# **EXPRESS®** HERBICIDE WITH TOTALSOL® SOLUBLE GRANULES THE PARTNER HERBICIDE TO EXPRESSSUN® TRAIT SUNFLOWERS

PRODUCT ATTRIBUTES	BENEFITS			
Partners With ExpressSun® Trait Sunflowers	Allows for broadleaf control without crop damage.			
In-Season Control of Annual Broadleaf Weeds	Express® herbicide research trials have demonstrated in-season control of Canada thistle and many other broadleaf week			
TotalSal® Saluble Granules	TotalSol soluble granules dissolve completely in water, providing more consistent weed control with faster, easier spray			

When used in accordance with the label, Express herbicide has a favorable toxicological profile for mammals, birds, fish Favorable Toxicological Profile and other nonplant wildlife.

TECHNICAL INFORMATION								
Active Ingredient	Group	Formulation	Signal Word	PPE	PHI	REI	Packaging	
Tribenuron methyl	Group 2 ALS/AHAS inhibitor. Blocks normal function of the enzyme acetolactate acid (ALS) and acetohydroxy acid synthase (AHAS).	Light brown soluble granules	CAUTION	Mixers, loaders, applicators and other handlers: long-sleeved shirt and long pants, shoes plus socks and chemical resistant gloves.	70 days	12 hours	12 x 15 oz.	

# **QUICK FACTS**

- Cost-effective, broad-spectrum control of tough weeds for a fast, easy harvest.
- Wide application window, allowing growers the flexibility to work around the weather. .

tank clean-out.

Excellent rotational flexibility.

TotalSol<sup>®</sup> Soluble Granules

## **APPLICATION RECOMMENDATIONS**

For use only on sunflowers with ExpressSun trait for tolerance to Express herbicide.

#### Preemergence/Burndown

- Express herbicide 0.25-0.5 oz./A. Zero-day interval before planting. Postemergence
- Express herbicide 0.25-0.5 oz./A + MSO 1 gal./100 gal. Do not exceed 1 oz./A postemergence use per season.

Apply 0.5 oz./A rate when weed infestation is heavy or when weeds predominantly consist of weeds partially controlled or when application timing and environmental conditions are marginal.

## **APPLICATION GUIDELINES**

- Apply Express herbicide using a minimum spray volume of 5 GPA using flat-fan nozzles or 2 GPA by air to provide good weed control. See label for GPA instructions for other nozzles and for specific state instructions. When tank mixing with a grass herbicide, use the higher spray volume recommended for those products, usually 10 GPA by ground.
- Apply Express herbicide from the two-leaf stage up to but not including bud formation.
- Depending on environmental conditions, a second application may be needed 14 or more days after the first application.
- Do not apply within 70 days of sunflower harvest.

TECHNICAL BULLETIN | SUNFLOWERS

Group Herbicide

### **STEWARDSHIP**

It is well-known that domestic sunflowers can outcross readily to wild sunflowers. To preserve the efficacy of the ExpressSun® trait, producers are required to follow specific management practices designed to prevent or delay herbicide resistance in wild species of sunflowers. These practices span crops to promote herbicide resistance management.

- Always grow sunflower hybrids with the ExpressSun trait as part of a multiyear rotation with other crops. .
- Use non-ALS/AHAS (non-Group 2) mode of action herbicides in a tank mix with ALS/AHAS herbicides or as sequential treatments in the rotational crop to control wild and volunteer sunflowers.
- Control wild sunflowers in non-crop areas adjacent to ExpressSun trait sunflower fields through the use of non-ALS/AHAS herbicides and/or mowing prior to • seed set.
- Use tillage to control emerged wild sunflowers prior to planting hybrids with the ExpressSun trait or by utilizing non-ALS/AHAS burndown herbicides or use • ALS/AHAS burndown herbicides in a tank mix with non-ALS/AHAS herbicides to provide control of sunflowers.

As practical, use ALS/AHAS herbicides in a tank mix with non-ALS/AHAS (non-Group 2) mode of action herbicides or use ALS/AHAS herbicides in a sequential program that employs alternate modes of action to control wild and volunteer sunflowers.

# WEEDS CONTROLLED

Bushy wallflower (treacle mustard) <sup>†</sup>	Mustard: black, blue/purple, wild†		
Chamomile: mayweed, wild	Pineappleweed		
Chickweed, common <sup>+</sup>	Pigweed: redroot <sup>+</sup> , tumble (0.5 oz.)		
Dandelion	Puncture vine		
False flax, small seeded <sup>+</sup>	Purslane, common		
Flixweed <sup>+</sup>	Shepherd's purse		
Lambsquarters: common <sup>+</sup> , slimleaf	Tansy mustard		
Lettuce, prickly**†	Thistle: Canada**, Russian**†		
Marsh elder <sup>†</sup>	Vetch: common*, hairy*		
Miner's lettuce			

WEEDS PARTIALLY CONTROLLED

Buckwheat, wild\* Nightshade, hairy\* Smartweed, Pennsylvania\* Sowthistle, annual\*

'Partial control. For better results, use 0.5 oz. Express\* herbicide per acre. "See the Specific Weed Instructions section of the Express herbicide label for more information

Naturally occurring resistant biotypes are known to occur

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