*Amaranthus hybridus*)  
Purslane, common (*Portulaca oleracea*)  
Pusley, Florida (*Richardia scabra*)  
Ragweed, common (*Ambrosia artemisiifolia*)  
Shepherd's-purse (*Capsella bursa-pastoris*)  
Sida, prickly (*Sida spinosa*)  
Smartweed, ladysthumb (*Polygonum persicaria*)  
Smartweed, Pennsylvania (*Polygonum pennsylvanicum*)  
Velvetleaf (*Abutilon theophrasti*)  
Waterhemp (*Amaranthus tuberculatus*)

### Annual Broadleaf Weeds Partially Controlled\* Before Emergence

Cocklebur (*Xanthium strumarium*)  
Morningglory spp. (*Ipomoea* spp.)  
Ragweed, giant (*Ambrosia trifida*)  
Sicklepod (*Cassia obtusifolia*)  
Sunflower (*Helianthus annuus*)

\*Where reference is made to weeds partially controlled, partial control means significant activity, but not always at a level generally considered acceptable for commercial weed control. Control of these weeds may be improved by following these suggested procedures.

1. For best results, **sprinkler irrigate** a minimum of 2 hours after, but within 2 days of application. Apply ½-1 inch of water. Use lower water volume (½ inch) on coarse-textured soils and higher volume (1 inch) on fine-textured soils. If

irrigation is not possible, and rain does not occur within 2 days after application, weed control may be decreased.

2. For large-seeded broadleaf weed species or those species listed as partially controlled, an application of a postemergence herbicide should be made, if needed, following a preemergence application of Expert.

When applied as directed in this label, Expert will provide control or partial control of the following **EMERGED** annual weeds:

## ANNUAL GRASSES

### Annual Grasses Controlled After Emergence

Barley (*Hordeum vulgare*)  
Barley, foxtail (*Hordeum jubatum*)  
Barley, little (*Hordeum pusillum*)  
Barnyardgrass (*Echinochloa crus-galli*)  
Bluegrass, annual (*Poa annua*)  
Brome, downy (*Bromus tectorum*)  
Brome, Japanese (*Bromus japonicus*)  
Cheat (*Bromus secalinus*)  
Corn, non-Roundup Ready (*Zea mays*)  
Crabgrass, large (*Digitaria sanguinalis*)  
Crabgrass, smooth (*Digitaria ischaemum*)  
Cupgrass, prairie (*Eriochloa contracta*)  
Cupgrass, southwestern (*Eriochloa gracilis*)  
Cupgrass, woolly (*Eriochloa villosa*)  
Foxtail, bristly (*Setaria verticillata*)  
Foxtail, giant (*Setaria faberi*)  
Foxtail, green (*Setaria viridis*)  
Foxtail, robust (*Setaria viridis*)  
Foxtail, yellow (*Setaria glauca*)  
Goosegrass (*Eleusine indica*)  
Johnsongrass, seedling (*Sorghum halepense*)  
Junglerice (*Echinochloa colona*)  
Millet, wild-proso (*Panicum miliaceum*)  
Oats (*Avena sativa*)  
Oat, wild (*Avena fatua*)  
Panicum, browntop (*Panicum fasciculatum*)  
Panicum, fall (*Panicum dichotomiflorum*)  
Panicum, Texas (*Panicum texanum*)  
Rye (*Secale cereale*)  
Sandbur, field (*Cenchrus incertus*)  
Shattercane (*Sorghum bicolor*)  
Signalgrass, broadleaf (*Brachiaria platyphylla*)



Sorghum, grain (*Sorghum bicolor*)  
Sorghum, volunteer (*Sorghum bicolor*)  
Wheat (*Triticum* spp.)  
Witchgrass (*Panicum capillare*)

### **Annual Broadleaf Weeds Controlled After Emergence**

Amaranth, Palmer (*Amaranthus palmeri*)  
Amaranth, Powell (*Amaranthus powellii*)  
Bittercress, hairy (*Cardamine hirsuta*)  
Burdock (*Sicyos angulatus*)  
Buttercup spp. (*Ranunculus* spp.)  
Carpetweed (*Mollugo verticillata*)  
Chickweed, common (*Stellaria media*)  
Chickweed, mouseear (*Cerastium vulgatum*)  
Cocklebur (*Xanthium strumarium*)  
Eclipta (*Eclipta prostrata*)  
Fleabane, annual (*Erigeron annuus*)  
Fleabane, hairy (*Conyza bonariensis*)  
Groundsel, common (*Senecio vulgaris*)  
Henbit (*Lamium amplexicaule*)  
Knotweed, prostrate (*Polygonum aviculare*)  
Kochia (*Kochia scoparia*)  
Lambsquarters, common (*Chenopodium alba*)  
Lettuce, prickly (*Lactuca serriola*)  
Mallow, Venice (*Hibiscus trionum*)  
Marestail/Horseweed (*Conyza canadensis*)  
Mustard, wild (*Brassica kaber*)  
Nightshade, black (*Solanum nigrum*)  
Nightshade, eastern black (*Solanum ptycanthum*)  
Nightshade, hairy (*Solanum sarrachoides*)  
Pennycress, field (*Thlaspi arvense*)  
Pepperweed, Virginia (*Lepidium virginicum*)  
Pigweed, redroot (*Amaranthus retroflexus*)  
Pigweed, smooth (*Amaranthus hybridus*)  
Pusley, Florida (*Richardia scabra*)  
Ragweed, common (*Ambrosia artemisiifolia*)  
Ragweed, giant (*Ambrosia trifida*)  
Shepherd's-purse (*Capsella bursa-pastoris*)  
Sida, prickly (*Sida spinosa*)  
Smartweed, ladythumb (*Polygonum persicaria*)  
Smartweed, Pennsylvania (*Polygonum pennsylvanicum*)  
Spurge, prostrate (*Euphorbia humistrata*)  
Spurge, spotted (*Euphorbia maculata*)  
Sunflower, common (*Helianthus annuus*)  
Thistle, Russian (*Salsola iberica*)

Velvetleaf (*Abutilon theophrasti*)  
Waterhemp (*Amaranthus tuberculatus*)

### **Annual Broadleaf Weeds Partially Controlled\* After Emergence**

Anoda, spurred (*Anoda cristata*)  
Jimsonweed (*Datura stramonium*)  
Morningglory spp. (*Ipomoea* spp.)  
Sesbania, hemp (*Sebania exaltata*)  
Sicklepod (*Cassia obtusifolia*)

\*Where reference is made to weeds partially controlled, partial control means significant activity, but not always at a level generally considered acceptable for commercial weed control.

When applied as directed in this label, Expert will provide in-season control or reduced competition from the following **EMERGED** perennial weeds\*:

### **PERENNIAL GRASSES**

#### **Perennial Grasses Controlled After Emergence**

Bluegrass, Kentucky (*Poa* spp.)  
Bromegrass, smooth (*Bromus inermis*)  
Fescue (*Festuca* spp.)  
Johnsongrass (*Sorghum halepense*)  
Muhly, wirestem (*Muhlenbergia frondosa*)  
Orchardgrass (*Dactylis glomerata*)  
Quackgrass (*Elytrigia repens*)  
Timothy (*Phleum pratense*)

### **PERENNIAL BROADLEAF WEEDS**

#### **Perennial Broadleaf Weeds Controlled After Emergence**

Alfalfa (*Medicago sativa*)  
Bindweed, field (*Convolvulus arvensis*)  
Bindweed, hedge (*Calystegia sepium*)  
Clover, red (*Trifolium pratense*)  
Clover, white (*Trifolium repens*)  
Dandelion (*Taraxacum officinale*)  
Dock, curly (*Rumex crispus*)  
Lettuce, blue (*Lactuca pulchella*)  
Milkweed (*Asclepias* spp.)  
Mullein, common (*Verbascum thapsus*)  
Redvine (*Brunnichia ovata*)

Sowthistle (*Sonchus arvensis*)  
 Thistle, Canada (*Cirsium arvense*)  
 Trumpetcreeper (*Campsis radicans*)  
 Smartweed, swamp (*Polygonum coccineum*)

## PERENNIAL SEDGES

### Perennial Sedges Controlled After Emergence

Nutsedge, purple (*Cyperus rotundus*)  
 Nutsedge, yellow (*Cyperus esculentus*)

\*Use Expert at the highest labeled rate allowed within a soil type for in-season perennial weed control. Regrowth of perennial grass or broadleaf weeds may occur after Expert application. If regrowth occurs, make an application of an appropriate herbicide labeled for control of that species at the specified timing, following all limitations on its label.

### Amount of Active Ingredient Delivered with Expert

Expert is a pre-pack combination of S-metolachlor, atrazine\*, and the isopropylamine (IPA) salt of glyphosate. Expert applied at the listed **qt./A** rates delivers the following active ingredient in pounds per acre (**lbs. a.i./A**):

**Table 1. Active Ingredients (a.i.) in Expert When Applied at the Listed Product **qt./A** Rates**

<b>Expert (<b>qt./A</b>)</b>	<b>S-metolachlor (<b>lbs. a.i./A</b>)</b>	<b>Atrazine (<b>lbs. a.i./A</b>)</b>	<b>Glyphosate IPA Salt (<b>lbs. a.i./A</b>)</b>
2.5	1.09	1.33	0.63
3.0	1.30	1.60	0.75
3.75	1.63	2.00	0.94

\*Where there are state/local requirements regarding atrazine use (including lower maximum rates and/or higher setbacks) which are different from the label, the more restrictive/protective requirements must be followed. Certain states may have established rate limitations within specific geographical areas. Consult your state lead pesticide control agency for additional information. It is a violation of this label not to follow state use regulations.

### Atrazine Rate Limitations

If Expert is applied before, in tank mixtures with, or after other atrazine-containing products, do not exceed the total annual atrazine limits outlined as follows:

## FOR ALL SOIL APPLICATIONS PRIOR TO CORN OR SORGHUM EMERGENCE

### On Highly Erodible Soils (as defined by the Natural Resource Conservation Service)

- If conservation tillage is practiced, leaving at least 30% of the soil covered with plant residues at planting, apply a maximum atrazine rate of 2.0 ~~lbs. a.i./A~~ as a broadcast spray.
- If the soil coverage is less than 30% at planting, apply a maximum atrazine rate of 1.6 ~~lbs. a.i./A~~.

### On Soils Not Highly Erodible

- Apply a maximum atrazine rate of 2.0 ~~lbs. a.i./A~~ as a broadcast spray.

## FOR APPLICATIONS AFTER CORN EMERGENCE

If no atrazine was applied prior to corn emergence, apply a maximum rate of 2.0 ~~lbs. a.i./A~~ broadcast. Where both a preemergence and a postemergence treatment are used, the total atrazine applied in the preemergence PLUS postemergence treatment cannot exceed 2.5 ~~lbs. active ingredient~~ per acre per calendar year.

## Application Rates and Timings

Within rate ranges, use the lower rate on soil relatively coarse-textured and/or low in organic matter, or where weed pressure is expected to be low or weeds listed on this label are less than 6 inches tall. Use the higher rate on soil relatively fine-textured and/or high in organic matter, or where weed pressure is expected to be heavy, or weeds listed on this label are from 6-12 inches tall, or when spraying perennial weeds.

When applying Expert, good coverage of weeds with the spray mixture is essential for maximum weed control results. Observe spray nozzles frequently during the spraying operation to ensure that the spray pattern is uniform. Avoid spraying when coverage will not be uniform or when excessive spray drift may occur. Allow adequate distance between the target area and desirable, non-target vegetation. Avoid spray overlap, because crop injury may result.

## Rotational Crops

Do not rotate to food or feed crops other than those listed below:

- (1) If treated crop is lost due to poor germination, hail, flood, insects, etc., corn may be replanted immediately or sorghum may be replanted immediately, provided the sorghum seed has been treated with Concep III. Do not make a second broadcast application of Expert. If the original application was banded and the

second crop is planted in the untreated row middles, a second banded treatment may be applied to the previously untreated row middles. (2) Corn, sorghum, soybean, cotton, or peanut may be planted the spring following treatment. Do not graze or feed forage or fodder from cotton to livestock, or illegal residues may result. (3) Injury may occur to soybean planted the year following application on soils having a calcareous surface layer. (4) In eastern parts of North or South Dakota, Kansas, western Minnesota, and Nebraska, do not rotate to soybean for 18 months following application if Expert applied in combination with atrazine delivered more than 2.0 ~~lbs. a.i./A~~ of atrazine, or equivalent band application rate or soybean injury may occur. (5) If applied after June 10, do not rotate with crops other than corn or sorghum the next year, or crop injury may occur. (6) In the High Plains and Intermountain areas of the West, where rainfall is sparse and erratic or where irrigation is required, use only when corn or sorghum is to follow corn, or a crop of untreated corn or sorghum is to precede other rotational crops. (7) Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes the year following application, or injury may occur.

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## APPLICATION PROCEDURES

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### Ground Applications

Use stainless steel, fiberglass, or polyethylene spray tanks only. **Do not mix, store, or apply this product or spray solutions of this product in galvanized or unlined steel (except stainless steel) containers or spray tanks. This product or spray solutions of this product react with such containers to produce hydrogen gas, which may form a highly combustible gas mixture. This gas mixture could explode causing serious personal injury if ignited.** Spray nozzles should be uniformly spaced and of the same size, and should provide accurate and uniform application. Use spray nozzles that provide medium-coarse droplets to provide good coverage and to minimize drift. (See **Recommendations to Avoid Spray Drift** section.)

To help assure accuracy, calibrate sprayer at the beginning of the season before use and recalibrate frequently. Also recalibrate any time carriers are changed. For ground application, use a minimum of 10 ~~gals.~~ of water per acre. When weed infestations are severe, use higher volumes (e.g., 20 ~~gals./A~~) to ensure adequate spray coverage.

Use a pump with capacity to: (1) maintain 35-40 psi pressure at nozzles, and (2) provide sufficient agitation within the tank to keep product in suspension. Lower pressures may be used with extended range or low-pressure nozzles. A centrifugal pump, which provides propeller shear action for dispersing and mixing the product, is recommended. The pump should provide a minimum of 20 ~~gals./minute/100 gal.~~ tank size circulated through correctly positioned sparger tubes or jets. Agitation during both mixing and application is essential. Use screens to protect the pump and to prevent nozzles from clogging. Screens placed on the suction side of the pump should be

16-mesh or coarser. Do not place a screen in the recirculation line. Use 50-mesh or coarser screens between the pump and boom, and when required, at the nozzles. Check nozzle manufacturer's recommendations.

For band applications, calculate the amount to be applied as follows:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$$

### Recommendations to Avoid Spray Drift

As with all crop protection products, it is important to avoid off-target movement. Do not allow spray from ground equipment to drift onto adjacent land or crops, as even small amounts may injure sensitive plants. When drift may be a problem, take steps to reduce spray drift, including:

- Do not spray if wind speed is in excess of 10 mph or if winds are gusty.
- If sensitive crops or plants are growing downwind, extreme caution must be used under all conditions. Do not spray if winds are gusty or above 5 mph.
- Use extreme caution when conditions are favorable for drift (high temperatures and low relative humidity), especially when sensitive plants are located nearby.
- Drift from applications of the herbicide is likely to result in damage to sensitive plants adjacent to the treatment site, including corn plants that do not carry the Roundup Ready trait.
- Do not apply when a temperature inversion exists. If an inversion condition is suspected, consult with local weather services before making application.
- Further reductions in drift can be obtained by:
  - Using nozzles that provide a uniform droplet size. Use nozzles that produce medium to coarse droplets (250-400 microns VMD) that are less prone to result in spray drift.
  - Use flat fan nozzles. For example, Turbo Teejet, XR® Teejet, RF Raindrop®, or similar "low drift" nozzles are preferred.
  - Recalibrate sprayer by reducing spray pressures and by increasing spray volumes to produce larger droplets when conditions favor drift.
  - Applying as close to target weeds as practical to obtain a good spray pattern for adequate coverage according to nozzle manufacturer's recommendations.
  - Using a drift reducing agent according to the manufacturer's recommendations.

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## SPRAY EQUIPMENT

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### Cleaning Equipment After Expert Application

Since most crops other than Roundup Ready corn are extremely sensitive to low rates of Expert, special attention must be given to cleaning equipment before spraying other crops. Mix only as much spray solution as needed. Immediately after spraying, clean equipment thoroughly using this procedure.

1. Flush tank, hoses, boom, and nozzles with clean water. (See **Step 5** for disposal).
2. Prepare a cleaning solution of 1 gal of household ammonia per 25 gals of water. Many commercial spray tank cleaners may be used. Contact your local Syngenta representative for more information about proper tank cleaning procedures.
3. Use a pressure washer to clean the inside of the spray tank with the ammonia cleaning solution. Take care to wash all parts of the tank, including the inside top surface. If pressure washer is not available, completely fill the sprayer with the cleaning solution to ensure contact of the cleaning solution with all internal surfaces of the tank and plumbing. Start agitation in the sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.
4. Flush hoses, spray lines, and nozzles for at least one minute with the cleaning solution.
5. Dispose of rinsate from steps 1-4 in an appropriate manner. Spray the cleaning solution on land that will be planted to corn or sorghum or use other approved disposal. **Do not spray rinsate after emergence of corn or sorghum.**
6. Repeat steps 2-5.
7. Remove nozzles, screens and strainers and clean separately in the ammonia solution after completing the above procedures.
8. Rinse the complete spraying system with clean water.

**Note:** If the tank is equipped with the proper number of correctly mounted 360° tank washing nozzles which are attached to a dedicated rinsing system, less cleaning solution than a full tank may be used. Use sufficient cleaning solution to thoroughly rinse all surfaces. Start the sprayer agitation and recirculate the cleaning solution for at least 15 minutes. Flush the spray boom with the cleaning solution. Repeat the rinsing procedure 1-2 times.

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## MIXING PROCEDURES

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### Compatibility Test

A jar test is recommended before mixing to ensure Expert compatibility with tank mix partners and fluid fertilizer carriers. The following test assumes a spray volume of 25 gals per acre. For other spray volumes, make appropriate changes in the ingredient rates.

**Note:** Nitrogen fertilizer solutions (28%-32% only) may replace part or all of the water carrier in the spray tank when applied prior to corn emergence. **Do not use complex fluid fertilizers such as 10-34-0 as the spray carrier when applying Expert.**

Because liquid fertilizers vary, even within the same analysis, **always check compatibility with pesticide(s) before mixing.**

1. Add 1.0 **pt.** of carrier (water or fertilizer) to each of two 1 **qt.** jars with tight lids.  
**Note:** Use the same source of carrier and other components in the compatibility test that will actually be tank mixed and applied. It is important that all components are mixed at a temperature similar to the temperature of those used for the actual application.
2. To one of the jars, add  $\frac{1}{4}$  **tsp.** of 1.2 milliliters of a compatibility agent approved for this use, such as Compex® or Unite® ( $\frac{1}{4}$  **tsp.** is equivalent to 2 **pt./100 gals.** spray solution). Shake or stir gently to mix.
3. To both jars, add the appropriate amount of pesticide(s) in their relative proportions based on recommended labeled rates. If more than one pesticide is used, add them separately with dry pesticides first, flowables next, and emulsifiables last. After each addition, shake or stir gently to mix.
4. After adding all ingredients, put lids on and tighten, and invert each jar 10 times to mix. Let the mixtures stand 15-30 minutes and then look for separation, large flakes, precipitates, gels, heavy oil film on the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the two jars. If either mixtures separates, but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (a) slurry the dry pesticide(s) in water before addition, or (b) add  $\frac{1}{2}$  the compatibility agent to the water or fertilizer solution and the other  $\frac{1}{2}$  to the emulsifiable concentrate or flowable pesticide before addition to the mixture. If incompatibility is still observed, do not use the mixture.
5. After compatibility testing is complete, dispose of any pesticide wastes in accordance with the **Storage and Disposal** section in this label.

### Mixing Instructions

**IMPORTANT:** Follow the correct mixing order on the label or the material may not mix properly. Poor mixing may result in crop injury or poor product performance.

1. Shake 2.5 **gal.** jugs well or thoroughly recirculate larger containers before using Expert and tank mix partners.



2. Make sure the spray tank is clean before mixing. If it is contaminated with other materials, mixing problems and/or clogging may occur. Inconsistent performance and/or injury to the crop may result.
3. Fill the spray tank  $\frac{1}{4}$ - $\frac{1}{2}$  full with clean water and begin agitation. **Note: Using muddy water from sources such as ponds or ditches may reduce the postemergence activity of Expert.**
4. Make certain that the agitation system is working properly and creates a rippling or rolling action on the liquid surface. Maintain agitation throughout the mixing and spraying process.
5. Continue filling the spray tank. If a compatibility agent is needed, add the required amount to the tank prior to adding any other components. When the tank is  $\frac{1}{2}$  full, add spray grade ammonium sulfate to the tank if desired. The addition of ammonium sulfate in the spray solution may increase the performance of Expert and recommended tank mixtures on emerged annual weeds growing under adverse conditions. If desired, add spray grade, dry ammonium sulfate at 2% by weight or 17 **lbs./100 gals.** of water. Ammonium sulfate should be added to the water in the spray tank and completely dissolved prior to adding any herbicides. **Do not mix ammonium sulfate in any fluid fertilizer solutions.** Additional surfactants are not required with this product.
6. Next, add selected water-dispersible granule or other dry formulations such as AAtrex Nine-O or Princep Caliber 90, and allow material to disperse.
7. Pour the required amount of Expert into the spray tank while continuing agitation and allow time to fully disperse. Add other flowable formulations such as AAtrex 4L or Princep 4L.
8. Next, add soluble liquids such as glyphosate, dicamba, or 2,4-D if desired. Then add any emulsifiable concentrate formulation such as Dual II Magnum or Prowl.
9. Complete filling the tank, maintaining sufficient agitation at all times to ensure surface action until the spray tank mixture is uniform.
10. An anti-foaming agent may be added to reduce excessive foaming if needed.
11. **Do not leave mixture in the spray tank without continuous agitation.** Always maintain agitation to avoid separation and buildup of undesirable residues on the walls of the spray tank.

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## CROP USE DIRECTIONS

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### CORN (FIELD CORN, SWEET CORN, POPCORN) – EXPERT APPLIED ALONE

Expert may be applied up to 30 days before, during, or after planting corn grown under no-tillage or other reduced tillage practices, and prior to emergence of corn that is not specifically designated Roundup Ready.

Expert may be applied in the fall, as a single application for burndown of existing vegetation and residual control of the winter weeds listed on this label within the ecofallow (no-till) production areas of NE and KS where wheat (or other small grain cereals) will be rotated to corn. The application must be made to untilled wheat stubble in the fall following wheat harvest, but before soil freeze-up. The ground must remain untilled through the establishment of the corn crop.

**USE PRECAUTIONS: DO NOT APPLY EXPERT AFTER CORN EMERGES UNLESS THE CORN SEED IS SPECIFICALLY DESIGNATED AS ROUNDUP READY. FAILURE TO COMPLY WITH THIS USE PRECAUTION WILL CAUSE SEVERE INJURY OR DEATH TO NON-ROUNDUP READY CORN PLANTS.**

Apply Expert before or after weed emergence according to the rates listed in **Table 2**. If Expert is applied before planting, to the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.

**Table 2. Expert Rates – Preplant and Preemergence to Corn**

Soil Texture	Expert Rate Per Treated Acre*	
	Less than 3% Organic Matter	3% Organic Matter or Greater
<b>COARSE</b> Sand, loamy sand, sandy loam	2.5 - 3.75 <del>qts.</del>	3 - 3.75 <del>qts.</del>
<b>MEDIUM</b> Loam, silt loam, silt	3 - 3.75 <del>qts.</del>	3 - 3.75 <del>qts.</del>
<b>FINE</b> Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	3 - 3.75 <del>qts.</del>	3 - 3.75 <del>qts.</del>

\*Do not exceed 3 ~~qts.~~/A of Expert when applying to highly erodible land with less than 30% plant residue cover. Control of certain weeds may be reduced and a tank mix partner or an application of a postemergence herbicide may be needed.

**Note:** (1) In the event of escape of annual weeds following a preplant surface or preemergence treatment of Expert, follow with a postemergence application of an appropriately labeled broadleaf and/or grass weed herbicide, such as AAtrex, Beacon®, Callisto®, Exceed®, NorthStar®, Spirit®, Tough®, Accent®, Banvel, Clarity,

Basagran®, Brominal®, Buctril®, Marksman®, or 2,4-D. If the postemergence treatment includes the herbicide used in the earlier treatment, do not exceed the labeled rate for corn on a given soil texture. (2) If AAtrex or another product containing atrazine is used postemergence following application of Expert, do not exceed a total of 2.5 lbs. a.i./A of atrazine per year.

## CORN – EXPERT APPLIED IN COMBINATION

Expert may only be applied in tank mixture with other products before corn emerges.

**Do not apply Expert in tank mixtures with any products after corn emergence.**

Refer to **Table 2** for Expert rates. Expert may be tank mixed with one or more of the following: Dual II Magnum, AAtrex 4L or AAtrex Nine-O (atrazine), Princep 4L or Princep Caliber 90 (simazine), Touchdown or Roundup (glyphosate), Python, Hornet, Prowl, Banvel or Clarity (dicamba), or 2,4-D. **Note:** Tank mixtures are permitted only in those states where the tank mix partner is registered. Follow the label of each product used for precautionary statements, directions for use, geographic and other restrictions.

### Expert in Combination with Dual II Magnum

Expert may be tank mixed with Dual II Magnum when heavy infestations of grass and sedge weeds listed in the **Before Emergence** section of this label are anticipated.

Consult **Table 1** of this label for the rate of S-metolachlor delivered with Expert and refer to the Dual II Magnum label for recommended use rates for individual soil types and weeds controlled.

**Note:** To avoid possible illegal residues, do not apply more than a total of 3.75 lbs. of S-metolachlor, the active ingredient in Dual II Magnum and one of the active ingredients in Expert, per acre of a corn crop.

### Expert in Combination with AAtrex 4L or AAtrex Nine-O (atrazine)

Expert may be tank mixed with AAtrex 4L or AAtrex Nine-O (atrazine), up to the maximum use rates of atrazine as outlined in the **Atrazine Rate Limitations** section, when heavy infestations of annual broadleaf weeds listed on this label are anticipated.

Consult **Table 1** of this label for the rate of atrazine delivered with Expert and refer to the specific atrazine label for recommended use rates for soil types and weeds controlled. **Do not exceed the maximum atrazine use rates outlined above.**

### Expert in Combination with Princep 4L or Princep Caliber 90 (simazine)

Expert may be tank mixed with Princep 4L or Princep Caliber 90 (simazine) for improved preemergence control when heavy infestations of certain annual grass and broadleaf weeds are anticipated. Refer to the specific simazine label for recommended use rates for individual soil types and weeds controlled.

### **Expert in Combination with Touchdown or Roundup (glyphosate)**

Expert may be tank mixed with Touchdown or Roundup (glyphosate) for improved control or partial control of many emerged grass and broadleaf weeds. Consult **Table 1** of this label for the rate of glyphosate delivered with Expert and refer to the specific glyphosate label for rates and lists of weeds controlled.

### **Expert in Combination with Prowl (pendimethalin)**

Expert may be tank mixed with Prowl (pendimethalin) for improved preemergence control of selected annual grass and broadleaf weeds. Refer to the Prowl label for rates and lists of weeds controlled.

### **Expert in Combination with Banvel or Clarity (dicamba) or 2,4-D**

Expert may be tank mixed with either Banvel or Clarity (dicamba) or 2,4-D for improved control of existing annual and perennial broadleaf weeds. Refer to the specific 2,4-D or dicamba label for rates and lists of weeds controlled. Expert mixtures with dicamba or 2,4-D must be applied at least 7 days before planting or crop injury may occur.

### **Expert in Combination with Python or Hornet**

Expert may be tank mixed with either Python or Hornet for improved preemergence control of selected annual broadleaf weeds in field corn. This combination will provide improved residual control of velvetleaf, and triazine-resistant populations of lambsquarters, pigweed, and velvetleaf. Refer to the Python or Hornet label for rates and lists of weeds controlled.

## **ROUNDUP READY CORN – EXPERT APPLIED ALONE**

***USE PRECAUTIONS: DO NOT APPLY EXPERT AFTER CORN EMERGES UNLESS THE CORN SEED IS SPECIFICALLY DESIGNATED AS ROUNDUP READY. FAILURE TO COMPLY WITH THIS USE PRECAUTION WILL CAUSE SEVERE INJURY OR DEATH TO NON-ROUNDUP READY CORN PLANTS.***

Expert may be applied broadcast, over-the-top of Roundup Ready corn up to a maximum corn height of 12 inches according to the rates listed in **Table 2**. Expert may occasionally cause minor corn leaf burn when applied after emergence of Roundup Ready corn. **Do not tank mix other products with Expert after corn emergence.**

**Use a nozzle spacing and boom height arrangement that avoids applying an excessive rate of Expert directly over the corn rows.** Boom height for broadcast over-the-top application should be based upon the height of the corn, and should be in accordance with the nozzle manufacturer's recommendation for height above the target area.

**Avoid all direct or indirect contact (such as spray drift) of Expert with crops other than those recommended for treatment on this label or with any desirable vegetation, since injury may occur.**

**Note:** To avoid possible illegal residues, do not graze or feed forage from treated areas for 30 days following application.

### **SORGHUM (GRAIN OR FORAGE)**

Expert may be applied up to 30 days before, during, or after planting, and before emergence of grain sorghum or forage sorghum grown under no-tillage or other reduced tillage practices. **Note: Sorghum seed must be properly treated with Concep III.** Apply Expert before or after weed emergence according to the rates listed in **Table 3**. If Expert is applied before planting, to the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.

**USE PRECAUTIONS: DO NOT APPLY EXPERT AFTER SORGHUM EMERGES. FAILURE TO COMPLY WITH THIS USE PRECAUTION WILL CAUSE SEVERE INJURY OR DEATH TO SORGHUM PLANTS. DO NOT GRAZE OR FEED FORAGE FROM TREATED AREAS FOR 60 DAYS.**

### **EXPERT APPLIED ALONE**

**Table 3: Expert Rates – Preplant and Preemergence to Grain Sorghum or Forage Sorghum**

<b>Soil Texture</b>	<b>Expert Rate Per Treated Acre</b>		
	<b>Less than 1% Organic Matter</b>	<b>1% to 1.5% Organic Matter</b>	<b>Greater than 1.5% Organic Matter</b>
<b>COARSE</b> Sand, loamy sand, sandy loam	DO NOT USE	DO NOT USE	DO NOT USE
<b>MEDIUM</b> Loam, silt loam, silt	DO NOT USE	2.5 - 3 <b>qts*</b>	3 <b>qts*</b>
<b>FINE</b> Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	DO NOT USE	2.5 - 3 <b>qts*</b>	3 - 3.75 <b>qts*</b>

\*Use the higher rate within a rate range for each soil type when Expert is applied 14 - 30 days before planting sorghum. Do not exceed 3 **qts**/A of Expert when applying to highly erodible land with less than 30% plant residue cover. Control of certain weeds may be reduced and a tank mix partner or an application of a postemergence herbicide may be needed.

**Use Precautions:** *To avoid possible crop injury, (1) Do not apply Expert on highly alkaline soils with a pH greater than 8.0 or on eroded areas where calcareous subsoils are exposed. (2) Do not apply Expert when sorghum is planted in deep furrows because heavy rains following application can cause excessive concentrations of herbicide in the furrow. (3) Do not apply Expert to sorghum grown under dry mulch tillage. (4) Do not apply Expert if sorghum is growing under stress caused by minor element deficiency. (5) Injury may occur if both Expert and an at-planting systemic insecticide applied in-furrow are used.*

## **SORGHUM (GRAIN OR FORAGE) – EXPERT APPLIED IN COMBINATION**

### **Expert in Combination with Touchdown or Roundup (glyphosate)**

Expert may be tank mixed with Touchdown or Roundup (glyphosate) for improved control or partial control of many emerged grass and broadleaf weeds, particularly perennial species. Consult **Table 3** for the correct Expert rate and **Table 1** for the rate of glyphosate delivered with Expert. Refer to the specific glyphosate label for rates and lists of weeds controlled.

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## **STORAGE AND DISPOSAL**

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Do not contaminate water, food, or feed by storage, disposal or cleaning of equipment.

### **Pesticide Storage**

Store in a dry and cool place. Do not irradiate directly with sunlight.

### **Pesticide Disposal**

Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment. Open dumping is prohibited. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of federal law. Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to federal, state, or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office.

### **Container Handling [equal to or less than 5 gallons]**

**Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two**

more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night. If the container is damaged and leaking or material has been spilled follow these procedures:

1. Cover spill with absorbent material.
2. Sweep into disposal container.
3. Wash area with detergent and water and follow with clean water rinse.
4. Do not allow to contaminate water supplies.
5. Dispose of according to instructions.

### Container Handling [greater than 5 gallons]

Refillable container. Refill this container with Expert Herbicide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities. If the container is damaged, leaking or obsolete, contact Syngenta Crop Protection, LLC at 1-800-888-8372.

For minor spills, leaks, etc., follow all use precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night. If the container is damaged and leaking or material has been spilled follow these procedures:

1. Cover spill with absorbent material.
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For non-emergency (e.g., current product information), call  
Syngenta Crop Protection at 1-800-334-9481.

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