



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (H7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg. Number:

Date of Issuance:

100-972

MAY 8 2002

Term of Issuance: Conditional

Name of Pesticide Product:

Expert Herbicide

NOTICE OF PESTICIDE:

Registration
 Reregistration
(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Mr. Greg Watson
NAFTA Herbicide Team Leader
SYNGENTA CROP PROTECTION, INC
P. O. Box 18300
Greensboro, NC 27419-8300

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any co-correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/ reregistration of your product the Agency requires; all registrants of similar products to submit such data.
2. Make the following label changes:
 - a. Revise the EPA Registration Number to read, "EPA Reg. No. 100-972"
 - b. Under the "PPE" and the "Agricultural Use Requirements" box change "waterproof gloves" to "chemical resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride."
 - c. Change all "Precautions", "Warning", and "Caution" to "Use Precautions".
 - d. It is recommended that the "Storage and Disposal" section be changed as follows:

Signature of Approving Official:

James Tompkins
James Tompkins, PM-25
Herbicide Branch
Registration Division, (7505C)

Date:

5-8-02

"STORAGE AND DISPOSAL"

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

PESTICIDE STORAGE:

PESTICIDE DISPOSAL:

CONTAINER DISPOSAL:

- d. On the "container label":
 - 1. Make "Direction for Use" section and place the "Agricultural Use Requirements" box in that section.
 - 2. It is recommended that the "Precautionary Statements" section be changed as follows:
"PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals
CAUTION"
 - 3. Submit one (1) copy of the revised final printed label for the record.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

2 1/2 Gallon and Bulk 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.

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) and Related Compounds.....	22.9%
S-metolachlor* (CAS No. 87392-12-9).....	18.6%
Glyphosate, in the form of the isopropylamine salt** (CAS No. 38641-94-0).....	10.8%
<u>Inert Ingredients:</u>	<u>47.7%</u>
Total:	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 + related; and 1.0 lbs. of the isopropylamine salt of glyphosate active ingredient per gallon.

2.5 GALLONS _____ Gallons
 U.S. Standard Measure U.S. Standard Measure (Bulk)

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-

EPA Est. 100-LA-1

SHAKE WELL BEFORE USING

NCP

ACCEPTED
 with COMMENTS
 In EPA Letter Dated

MAY 8 2002

Under the Federal Insecticide,
 Fungicide, and Rodenticide Act
 as amended, for the pesticide
 registered under EPA Reg. No.

100-972

DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire **Directions for Use** and the **Conditions of Sale and Warranty** before using this product. If terms are not acceptable, return the unopened product container at once.

CONDITIONS OF SALE AND WARRANTY

The **Directions for Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Novartis Crop Protection, Inc. or the Seller. All such risks shall be assumed by the Buyer.

Novartis warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions for Use** subject to the inherent risks referred to above. **Novartis makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall Novartis or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product.** Novartis and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty**, which may be varied only by agreement in writing signed by a duly authorized representative of Novartis.

DIRECTIONS FOR USE

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

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 chemicals. 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 12 hours. Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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
- Waterproof gloves
- Shoes plus socks

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

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

GENERAL INFORMATION

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 or Screen®. 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.

WARNING: 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 WARNING 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 where the tank mix partner is registered. Follow the label of each product used for precautionary statements, directions for use, geographic and other restrictions.

Before corn or sorghum emerges, water or fluid fertilizer (28% to 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.

Precautions: (1) If sorghum seed is not properly pretreated with Concep III or Screen, 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), 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 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 or Screen.

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, Novartis recommends the use of Expert after emergence of resistant biotypes. Consult with your State Agricultural Extension Service for specific recommendations.

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:

COARSE	Sand, loamy sand, sandy loam
MEDIUM	Loam, silt loam, silt
FINE	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.

To avoid spray drift, do not apply if wind speed 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 section: **Recommendations to Avoid Spray Drift**).

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.

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.

MIXING AND APPLICATION PROCEDURES

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 gallons per acre. For other spray volumes, make appropriate changes in the ingredient rates.

Note: Nitrogen fertilizer solutions (28% to 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 2 one-quart 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 ¼ tsp. or 1.2 milliliters of a compatibility agent approved for this use, such as Compex® or Unite® (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 emulsifiable concentrates 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 mixture 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 ½ the compatibility agent to the water or fertilizer solution and the other ½ 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 ¼ - ½ 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 ½ 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 pounds per 100 gallons 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 formulations 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.

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 an application.
- Further reductions in drift can be obtained by:
 1. 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.
 2. Use flat fan nozzles. For example, Turbo Teejet, XR[®] Teejet, RF Raindrop[®], or similar "low drift" nozzles are preferred.
 3. Recalibrate sprayer by reducing spray pressures and by increasing spray volumes to produce larger droplets when conditions favor drift.
 4. Applying as close to target weeds as practical to obtain a good spray pattern for adequate coverage according to nozzle manufacturer's recommendations.
 5. Using a drift reducing agent according to the manufacturer's recommendations.

Ground Applications

Use stainless steel, aluminum, 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** preceding this 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:

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

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 Novartis 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.

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 pounds per 100 gallons of

11/29

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, smooth (*Digitaria ischaemum*)
- Crabgrass, large (*Digitaria sanguinalis*)
- 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 cernuus*)
 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*)
 Maretail/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*)
 Sheperdspurse (*Capsella bursa-pastoris*)
 Sida, prickly (*Sida spinosa*)
 Smartweed, Pennsylvania (*Polygonum pennsylvanicum*)
 Smartweed, ladythumb (*Polygonum persicaria*)
 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 (1/2 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*)
 Millet, foxtail (*Setaria italica*)
 Millet, wild proso (*Panicum miliaceum*)
 Johnsongrass, seedling (*Sorghum halepense*)
 Junglerice (*Echinochloa colona*)
 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*)
 Burcucumber (*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*)
 Marestalk/Horseweed (*Conyza canadensis*)
 Mustard, wild (*Brassica kaber*)
 Nightshade, black (*Solanum nigrum*)
 Nightshade, E. 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*)
 Shepherdspurse (*Capsella bursa-pastoris*)
 Sida, prickly (*Sida spinosa*)
 Smartweed, ladysthumb (*Polygonum persicaria*)
 Smartweed, Pennsylvania (*Polygonum Pensylvanicum*)
 Spurge, prostrate (*Euphorbia humistrata*)
 Spurge, spotted (*Euphorbia maculata*)
 Sunflower, common (*Helianthus annuus*)
 Thistle, Russian (*Salsola kali*)
 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 (*Sesbania 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 (*Galustegia sepium*)
 Clover, red (*Trifolium pratense*)
 Clover, white (*Trifolium repens*)
 Dandelion (*Taraxacum officinale*)
 Dock, curly (*Rumex crispus*)
 Lettuce, blue (*Lactuca pulchella*)
 Mullein, common (*Verbascum thapsus*)
 Milkweed (*Asclepias spp.*)
 Redvine (*Brunnichia ovata*)
 Sowthistle (*Sonchus arvensis*)
 Thistle, Canada (*Cirsium arvense*)
 Trumpet creeper (*Campsis radicans*)
 Smartweed, swamp (*Polygonum coccineum*)

PERENNIAL SEDGES

Perennial Sedges Controlled After Emergence

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

*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			
Expert	S-metolachlor	Atrazine	Glyphosate IPA Salt
(Qts./A)	(lbs. a.i./A)	(lbs. a.i./A)	(lbs. a.i./A)
2.5	1.09	1.33	0.63
3	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 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. If a postemergence application of atrazine is required following an earlier application, the total atrazine rate may not exceed 2.5 lbs. a.i. 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 to 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 or Screen. 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.

CORN (ALL TYPES) - EXPERT APPLIED ALONE

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, and prior to emergence of corn that is not specifically designated as Roundup Ready.

WARNING: DO NOT APPLY EXPERT AFTER CORN EMERGES UNLESS THE CORN SEED IS SPECIFICALLY DESIGNATED AS ROUNDUP READY. FAILURE TO COMPLY WITH THIS WARNING 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	Rate Per Treated Acre*	
	Less than 3% Organic Matter	3% Organic Matter or Greater
COARSE Sand, loamy sand, sandy loam	2.5 to 3.75 qts.	3 to 3.75 qts.
MEDIUM Loam, silt loam, silt	3 to 3.75 qts.	3 to 3.75 qts.
FINE Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	3 to 3.75 qts.	3 to 3.75 qts.

*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®, 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 Nine-O (atrazine), Princep 4L or Caliber 90 (simazine), 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 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 above, 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 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 Roundup (glyphosate)

Expert may be tank mixed with 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

WARNING: DO NOT APPLY EXPERT AFTER CORN EMERGES UNLESS THE CORN SEED IS SPECIFICALLY DESIGNATED AS ROUNDUP READY. FAILURE TO COMPLY WITH THIS WARNING 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 recommendations 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 APPLIED ALONE

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 or Screen. 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.

WARNING: DO NOT APPLY EXPERT AFTER SORGHUM EMERGES. FAILURE TO COMPLY WITH THIS WARNING WILL CAUSE SEVERE INJURY OR DEATH TO SORGHUM PLANTS.

Table 3. Expert Rates – Preplant and Preemergence to Grain Sorghum or Forage Sorghum			
Soil Texture	Rate Per Treated Acre		
	Less than 1% Organic Matter	1% to 1.5% Organic Matter	Greater than 1.5% Organic Matter
COARSE Sand, loamy sand, sandy loam	DO NOT USE	DO NOT USE	DO NOT USE
MEDIUM Loam, silt loam, silt	DO NOT USE	2.5 to 3 qts.*	3 qts.
FINE Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	DO NOT USE	2.5 to 3 qts.*	3 to 3.75 qts.*

*Use the higher rate within a rate range for each soil type when Expert is applied 14 to 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 post emergence herbicide may be needed.

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 Roundup (glyphosate)

Expert may be tank mixed with 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.

STORAGE AND DISPOSAL

Storage

Ground water contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material.

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 Disposal (2 1/2 gallon)

Do not reuse empty container. Triple rinse (or equivalent), puncture and dispose of in a sanitary landfill, or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep out of smoke.

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.

Container Disposal (Bulk)

Refer to label on container for disposal instructions.

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.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing.

First Aid
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 center or doctor for advice.
Hot Line Number
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-888-8372 day or night for emergency medical treatment.

22/29

Personal Protective Equipment

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Control Statements

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], 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**" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Environmental Hazards

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.

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.

Mixing/Loading Instructions

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 may 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.

States may have in effect additional requirements regarding well-head setbacks and operational area containment.

This product may not be mixed or loaded within 50 ft. of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be applied aerially or by ground within 66 ft. of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 ft. around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66 ft. buffer or setback from runoff entry points must be planted to crop, or seeded with grass or other suitable crop.

Tile-Terraced Fields Containing Standpipes

To ensure protection of surface water from runoff through standpipes with tile-outlets in terraced fields, one of the following options may be used:

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

described as a crop management practice where little or no crop residue is removed from the field during and after crop harvest.

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.

AAtrex[®], Beacon[®], Caliber 90[®], Concep[®], Dual II MAGNUM[®], Exceed[®], Nine-O[®], Northstar[®], Princep[®], Spirit[®] and Tough[®] trademarks of Novartis
U.S. Patent Nos. 4,618,361 and 5,002,606

Accent[®] trademark of E.I. duPont de Nemours and Company, Inc.

Banvel[®], Clarity[®], Marksman[®] and Prowl[®] trademarks of BASF Corporation

Brominal[®] and Buctril[®] trademarks of Aventis

Compex[®] trademark of KALO Agricultural Chemicals, Inc.

Python[®] and Hornet[®] trademarks of Dow AgroSciences

RF Raindrop[®] trademark of Delavan-Delta, Inc.

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Unite[®] trademark of HACO, Inc.

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Novartis Crop Protection, Inc.
Greensboro, North Carolina 27419
www.cp.us.novartis.com

NCP

25/29

(CONTAINER LABEL)
(For 2 1/2 Gallon and Bulk)

**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.

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) and Related Compounds.....	22.9%
S-metolachlor* (CAS No. 87392-12-9).....	18.6%
Glyphosate, in the form of the isopropylamine salt** (CAS No. 38641-94-0).....	10.8%
<u>Inert Ingredients:</u>	<u>47.7%</u>
Total:	100.0%

*Includes R-enantiomer

**This product contains 8.0% glyphosate acid

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

EPA Reg. No. 100-

EPA Est. 100-LA-1

2.5 GALLONS	_____ GALLONS
U.S. Standard Measure	U.S. Standard Measure

See directions for use in attached booklet

See additional precautionary statements at end of label (For bulk)

SHAKE WELL BEFORE USING

AGRICULTURAL USE REQUIREMENTS
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the **Directions for Use** section for information about this Standard.

KEEP OUT OF REACH OF CHILDREN.

CAUTION

(For Bulk - Warranty Statement))

DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire **Directions for Use** and the **Conditions of Sale and Warranty** before using this product. If terms are not acceptable, return the unopened product container at once.

CONDITIONS OF SALE AND WARRANTY

The **Directions for Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Novartis Crop Protection, Inc. or the Seller. All such risks shall be assumed by the Buyer.

Novartis warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions for Use** subject to the inherent risks referred to above. **Novartis makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall Novartis or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product.** Novartis and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty**, which may be varied only by agreement in writing signed by a duly authorized representative of Novartis.

Precautionary Statements

Hazards to Humans and Domestic Animals

Causes moderate eye irritation. Avoid contact with eyes or clothing.

First Aid
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 center or doctor for advice.
Hot Line Number
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-888-8372 day or night for emergency medical treatment.

Environmental Hazards

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.

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.

Mixing/Loading Instructions (2 ½ gallon)

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 may not be mixed/loaded or used within 50 ft. of all wells, including abandoned wells, drainage wells, and sink holes.* This product may not be mixed or loaded within 50 ft. of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be applied by ground within 66 ft. of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 ft. around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66 ft. buffer or setback from runoff entry points must be planted to crop, or seeded with grass or other suitable crop.*

*For exceptions to these restrictions, see the **Environmental Hazards** section of the **Precautionary Statements** in the attached booklet.

Mixing/Loading Instructions (Bulk)

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 may 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.

States may have in effect additional requirements regarding well-head setbacks and operational area containment.

This product may not be mixed or loaded within 50 ft. of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be applied aerially or by ground within 66 ft. of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 ft. around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66 ft. buffer or setback from runoff entry points must be planted to crop, or seeded with grass or other suitable crop.

Tile-Terraced Fields Containing Standpipes

To ensure protection of surface water from runoff through standpipes with tile-outlets in terraced fields, **one** of the following options may be used:

1. Do not apply this product within 66 ft. of standpipes in 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 tile-outletted terraced 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 practice is described as a crop management practice where little or no crop residue is removed from the field during and after crop harvest.

Physical and 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.

Chemigation Prohibition

Do not apply this product through any type of irrigation system.

Container Disposal (2 ½ Gallon)

Do not reuse empty container. Triple rinse (or equivalent), puncture and dispose of in a sanitary landfill, or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep out of smoke.

See directions for use in attached booklet.

Container Disposal (Bulk)

Thoroughly clean container before reuse, unless this is a Novartis refillable container. If this is a Novartis refillable container and is to be refilled, do not rinse or introduce any pesticide other than Expert. Reseal and return the container to an authorized Novartis refilling facility. If the Novartis container is not to be refilled, triple rinse (or equivalent), and offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep out of smoke.

To be used in accordance with directions for use in Expert label booklet. See Expert label booklet for pesticide disposal instructions.

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.

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