



FeXapan™ Herbicide plus VaporGrip™ Technology

GROUP	4	HERBICIDE
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HERBICIDE

SOLUTION

COMMERCIAL (AGRICULTURAL)

ACTIVE INGREDIENT: Dicamba, present as diglycolamine salt 350 g a.e./L

REGISTRATION NO. 32188 PEST CONTROL PRODUCTS ACT

NET CONTENTS: 1 L to BULK

READ THE LABEL AND ATTACHED BROCHURE BEFORE USING

KEEP OUT OF REACH OF CHILDREN

Production Agriscience Canada Company

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ABOUT FEXAPAN™ HERBICIDE PLUS VAPORGRIP™ TECHNOLOGY

FeXapan Herbicide Plus Vaporgrip Technology controls broadleaf weeds in Roundup Ready 2 Xtend soybeans, cereals, corn, reduced tillage (prior to seeding and reduced tillage fallow), pastures and rangeland grasses, crop-free land (summerfallow and stubble), red fescue, canary seed (*Phalaris canariensis*), seedling grasses grown for seed and forage, and low bush blueberries.

GENERAL PRECAUTIONS

1. FeXapan Herbicide Plus Vaporgrip Technology should not be applied on or near desirable trees or plants.
2. Apply FeXapan Herbicide Plus Vaporgrip Technology when air temperature is between 10 and 25°C. Do not apply when there is a risk of severe fall in night temperature after use.
3. As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.
DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.
4. Do not treat areas where movement of the chemical into the soil or surface washing may bring FeXapan Herbicide Plus Vaporgrip Technology into contact with roots of desirable plants.
5. Crop damage can occur if FeXapan Herbicide Plus Vaporgrip Technology is applied at any time other than the recommended crop stage.

NOTE: Crops growing under stress from adverse environmental conditions such as excess moisture, drought, disease, etc., may suffer a further setback and exhibit more pronounced injury symptoms if FeXapan Herbicide Plus Vaporgrip Technology is applied. However, the crop injury that may occur is usually offset by the weed control obtained.

6. Unless otherwise specified, do not use additives such as oil, wetting agents, emulsifiers, detergents, spreaders, sticking agents, or dispersing agents with FeXapan Herbicide Plus Vaporgrip Technology on crops.
7. If FeXapan Herbicide Plus Vaporgrip Technology is tank-mixed with another product, such as 2,4-D, consult that product's label for additional safety precautions, restrictions, application rates, timings and additional weeds controlled.
8. Ensure that spray equipment used to apply FeXapan Herbicide Plus Vaporgrip Technology is properly cleaned before re-using to apply any other chemicals. See section on suggested procedure for cleaning spray equipment.

SPRAY DRIFT PRECAUTIONS

FeXapan Herbicide Plus Vaporgrip Technology may cause injury to desirable trees and plants, particularly non-Roundup Ready 2 Xtend Soybeans, flowers, fruit trees, grapes, ornamentals, peas, potatoes, tomatoes, tobacco, and other broadleaf plants especially in their developmental and growing stage. Follow these precautions when spraying in the vicinity of sensitive crops:

1. Treat when wind is 5 to 15 km/hr. Do not apply during periods of dead calm or when weather conditions may cause drift from target areas to adjacent sensitive crops. Leave an adequate buffer zone between treatment areas and sensitive plants.
2. Use coarse sprays since they are less likely to drift than fine sprays. Select nozzles which minimize amounts of the fine spray particles. Do not exceed the nozzle manufacturer's recommended pressure, and use high flow rate (large orifice) nozzles to apply the highest practical spray volume.
3. Do not spray when the temperature is expected to exceed 30°C.
4. Avoid spraying under conditions of high humidity or fog.

ENVIRONMENTAL HAZARDS

Toxic to aquatic organisms and non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

DIRECTIONS FOR USE

Field Sprayer Application

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

Aerial Application (Cereals – Western Canada ONLY)

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply when wind speed is greater than 15 km/h at flying height at the site of application. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) coarse classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length MUST NOT exceed 65% of the wingspan or rotor span.

DO NOT apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands), estuarine or marine habitats.

DO NOT contaminate irrigation/drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

Surface Runoff

To reduce runoff from treated areas into aquatic habitats, consider the characteristics and conditions of the site before treatment. Site characteristics and conditions that may lead to runoff include, but are not limited to, heavy rainfall, moderate to steep slope, bare soil, poorly draining soil (e.g. soils that are compacted, fine textured or low in organic matter such as clay).

Potential contamination of aquatic areas as a result of runoff may be reduced by including an untreated vegetative strip between the treated area and the edge of the water body.

Avoid applying this product when heavy rain is forecast.

Leaching

The use of this chemical may result in contamination of groundwater particularly in areas where soils are permeable (e.g. sand, loamy sand and sandy loam soils) and/or the depth to the water table is shallow.

BUFFER ZONES

Use of the following spray methods or equipment DO NOT require a buffer zone: hand-held or backpack sprayer, spot treatment and inter-row hooded sprayer.

For application to rights-of-way, buffer zones for protection of sensitive terrestrial habitats are not required; however, the best available application strategies to minimize off-site drift, including meteorological conditions (e.g. wind direction, low wind speed) and spray equipment (e.g. coarse droplet sizes, minimizing height above canopy), should be used. Applicators must, however, observe the specified buffer zones for protection of sensitive aquatic habitats.

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

When a tank mixture is used, consult the labels of the tank mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture.

Buffer Zones Using ASAE Coarse Applications

Method of Application	Crop	Buffer Zones (meters) Required for Protection of:					
		Freshwater Habitat of Depths:		Estuarine/Marine Habitats of Depths:		Terrestrial Habitat	
		Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m		
Field Sprayer*	Dicamba tolerant soybean, field corn, summer fallow and stubble fields, perennial rosette in summer fallow field, reduced tillage fallow field, new/established red fescue for seed, established grass pasture	1	1	0	0	4	
	Cereals (spring wheat, spring barley, spring rye, winter wheat, oats), canary grass (seed production), seed and forage crop production (brome grass, smooth fescue, meadow fescue, tall foxtail, meadow orchard grass, red fescue, creeping timothy and wheatgrass (crested, intermediate, pubescent, slender, strembank and tall).	0	0	0	0	1	
	Reduced tillage prior to seeding (in wheat, barley, rye, oats, and corn (except sweet corn)	0	0	0	0	4	
	Pasture and rangeland, non-cropland**	1	1	0	0	10	
	Lowbush blueberries	1	1	1	0	15	
Aerial	Cereals (spring wheat, spring barley, spring rye, winter wheat, oats)	Fixed wing	0	0	0	0	50
		Rotary wing	0	0	0	0	45

* For field sprayer application, buffer zones can be reduced with the use of drift-reducing spray shields. When using a spray boom fitted with a full shield (shroud, curtain) that extends to the crop canopy, the labelled buffer zone can be reduced by 70%. When using a spray boom where individual nozzles are fitted with cone-shaped shields that are no more than 30 cm above the crop canopy, the labelled buffer zone can be reduced by 30%.

** Buffer zones for the protection of terrestrial habitats are not required for use on rights-of-way, including railroad ballast, rail and hydro rights-of-way, utility easements, roads, and training grounds and firing ranges on military bases.

The spray drift buffer zone for this product can be modified based on weather conditions and spray equipment configuration by accessing Buffer Zone Calculator on the Pest Management Agency web site.

DIRECTIONS FOR USE

Roundup Ready 2 Xtend Soybeans

FeXapan Herbicide Plus Vaporgrip Technology and Roundup WeatherMAX with Transorb 2 Technology Liquid Herbicide Use In Roundup Ready 2 Xtend Soybeans

Apply FeXapan Herbicide Plus Vaporgrip Technology alone or in tank mixture with Roundup WeatherMAX with Transorb 2 Technology Liquid Herbicide in 100-220 L/ha

DO NOT apply by air

Weeds Controlled *	Rates	Timing
<p>Annual Broadleaved Weeds: velvetleaf, common ragweed, giant ragweed, false ragweed, common lamb's-quarters, redroot pigweed, smooth pigweed, Russian pigweed, cocklebur, green smartweed, lady's-thumb, Pennsylvania smartweed, Eastern black nightshade, wild mustard, hare's-ear mustard, Indian mustard, tumble mustard, wormseed mustard, wild buckwheat, tartary buckwheat, Canada fleabane, stinkweed, Russian thistle, non-glyphosate tolerant canola (rapeseed), hempnettle, kochia, chickweed, corn spurry, wild tomato, cleavers, shepherd's-purse, cow cockle, night flowering catchfly, stork's bill, narrow leaved hawk's-beard, flixweed, bur cucumber(2), volunteer adzuki beans(3), biennial wormwood(1)</p> <p>Annual Grass Weeds: foxtail (green, yellow, giant), barnyard grass, crabgrass (smooth, large), fall panicum wild proso millet, wild oats, volunteer barley, volunteer wheat</p> <p>Perennial Weeds: Dandelion (6) quackgrass(4), Canada Thistle(4), perennial sow thistle(4), wire-stemmed muhly(4), yellow nutsedge (5,7),common milkweed(5,7), field bindweed(7)</p>	<p>FeXapan Herbicide Plus Vaporgrip Technology at 823 ml to 1.71 L/ha + Roundup WeatherMAX at 1.67 L/ha</p>	<p>Preplant or Preemergence to the crop and/or Postemergence to the crop once or twice up to the early flower stage of the crop (R1)</p> <p>Note: The 1.71 L/ha rate of FeXapan Herbicide Plus Vaporgrip Technology is to be used only once in a season and should be used preplant, preemergence or in-crop early postemergence</p> <p>Note: 3.36 L/ha of FeXapan Herbicide Plus Vaporgrip Technology is the maximum total to be applied to Roundup Ready 2 Xtend Soybeans in a single growing season (year).</p> <p>A third application of FeXapan Herbicide Plus Vaporgrip Technology should only be made for the control of glyphosate resistant weed populations.</p> <p>Also see Residual Weed Control Section below for more information.</p>
<p>All Weeds listed above plus tall water hemp (8), and horsenettle (8)</p>	<p>FeXapan Herbicide Plus Vaporgrip Technology at 823 ml to 1.71 L/ha + Roundup WeatherMAX at 3.33 L/ha</p>	<p>See notes above for application details. - 1 application per season at 3.33 L/ha</p>

All Weeds listed above plus volunteer alfalfa (9) and bromegrass (9)	FeXapan Herbicide Plus Vaporgrip Technology at 823 ml to 1.71 L/ha + Roundup WeatherMAX at 4.67 L/ha (10)	See notes above for application details. - 1 application per season at 4.67 L/ha.
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* Weeds will be more easily controlled and early crop competition avoided with applications made when the weeds are small. Control of annual weeds greater than 25 cm in height will be inconsistent, although some weeds may be controlled.

Application Footnotes:

- (1) One application including Roundup WeatherMAX at 1.67 L/ha applied at the 2-8 leaf stage of actively growing biennial wormwood.
- (2) Two applications including Roundup WeatherMAX at 1.67 L/ha applied when the bur cucumber is at the 1 to 18 leaf stage. Applications should be at least 2 weeks apart for best results.
- (3) Applications including Roundup WeatherMAX at 1.67 L/ha applied at the unifoliate to 4th trifoliate leaf stage of the Adzuki beans. A second 1.67 L/ha application may be used for late flushes emerging after the initial treatment when the Adzuki beans are in the unifoliate to 4th trifoliate leaf stage and actively growing.
- (4) Applications including Roundup WeatherMAX at 1.67 L/ha applied when quackgrass has 3-4 leaves, Canada thistle and perennial sow thistle are rosette to 50 cm in height, and wire-stemmed muhly is 10-20 cm in height. Weeds should be actively growing at application.
- (5) Applications including Roundup WeatherMAX at 1.67 L/ha will provide suppression.
- (6) Applications including Roundup WeatherMAX applied preplant surface or pre-emergence at 1.67 to 3.33 L/ha. Use Roundup WeatherMAX rates of 2.47 to 3.33 L/ha on heavy infestations of dandelions and on dandelions greater than 15 cm in size. Apply up to and including bloom for best results.
- (7) For control of common milkweed, yellow nutsedge, and field bindweed a second application **including Roundup WeatherMAX at 1.67 L/ha may be needed and should be applied at least 2 weeks after the first application or 3.33 L/ha should be applied once. Milkweed should be 15-60 cm in height, yellow nutsedge should be 5-15 cm in height.**
- (8) Applications including Roundup WeatherMAX at 3.33 L/ha applied at the 2-12 leaf stage of horse-nettle or up to the 18 leaf stage of tall waterhemp or 2 applications of 1.67 L/ha applied at least 2 weeks apart. **For control of tall waterhemp use the higher rate if weeds are beyond the 6 leaf stage.**
- (9) **Alfalfa should have 9 or more leaves and be at least 10-15 cm tall. Bromegrass should have at least 3-5 leaves and be at least 10-15 cm tall.**
- (10) **With the 4.67 L/ha rate some short term yellowing may occur in the sprayer overlap areas, but this effect is temporary and will not influence growth or yield.**

Residual Weed Control and Suppression with FeXapan Herbicide Plus Vaporgrip Technology Applications:

In addition to providing postemergence burndown activity on weeds FeXapan Herbicide Plus Vaporgrip Technology applications will also provide short term residual activity on the weeds listed below.

<p>Residual Weed Control and Suppression provided with FeXapan Herbicide Plus Vaporgrip Technology Applications (the 1.71 L/ha rate provides short term control and the 823 ml/ha rate provides suppression) Common lamb's-quarters, redroot pigweed, common ragweed, wild buckwheat, and velvetleaf*.</p> <p>*suppression only for both rates</p>
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FeXapan Herbicide Plus Vaporgrip Technology Use in Roundup Ready 2 Xtend Soybeans

Weeds Controlled	Rates	Timing
<p>Annual Broadleaved Weeds: velvetleaf, common ragweed, giant ragweed, false ragweed, common lamb's-quarters, redroot pigweed, smooth pigweed, Russian pigweed, green smartweed, lady's-thumb, wild mustard, hare's-ear mustard, Indian mustard, tumble mustard, wormseed mustard, wild buckwheat, tartary buckwheat, Canada fleabane(1), corn spurry, cleavers, cow cockle,</p> <p>Perennial Weeds: Canada thistle(2), perennial sow thistle(2), field bindweed(2)</p>	<p>FeXapan Herbicide Plus Vaporgrip Technology at 823 ml to 1.71 L/ha</p>	<p>Preplant or Preemergence to the crop and/or</p> <p>Postemergence to the crop once or twice up to the early flower stage of the crop (R1)</p> <p>Note: The 1.71 L/ha rate of FeXapan Herbicide Plus Vaporgrip Technology is to be used only once in a season and should be used preplant, preemergence or in-crop early postemergence</p> <p>Note: 3.36 L/ha of FeXapan Herbicide Plus Vaporgrip Technology is the maximum total to be applied to Roundup Ready 2 Xtend Soybeans in a single growing season (year).</p> <p>A third application of FeXapan Herbicide Plus Vaporgrip Technology should only be made for the control of glyphosate resistant weed populations.</p>

Application Footnotes:

(1) Post-emergence application only

(2) Apply FeXapan Herbicide Plus Vaporgrip Technology annually for three years at the flowering stage of bindweed and the budding stage of thistles.

Pre-Harvest Interval(s):

- 7-10 days for soybean forage and 13–15 days for soybean hay

Rotational Crop Guidelines:

A plant back interval of 120 days is required for those crops not on the FeXapan Herbicide Plus Vaporgrip Technology label.

Do not count days when the ground is frozen. Moisture is essential for the degradation of this herbicide in soil. If dry weather persists after application, crop injury may occur the following spring.

Equipment – DO NOT APPLY THIS PRODUCT TO ROUNDUP READY 2 XTEND SOYBEANS USING AERIAL SPRAY EQUIPMENT

Apply FeXapan Herbicide Plus Vaporgrip Technology to weeds < 10 cm

Water Volume – apply this product in a minimum of 100 Liters of spray solution per hectare.

Spray Drift Management

Do not allow herbicide solution to mist, drip, drift or splash onto desirable vegetation because severe injury or destruction to desirable broadleaf plants could result. The following drift management requirements must be followed to ensure application accuracy from ground application onto agricultural field crops.

Controlling Droplet Size

The most effective way to reduce spray drift potential is to apply large droplets (coarser spray qualities) that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if the application is made improperly, or under unfavorable environmental conditions (see the “**Wind Speed and Direction**”, “**Temperature and Humidity**” and “**Temperature Inversions**” sections of this label).

- **Nozzle type.** Use only spray nozzles that produce extremely coarse to ultra coarse spray qualities and minimal amounts of fine spray droplets as defined by the American Society of Agricultural and Biological Engineers (ASABE S-572.1). Do not use conventional flat fan nozzles that produce medium or fine spray qualities.
 - Check nozzle manufacturer’s recommendations to determine the proper droplet spectrum, operating pressure, boom height, nozzle spacing and ground speed that will deliver Extremely Coarse to Ultra Coarse spray qualities at a spray volume of at least 100 L/ha.
 - **Spray Pressure.** Adjust pressure for selected nozzles according to the nozzle manufacturer to maintain Extremely Coarse to Ultra-coarse qualities. Do not exceed the nozzle manufacturer’s recommended pressures. Use sufficient spray pressure with air induction nozzles to ensure a good spray pattern, while maintaining Extremely Coarse to Ultra Coarse sprays; use at least 200 kPa to ensure proper pattern overlap and check this visually. Confirm that sprayer rate controller hardware (if so equipped) does not increase pressure above the range that produces the correct spray quality. Calibrate the flow rate for the selected nozzles on the equipment used to apply this product.
 - **Spray Volume.** Apply this product in a minimum of 100 Liters of spray solution per hectare. Use a higher spray volume when treating dense vegetation. Higher spray volumes also allow the use of larger nozzle orifices (sizes) which produce coarser spray droplets.
 - **Equipment Ground Speed.** Select a ground speed under 25 km/h that will deliver the desired spray volume while maintaining the desired spray pressure. Slower speeds generally result in more uniform spray coverage and deposition on the target area.
 - **Spray boom Height.** Spray at the appropriate boom height based on nozzle selection and nozzle spacing (should not be more than 50 cm above target pest or crop canopy). Set boom to lowest effective height over the target pest or crop canopy based on equipment manufacturer’s directions. Automated boom height controllers are recommended with large booms to better maintain optimum nozzle to canopy height. Excessive boom height will increase the potential for spray drift.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions. Do not apply during a temperature inversion because off-target movement potential is high.

- During a temperature inversion, the atmosphere is very stable and vertical air mixing is restricted, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions.
- Temperature inversions are characterized by increasing temperatures with altitude and are common on evenings, nights, and early mornings with limited cloud cover and light to no wind. After sunset, air at the earth’s surface cools and air is trapped by warmer air above it. Inversions begin to form as the sun sets and often continue into the morning.
- Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.
- The inversion will dissipate with increased winds (above 5 km/h) or after sunrise when the surface air begins to warm.

Wind Speed and Direction

- Drift potential is lowest between wind speeds of 5 to 15 km/h.
- If the wind speed is 5 km/hr or less and fog is present, indicating a temperature inversion, do not apply this product.
- If fog is not present, conduct a smoke test. Smoke that moves upward confirms there is no inversion present whereas smoke that layers and moves laterally in a concentrated cloud, indicates a temperature inversion exists. Do not apply this product during a temperature inversion. Wait until the wind speed is greater than 5 km/hr to ensure that any inversion has lifted.
- Do not spray this product when the wind is blowing in the direction of a sensitive area at a wind speed greater than 15 km/h.
- For FeXapan Herbicide Plus Vaporgrip Technology wind speed and direction restrictions see below table:

Wind speed	Application conditions and restrictions
<5 km/hr	Do not apply FeXapan Herbicide Plus Vaporgrip Technology if temperature inversion exists
5-15 km/hr	Optimum FeXapan Herbicide Plus Vaporgrip Technology application conditions.
> 15 km/hr	Do not apply FeXapan Herbicide Plus Vaporgrip Technology

NOTE: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect drift.

Additives and tank mixes

- Nozzle selection is one of the most important parameters for drift reduction. A drift reduction additive may be used with this product to further reduce fine droplets.
- Not all drift reduction additives are compatible with every nozzle type and pesticide / adjuvant combination. Check with the additive manufacturer to insure that the drift additive will work properly with the spray nozzle, spray pressure and your specific spray solution. Read and carefully observe all precautions, limitations and all other information on the product label.
- A quality nonionic surfactant (NIS) of at least 70% active may be added to the spray solution at 0.25 % v/v. Read and carefully observe all caution statements and other information on the surfactant label.
- Do not add acidifying buffering agents, acidic pH adjusting agents or adjuvants other than agriculturally approved NIS to the spray solution. Do not add ammonium sulfate (AMS), AMS-containing adjuvants, water conditioners, or sprayable fluid fertilizers.
- Do not use crop oil concentrates (COC) and methylated seed oils (MSO) as adjuvants when this product is applied with glyphosate-based agricultural herbicides. When FeXapan Herbicide Plus Vaporgrip Technology is used with another herbicide that requires the use of a COC or MSO adjuvant follow the label instructions of that product.
- In some cases, tank mixing a pest control product with another pest control product or a fertilizer can result in biological effects that could include, but are not limited to: reduced pest efficacy or increased host crop injury. The user should contact Production Agriscience Canada Company at 1-800-667-3852 for information before mixing any pesticide or fertilizer that is not specifically recommended on this label. The user assumes the risk of losses that result from the use of tank mixes that do not appear on this label or that are not specifically recommended by Production Agriscience Canada Company.
- Apply FeXapan Herbicide Plus Vaporgrip Technology or tank mixtures with XtendiMax with Vaporgrip Technology Herbicide at a minimum spray volume of 100 L/ha.

Sensitive Areas

This product should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for species at risk, or sensitive crop plants) is minimal (e.g. when the wind is blowing away from sensitive areas). Applicators should survey the surrounding area before making an application of this product.

Failure to follow the requirements in this label, could result in severe injury or destruction to desirable sensitive crops and trees, particularly beans, cotton, flowers, fruit trees, grapes, ornamentals, peas, potatoes, soybeans, sunflowers, tobacco, tomatoes, and other broadleaf plants when contacting their roots, stems or foliage.

Application Awareness

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR

The interaction of equipment and weather related factors must be monitored to maximize performance and on-target spray deposition. The applicator is responsible for considering all of these factors when making a spray decision.

Proper spray system equipment cleanup

Minute quantities of dicamba may cause injury to **non-Roundup Ready 2 Xtend soybeans** and other sensitive crops (see the "Sensitive Areas" section of this label for a listing of sensitive crops).

Clean equipment immediately after using this product, using a triple rinse procedure as follows:

1. After spraying, drain the sprayer (including boom and lines) immediately. Do not allow the spray solution to remain in the spray boom lines overnight prior to flushing.
2. Flush tank, hoses, boom and nozzles with clean water.
3. Inspect and clean all strainers, screens and filters.
4. Prepare a cleaning solution with a commercial detergent or sprayer cleaner or ammonia according to the manufacturer's directions.
5. Take care to wash all parts of the tank, including the inside top surface. Start agitation in the sprayer and thoroughly re-circulate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.
6. Flush hoses, spray lines and nozzles for at least 1 minute with the cleaning solution.
7. Repeat above steps for two additional times to accomplish an effective triple rinse.
8. Remove nozzles, screens and strainers and clean separately in the cleaning solution after completing the above procedures.
9. Appropriately dispose of rinsate from steps 1-7 in compliance with all applicable laws and regulations.
10. Drain sump, filter and lines.
11. Rinse the complete spraying system with clean water.

All rinse water must be disposed of in compliance with municipal, provincial, and federal guidelines.

Additives and tank mixes

- Nozzle selection is one of the most important parameters for drift reduction. A drift reduction additive may be used with this product to further reduce fine droplets.
- Not all drift reduction additives are compatible with every nozzle type and pesticide / adjuvant combination. Check with the additive manufacturer to insure that the drift additive will work properly with the spray nozzle, spray pressure and your specific spray solution.
- Read and carefully observe all precautions, limitations and all other information on the product label.
- A quality nonionic surfactant (NIS) of at least 70% active may be added to the spray solution at 0.25 percent surfactant concentration. Read and carefully observe all caution statements and other information on the surfactant label.
- Do not add acidifying buffering agents, acidic pH adjusting agents or adjuvants other than agriculturally approved NIS to the spray solution.
- Do not use crop oil concentrates (COC) and methylated seed oils (MSO) as adjuvants when this product is applied with glyphosate-based agricultural herbicides. When FeXapan Herbicide Plus Vaporgrip Technology is used with another herbicide that requires the use of a COC or MSO adjuvant follow the label instructions of that product.

- In some cases, tank mixing a pest control product with another pest control product or a fertilizer can result in biological effects that could include, but are not limited to: reduced pest efficacy or increased host crop injury. The user should contact Production Agriscience Canada Company at 1-800-667-3852 for information before mixing any pesticide or fertilizer that is not specifically recommended on this label. The user assumes the risk of losses that result from the use of tank mixes that do not appear on this label or that are not specifically recommended by Production Agriscience Canada Company.
- Apply FeXapan Herbicide Plus Vaporgrip Technology or tank mixtures with FeXapan Herbicide Plus Vaporgrip Technology at a minimum spray volume rate of 100 L/ha.

CEREALS (not underseeded to legumes)

Treatment Notes

1. For best performance, spray when weeds are in the 2 to 3 leaf stage and rosettes are less than 5 cm across.
2. Use the higher level of listed rate ranges when treating more mature weeds or dense vegetative growth.
3. Crop damage can occur if application is made at any time other than the recommended crop stage.
4. Do not apply FeXapan Herbicide Plus Vaporgrip Technology or FeXapan Herbicide Plus Vaporgrip Technology tank-mixes if crop is under-seeded to legumes.

Application Directions

Ground Application

Apply FeXapan Herbicide Plus Vaporgrip Technology or FeXapan Herbicide Plus Vaporgrip Technology tank-mixes in at least 110 litres of water/ha.

Aerial Application (Western Canada Only)

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the National Aerial Pesticide Application Manual, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified buffer zones should be observed.

Coarse sprays are less likely to drift, therefore, avoid combinations of pressure and nozzle type that will result in fine particles (mist). Do not apply during periods of dead calm or when wind velocity and direction pose a risk of spray drift. Do not spray when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelter-belt) or aquatic habitat.

Operator Precautions

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

Read NOTICE before buying or using. If NOTICE terms are not acceptable, return at once unopened.

Application of this specific product must meet and/or conform to the following:

1. FeXapan Herbicide Plus Vaporgrip Technology or FeXapan Herbicide Plus Vaporgrip Technology phenoxy herbicide tank-mixes may be aurally applied in not less than 20 litres of water/ha.
2. Apply FeXapan Herbicide Plus Vaporgrip Technology alone at 230 mL/ha or tank mix FeXapan Herbicide Plus Vaporgrip Technology at 230 mL/ha with the recommended rate of the phenoxy herbicides specified on this label.
3. Treat when wind is 5 to 15 km/hr. Do not apply during periods of dead calm or when weather conditions may cause drift from target areas to adjacent sensitive crops.
4. Do not use nozzle pressure above 200 kPa.
5. Do not spray when the wind is blowing towards a nearby sensitive crop, garden, or shelterbelt.
6. Unless otherwise specified, do not use any additives with FeXapan Herbicide Plus Vaporgrip Technology.

Weeds Controlled

Weeds Controlled	FeXapan Herbicide Plus Vaporgrip Technology Rates	Tank Mix
Tartary Buckwheat, wild buckwheat, cow cockle, cleavers (higher rate only), lady's thumb, perennial sow-thistle (top growth only), green smartweed, corn spurry, Canada thistle (top growth only)	FeXapan Herbicide Plus Vaporgrip Technology alone at 315-398 mL/ha	None
Weeds listed for FeXapan Herbicide Plus Vaporgrip Technology alone plus: burdock (young seedlings), volunteer canola*, cocklebur, flixweed, hemp-nettle**, kochia, redroot pigweed, Russian pigweed, wild radish, shepherd's-purse, volunteer sunflower***, Russian thistle	FeXapan Herbicide Plus Vaporgrip Technology at 315 mL/ha +	2, 4-D amine OR MCPA amine OR MCPA K
Weeds listed for FeXapan Herbicide Plus Vaporgrip Technology alone plus: chickweed, hemp-nettle**, stinkweed; volunteer sunflower***	FeXapan Herbicide Plus Vaporgrip Technology at 315 mL/ha +	Sencor OR Lexone
Weeds listed for FeXapan Herbicide Plus Vaporgrip Technology alone plus: volunteer canola*	FeXapan Herbicide Plus Vaporgrip Technology at 315 mL/ha +	Ally

* Best results will be obtained if application is made prior to bolting of canola, when this weed is at the 2 to 4 leaf stage.

** Use FeXapan Herbicide Plus Vaporgrip Technology + MCPA K for hemp-nettle control. Apply at the 2 to 3 leaf stage of weed for best control. Hemp-nettle may not be controlled if application is made at a more advanced stage of crops and weeds.

*** Depending on the growing conditions, control may be slightly delayed.

Application Directions

FeXapan Herbicide Plus Vaporgrip Technology may be applied to:

- Spring Wheat
- Spring Barley
- Winter Wheat
- Oats
- Spring Rye

The following sections describe application directions for these crops.

Spring Wheat

Herbicide	Rate L/ha	Crop Stage
FeXapan Herbicide Plus Vaporgrip Technology alone	315-398 mL/ha	2-5 leaf
+ 2,4-D amine	850 mL/ha (500 g/L formulation)	2-5 leaf
or MCPA amine	850 mL/ha (500 g/L formulation)	2-5 leaf
or MCPA K	1.1 L/ha (400 g/L formulation)	2-5 leaf
or Sencor 500*	275-425 mL/ha**	2-3 leaf
or Lexone DF*	275 g/ha	2-3 leaf
or Ally***	5 g/ha	2-5 leaf

* Sencor/Lexone tank-mixes apply to Western Canada only. Application may be delayed until the 4-leaf stage of the crop, however, crop tolerance may be reduced. Apply FeXapan Herbicide Plus Vaporgrip Technology at 315 mL/ha with Sencor/Lexone.

** Use the higher rate of Sencor 500 for control of volunteer sunflowers.

*** Ally tank-mixes apply to Western Canada only. Apply FeXapan Herbicide Plus Vaporgrip Technology at 315 mL/ha with Ally. Ensure that Ally is completely in suspension in the spray tank before adding FeXapan Herbicide Plus Vaporgrip Technology. Do not add a surfactant.

Spring Rye

Herbicide	Rate L/ha	Crop Stage
FeXapan Herbicide Plus Vaporgrip Technology alone	315-398 mL/ha	2-3 leaf
+ 2,4-D amine	850 mL/ha (500 g/L formulation)	2-3 leaf

Spring Barley

Herbicide	Rate L/ha	Crop Stage
FeXapan Herbicide Plus Vaporgrip Technology alone	315-398 mL/ha	2-5 leaf
+2,4-D amine	850 mL/ha (500 g/L formulation)	2-5 leaf
or MCPA amine	850 mL/ha (500 g/L formulation)	2-5 leaf
or MCPA K	1.1 L/ha (400 g/L formulation)	2-5 leaf
or Sencor 500*	275-425 mL/ha**	2-3 leaf
or Lexone DF*	275 g/ha	2-3 leaf
or Ally***	5 g/ha	2-5 leaf

* Sencor/Lexone tank-mixes apply to Western Canada only. NOTE: Do not use on Klondike barley.

** Use the higher rate of Sencor 500 for control of volunteer sunflowers.

*** Ally tank-mixes apply to Western Canada only. Apply FeXapan Herbicide Plus Vaporgrip Technology at 315 mL/ha with Ally. Ensure that Ally is completely in suspension in the spray tank before adding FeXapan Herbicide Plus Vaporgrip Technology. Do not add a surfactant.

Winter Wheat

Herbicide	Rate L/ha	Crop Stage
FeXapan Herbicide Plus Vaporgrip Technology alone	315-398 mL/ha	15-25 cm tall or before shot-blade stage
+ 2,4-D amine	850 mL/ha (500 g/L formulation)	15-25 cm tall or before shot-blade stage
or MCPA amine	850 mL/ha (500 g/L formulation)	
or MCPA K	1.1 L/ha (400 g/L formulation)	

Oats

Herbicide	Rate L/ha	Crop Stage
FeXapan Herbicide Plus Vaporgrip Technology alone	315-398 mL/ha	2-5 leaf
+ MCPA amine	850 mL/ha (500 g/L formulation)	2-5 leaf
or MCPA K	1.1 L/ha (400 g/L formulation)	2-5 leaf

Grazing Restrictions:

Following treatment with FeXapan Herbicide Plus Vaporgrip Technology or FeXapan Herbicide Plus Vaporgrip Technology plus 2,4-D, follow these grazing restrictions:

- DO NOT permit lactating dairy animals to graze fields within 7 days after application
- DO NOT harvest forage or cut hay within 30 days after application
- Withdraw meat animals from treated fields at least 3 days before slaughter

Following treatment with FeXapan Herbicide Plus Vaporgrip Technology plus any other herbicide tank mix: Do not graze or harvest for livestock feed prior to crop maturity; sufficient data are not available to support such use.

Field Corn

DO NOT apply by air.

Treatment Notes

1. Apply FeXapan Herbicide Plus Vaporgrip Technology or FeXapan Herbicide Plus Vaporgrip Technology tank-mixes in 220 to 350 litres of water/ha at a pressure of 150 to 275 kPa. Use coarse sprays.
2. Keep spray mixture in suspension at all times. If mixture is allowed to settle, thoroughly agitate the mixture before spraying.
3. Do not apply to sweet corn.
4. Unless otherwise specified, do not use additives such as oil, wetting agents, emulsifiers, detergents, spreaders, sticking agents, or dispersing agents on corn with FeXapan Herbicide Plus Vaporgrip Technology.
5. Corn height refers to the crop as it stands, not leaf-extended.
6. When using drop pipes (drop nozzles), direct the spray beneath the lower leaves of the corn and onto the weeds and soil. Do not apply to corn over 50 cm in height.
7. Apply no later than 2 weeks prior to tassel emergence when using FeXapan Herbicide Plus Vaporgrip Technology alone up to 50 cm.
8. For the best control of annuals, spray when they are actively growing and in the seedling stage. Poor results may occur if weeds are well advanced at the time of application.
9. When applying FeXapan Herbicide Plus Vaporgrip Technology adjacent to sensitive crops, apply as a pre-emergent or early post-emergent treatment to avoid potential drift onto these sensitive crops.
10. When applied as a tank-mix combination, read and observe all label directions, including rates, restrictions and grazing limitations for each product used in the tank-mix. Follow the more stringent label precautionary and PPE measures for mixing/loading/applying, and label statements pertaining to environmental protection, such as buffer zones, stated on all tank-mix product labels.

FEXAPAN HERBICIDE WITH VAPORGRIP TECHNOLOGY / LIQUID NITROGEN

Pre-emergent applications of FeXapan Herbicide Plus Vaporgrip Technology are generally compatible with most liquid nitrogen fertilizers. To determine compatibility, mix all components of the finished spray in proportionate quantities in a small jar before mixing in the spray tank. If the herbicides do not ball-up or form flakes, sludge, jelly, oily films or layers, or other precipitates within 5 minutes after mixing, the tested spray-mix is compatible.

Weeds Controlled

Weeds Controlled	Rate L/ha	Crop Stage
field bindweed **, Tartary buckwheat, wild buckwheat, cleavers, cow cockle, Canada fleabane***, lady's-thumb, lamb's-quarters*, hare's-ear mustard, Indian mustard, tumble mustard, wild mustard, wormseed mustard, redroot pigweed**, Russian pigweed, common ragweed**, false ragweed, giant ragweed, perennial sow-thistle**, corn spurry, green smartweed, Canada thistle**, velvetleaf	FeXapan Herbicide Plus Vaporgrip Technology alone at 823 mL – 1.71 L/ha	none

*Including atrazine resistant species

**Apply FeXapan Herbicide Plus Vaporgrip Technology annually for three years at the flowering stage of bindweed and the budding stage of thistles.

***Post emergent applications only

Pre-Emergence Treatment

Eastern Canada Only

FeXapan Herbicide Plus Vaporgrip Technology can be used alone at 1.71 L/ha or in tank-mixes with the following herbicides for additional broadleaf and grassy weed control.

Herbicide	Rate L/ha
Dual Magnum	1.25-1/75 L
Dual II Magnum	1.25-1/75 L
Frontier Herbicide	1.1 - 1.4 L
Primextra II Magnum	3.0 - 4.0 L
Atrazine 480*	2.10-3.10 L
Prowl 400**	4.20 L
Atrazine 480* + Dual II Magnum	2.10-3.10 L + 1.25-1.75 L

* Other atrazine formulations will require a rate calculation adjustment according to percent active ingredient

** Other pendimethalin formulations will require a rate calculation adjustment according to percent active ingredient.

Pre-Emergence Treatment Notes

- Apply FeXapan Herbicide Plus Vaporgrip Technology tank-mixes as broadcast ground treatments after planting but before weeds and corn emerge.
- Apply to medium to fine textured soils containing more than 2.5% organic matter.
- Do not use on sandy or sandy loam soils.
- Avoid direct chemical contact with the corn seed. If you plan to apply FeXapan Herbicide Plus Vaporgrip Technology prior to corn emergence, be sure to place the corn seeds 4 cm or more below the soil surface. If seeds are planted less than 4 cm below the soil surface, delay application of FeXapan Herbicide Plus Vaporgrip Technology until the spike stage
- Do not incorporate. If applications are made during planting, apply FeXapan Herbicide Plus Vaporgrip Technology far enough behind the planting equipment to avoid incorporation by the planter wheel or other covering device. If soil crusting makes it necessary to use a rotary hoe after a pre-emergence treatment, delay hoeing the soil more than 1.3 cm deep.

- Always consult the tank mix partner label for further limitations and restrictions (especially re: soil type).

Post-Emergence Treatment

FeXapan Herbicide Plus Vaporgrip Technology or FeXapan Herbicide Plus Vaporgrip Technology tank-mixes can be applied as “overlay” to corn previously treated with any other broadleaf or grass herbicide. The 1.71 L rate of FeXapan Herbicide Plus Vaporgrip Technology as “overlay” is particularly effective in controlling velvetleaf and providing extended residual control of other late germinating, deep rooted annuals.

Note: Unless otherwise specified, do not use additives such as oils, wetting agents, or sticking agents.

FEXAPAN HERBICIDE PLUS VAPORGRIP TECHNOLOGY ALONE

Spike to 5-leaf corn

Eastern and Western Canada

Herbicide	Rate L/ha	Crop Stage	Weed Stage
FeXapan Herbicide Plus Vaporgrip Technology alone	1.71 L/ha	Spike to 5-leaf	Pre-emergence to 2-leaf ¹

¹ For best performance, spray when the broadleaf weeds are emerged and up to the 2-leaf stage of their development.

FEXAPAN HERBICIDE PLUS VAPORGRIP TECHNOLOGY TANK-MIXES

Western Canada (Prairie Provinces only)*

Herbicide	Rate L/ha	Crop Stage	Weed Stage
FeXapan Herbicide Plus Vaporgrip Technology + Accent 75DF + non-ionic surfactant such as Agral, Agsurf or Citowett Plus	0.823 L (288 g ai/ha) + 33 g (25 g ai/ha) + 0.2% v/v	Spike to 6-leaf	Post-emergence to 6-leaf

*Single post-emergent spray; ground application only; do not apply this tank mix within 30 days of harvest.

FEXAPAN HERBICIDE PLUS VAPORGRIP TECHNOLOGY TANK-MIXES

Eastern Canada only

Herbicide	Rate L/ha	Crop Stage	Weed Stage
FeXapan Herbicide Plus Vaporgrip Technology + Frontier Max Herbicide	1.71 L + 0,756 - 0.963 L	Spike to 3-leaf	Pre-emergence to 2-leaf***
FeXapan Herbicide Plus Vaporgrip Technology + Aatrex Liquid 480*	1.71 L + 2.10-3.10 L	Spike to 5-leaf	Pre-emergence to 2-leaf
FeXapan Herbicide Plus Vaporgrip Technology + Aatrex Liquid 480* + Dual II Magnum	0.823 - 1.71 L + 2.10-3,10 L + 1,25 - 1.75 L	Spike to 2-leaf	Emergence to 2-leaf
FeXapan Herbicide Plus Vaporgrip Technology + Primextra II Magnum	0.823 -1.71 L + 3.0 - 4.0 L	Spike to 2-leaf	Emergence to 2-leaf
FeXapan Herbicide Plus Vaporgrip Technology + Prowl 400**	0.823 -1.71 L + 4.20 L	Spike to 4-leaf	Pre-emergence to 2-leaf
FeXapan Herbicide Plus Vaporgrip Technology + Ultim 75% DF + non-ionic surfactant	0.823 L + 1 bag + 0.2% v/v	Spike to 6-leaf	Emergence to 6-leaf
FeXapan Herbicide Plus Vaporgrip Technology +	0.823 L + 60 g + 0.2% v/v	Spike to 3-leaf	Emergence to 4-leaf

Elim EP Herbicide 25% DF + non-ionic surfactant			
FeXapan Herbicide Plus Vaporgrip Technology + Dual II Magnum	0.823 -1.71 L + 1.25 - 1.75 L	Spike to 2-leaf	Emergence to 2-leaf
FeXapan Herbicide Plus Vaporgrip Technology + Prowl 400** + Elim EP Herbicide 25% DF + non-ionic surfactant	0.857 L + 2.5 L + 50 g + 0.2% v/v	Spike to 3-leaf	Emergence to 4-leaf

* Other atrazine formulations will require a rate calculation adjustment according to percent active ingredient

** Other pendimethalin formulations will require a rate calculation adjustment according to percent active ingredient.

*** For annuals, apply before 2-leaf stage.

FEKAPAN HERBICIDE PLUS VAPORGRIP TECHNOLOGY TANK-MIXES

Eastern Canada and the Province of Manitoba*

FeXapan Herbicide Plus Vaporgrip Technology can be tank mixed with Option 35 DF herbicide and applied as a post-emergence application to field corn grown in Eastern Canada and the province of Manitoba. Tank mixing FeXapan Herbicide Plus Vaporgrip Technology with Option 35 DF will provide enhanced control of annual broadleaf weeds.

Option 35 DF herbicide is to be used in conjunction with Hasten spray additive at 1.75 L/ha plus liquid nitrogen fertilizer (28% UAN) at a rate of 2.5 L/ha. Use of a spray-grade liquid nitrogen fertilizer is recommended.

Herbicide	Rate/ha	Corn Stage	Weed Stage	Weeds Controlled
FeXapan Herbicide Plus Vaporgrip Technology + Option 35 DF + Hasten spray adjuvant + liquid nitrogen fertilizer (28% UAN)	0.4 L + 100 g + 1.75 L + 2.5 L	1 to 8-leaf	Consult the Option 35 DF label for the recommended leaf stage of weeds at application. For best results, apply to emerged, young, actively growing weeds.	Perennials quackgrass Annual Grasses bristly foxtail, green foxtail, yellow foxtail, barnyard grass, large crab grass, proso millet, fall panicum, witchgrass Annual Broadleaf Weeds common chickweed, lamb's-quarters, wild mustard, wormseed mustard, Eastern black nightshade, redroot pigweed, common ragweed (suppression only), velvetleaf

*Ground application only. Do not apply by air. Make only one application per season. Apply in a minimum of 220 L/ha of water and at a pressure of 175 – 275 kPa.

Spike to 50 cm standing corn Eastern and Western Canada

Herbicide	Rate/ha	Corn Stage	Weed Stage
FeXapan Herbicide Plus Vaporgrip Technology alone	823 mL	Emergence to 50 cm (drop nozzles from 20 - 50 cm corn)	Pre-emergence to 2-leaf
FeXapan Herbicide Plus Vaporgrip Technology + 2,4-D amine	398 mL + 850 mL	Emergence to 50 cm (drop nozzles from 20 - 50 cm corn)	Pre-emergence to 2-leaf

Sequential FeXapan Herbicide Plus Vaporgrip Technology Applications Eastern and Western Canada

FeXapan Herbicide Plus Vaporgrip Technology may be applied sequentially to a FeXapan Herbicide Plus Vaporgrip Technology application to control late-emerging weeds such as field bindweed, Canada thistle and velvetleaf. Follow application directions as outlined for the FeXapan Herbicide Plus Vaporgrip Technology alone post-emergence treatments up to 50 cm tall corn.

Grazing Restrictions

- DO NOT permit lactating dairy animals to graze fields within 7 days after application
- DO NOT harvest forage or cut hay within 30 days after application
- Withdraw meat animals from treated fields at least 3 days before slaughter,

WEED CONTROL IN REDUCED TILLAGE (prior to seeding)

DO NOT apply by air

Treatment Notes

1. FeXapan Herbicide Plus Vaporgrip Technology + Roundup brand agricultural products (glyphosate only) applications may be applied to emerged annual grass and annual broadleaf weeds in reduced tillage systems prior to seeding of spring wheat, spring barley spring rye, winter wheat, oats, and field corn only.
2. Do not apply prior to seeding sweet corn.
3. Planting should follow soon after application since this tank-mix does not provide residual weed control.
4. Delayed planting following chemical application will allow weeds to emerge between application and crop emergence.
5. For field corn, apply to medium to fine textured soils containing more than 2.5% organic matter. Do not use on sandy or sandy loam soil.
6. Certain broadleaf crops such as sweet corn, lentils, peas, canola and flax can be injured by a pre-seeding application of this tank-mix and should not be planted after the use of this tank-mix.
7. Under certain stress conditions, such as drought, cool temperatures or where extremely hard water (> 700 ppm Ca + Mg) will be used, use 50 L/ha of water with this tank-mix to help improve results. However, the combination of low water volume and coarse sprays may reduce spray coverage.

Application Directions

Weeds Controlled	FeXapan Herbicide Plus Vaporgrip Technology Rate	Tank Mix
Annual Grasses (Apply any time between emergence and heading): downy brome, volunteer cereals, Persian darnel, green foxtail, wild oats	FeXapan Herbicide Plus Vaporgrip Technology at 432 mL/ha +	330-686 g ae/ha glyphosate + 0.5 L of a non-ionic surfactant in 100 L of water
Annual Broadleaves (Apply up to 15 cm height): <i>wild</i> buckwheat*, <i>volunteer</i> canola***, cow cockle, flixweed**, kochia, lady's-thumb, lamb's-quarters, wild mustard, redroot pigweed, green smartweed, stinkweed** Russian thistle, cleavers (1-4 whorls) (suppression only)	FeXapan Herbicide Plus Vaporgrip Technology at 432 mL/ha +	330-686 g ae/ha glyphosate +0.5 L of a non-ionic surfactant in 100 L of water

Perennials (Apply before initiation of seed head or browning of lower leaves): <i>foxtail barley</i> (suppression only)	FeXapan Herbicide Plus Vaporgrip Technology at 432 mL/ha +	330-686 g ae/ha glyphosate +0.5 L of a non-ionic surfactant in 100 L of water
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^{1*} Apply at the 1 to 4-leaf stage.

^{**} For optimal control of winter annual broadleaf weeds such as flixweed and stinkweed, 2,4-D should be applied to emerged, actively growing weeds in the fall the year prior to the FeXapan Herbicide Plus Vaporgrip Technology + Roundup spring pre-seeding tank-mix. Refer to the 2,4-D product label for appropriate rates.

^{***} Not including glyphosate tolerant canola, i.e. Roundup Ready Canola.

WEED CONTROL IN REDUCED TILLAGE FALLOW

DO NOT apply by air

Treatment Notes

1. Apply FeXapan Herbicide Plus Vaporgrip Technology tank-mixes in the spring to fallow land when seedling weeds have emerged, and are actively growing at the 2 to 4-leaf stage.
2. Reduced control may occur if applications are made at an advanced stage of weed development.

Application Directions

Weeds Controlled	FeXapan Herbicide Plus Vaporgrip Technology Rate	Tank Mix
<i>wild</i> buckwheat, <i>Tartary</i> buckwheat, <i>cow</i> cockle, flixweed, kochia, lady's-thumb, lamb's-quarters, <i>wild</i> mustard, <i>redroot</i> pigweed, shepherd's-purse, <i>green</i> smartweed, <i>perennial</i> sow-thistle (top growth), stinkweed, <i>Canada</i> thistle (top growth) <i>Russian</i> thistle	315 – 398 mL/ha +	1.1 L/ha of 2,4-D amine 500 OR 920 mL/ha of 2,4-D L.V. ester 600 in 50-100 L of water
<i>foxtail</i> barley ^{**} , <i>wild</i> buckwheat ^{**} , volunteer cereals, <i>cow</i> cockle, flixweed [*] , green foxtail, kochia, lady's-thumb, lamb's-quarters, wild mustard, wild oats, <i>redroot</i> pigweed ^{**} , volunteer canola ^{***} , stinkweed, Russian thistle	398 mL/ha +	270-362 g ae/ha glyphosate + 350 mL of a non- ionic surfactant registered for this use in 50-100 L of water

wild buckwheat	823 mL/ha +	270-362 g ae/ha glyphosate + 350 mL of an approved non-ionic surfactant in 50-100 L of water
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* For control of flixweed use 362 g ae/ha of glyphosate.

** Suppression only.

*** Not including glyphosate tolerant canola, i.e. Roundup Ready Canola.

FeXapan Herbicide Plus Vaporgrip Technology / Roundup brand agricultural products (glyphosate only) Application Notes

1. These tank-mixes should be applied to emerged, actively growing annual weeds from 8-15 cm in height.
2. Use the higher rate of Roundup brand agricultural products (glyphosate only) when weeds are at a more advanced stage of growth.
3. For perennial weed control, refer to the appropriate section of this label for proper stages of growth and recommended stages of application.
4. Reduced control may occur if muddy water is used, such as water from dug-outs, ponds and unlined ditches.

PERENNIAL WEED CONTROL IN SUMMERFALLOW AND STUBBLE

DO NOT apply by air

Treatment Notes

1. Apply FeXapan Herbicide Plus Vaporgrip Technology in minimum 100 litres of water/ha.
2. For the most effective control of Canada thistle, follow a long-term approach that includes in crop, post-harvest, and summerfallow treatments, in conjunction with tillage operations.
3. If application is made after September 1st, or if soil moisture levels are extremely low after application, crop injury may occur in the spring following application.

Weeds Controlled

Weeds Controlled	FeXapan Herbicide Plus Vaporgrip Technology Rate	Recropping in Year Following
field bindweed, English daisy, curled dock (top growth), goldenrod, tansy ragwort, perennial sow thistle, Canada thistle	FeXapan Herbicide Plus Vaporgrip Technology alone at 3.43 L/ha	Cereals, soybeans field corn, white beans, sweet corn
Canada thistle, perennial sow-thistle	FeXapan Herbicide Plus Vaporgrip Technology at 1.71 L/ha + 610 g ae/ha glyphosate + 350 mL of a non-ionic surfactant	<i>All of the above plus: canola</i>

¹Roundup (formulations containing 356 or 360 g a.e./L)

Application Directions

Summerfallow Treatment Notes

1. Cultivate in the spring and apply FeXapan Herbicide Plus Vaporgrip Technology when:

Weed	Weed Stage
thistles	the majority of thistles are up and before the early bud stage (15-25 cm tall)
field bindweed	in the flowering stage
other weeds	in the early bud stage of growth

2. Cultivate three weeks after application

Stubble Treatment Notes

- Apply to regrowth after harvest and at least 2 weeks prior to a killing frost.
- DO NOT permit lactating dairy animals to graze fields within 7 days after application
- DO NOT harvest forage or cut hay within 30 days after application
- Withdraw meat animals from treated fields at least 3 days before slaughter

PERENNIAL ROSETTE CONTROL IN SUMMERFALLOW

DO NOT apply by air

Treatment Notes

1. For the most effective control of Canada thistle, follow a long-term approach that includes in crop, post-harvest, and summerfallow treatments, in conjunction with tillage operations.
2. Commence early spring cultivation and continue as required throughout the summer. Note: The final cultivation must occur by the end of July between July 15-August 1 and the final cultivation should cut the thistle off 5 to 7.5 cm below the soil surface.
3. Spray in 100 L of water/ha when the majority of thistles have emerged as low growing rosettes 15 to 25 cm across.
4. Apply at least two weeks prior to a killing frost.
5. Cultivate three weeks after application.

Weeds Controlled

Weeds Controlled	FeXapan Herbicide Plus Vaporgrip Technology Rate	Recropping in Year Following
Canada thistle	1.71 L/ha	Cereals, field corn, white beans, canola, soybeans

PASTURES, RANGELAND, AND NON-CROP AREAS

FeXapan Herbicide Plus Vaporgrip Technology may be used to control deciduous brush species and broadleaf weeds in non-cropland areas, such as roadsides, hydro, pipeline and railway rights-of-way, airports, military bases, wasteland and similar non-crop land areas, as well as pasture and rangeland.

Treatment Notes

For high volume handwand applications, applicators must limit volume of solution used per day to 400 L (broadleaf control spot treatment only).

For Broadleaf Weed Control

1. Apply FeXapan Herbicide Plus Vaporgrip Technology or FeXapan Herbicide Plus Vaporgrip Technology tank-mixes in 110-220 L of water/ha when weeds are actively growing. Thorough coverage of foliage is necessary to control weeds.
2. Do not apply FeXapan Herbicide Plus Vaporgrip Technology or FeXapan Herbicide Plus Vaporgrip Technology tank-mixes if pasture is underseeded to legumes.

DO NOT apply by air

Weeds Controlled	FeXapan Herbicide Plus Vaporgrip Technology Rate	Tank Mix
field bindweed, English daisy, curled dock (top growth), goldenrod, tansy ragwort, perennial sow-thistle, Canada thistle,	Alone at 2.9 L/ha	None

goat's beard, ground cherry, diffuse knapweed, pasture sage, sheep sorrel, thyme-leafed spurge, poverty weed	Alone at 6.3 L/ha	None
poison ivy	At 2.26 L/ha +	2.2 L/ha of 2,4-D amine (500 g/L formulation) in 560 L of water/ha
<i>Weeds listed for FeXapan Herbicide Plus Vaporgrip Technology alone at 2.9 L/ha plus:</i> poison ivy, wild carrot plus additional weeds found on the 2,4-D amine label	At 2.9 L/ha +	2.2 L/ha of 2,4-D amine (500 g/L formulation)
<i>Weeds listed for FeXapan Herbicide Plus Vaporgrip Technology alone at 2.9 L/ha plus:</i> poison ivy, wild carrot plus additional weeds found on the 2,4-D ester label	At 2.9 L/ha +	1.83 L of 2,4-D L.V. ester (600 g/L formulation)

For Brush Weed Control

1. FeXapan Herbicide Plus Vaporgrip Technology is effective in controlling many deciduous brush species that are found growing along fence rows and in other areas around the farm where they may be undesirable.
2. Apply FeXapan Herbicide Plus Vaporgrip Technology tank-mixes in spring or early summer to deciduous species (leaves should be fully expanded) either as a leaf stem treatment or as a broadcast ground application.
3. Brush and trees over 2 meters tall should be cut and regrowth treated when it develops.
4. Do not apply FeXapan Herbicide Plus Vaporgrip Technology tank-mixes if pasture or rangeland is underseeded to legumes.
5. For Stem Foliage Treatment, apply to all foliage and stems to the point of runoff. The volume of spray mix applied per hectare will vary according to the height and density of the woody species present.
6. For Broadcast Ground Treatment, apply FeXapan Herbicide Plus Vaporgrip Technology tank-mixes in sufficient dilution to wet all foliage. Normally, 220-230 litres of water/ha is recommended for brush stands.

DO NOT apply by air.

Weeds Controlled	FeXapan Herbicide Plus Vaporgrip Technology Rate	Tank Mix
Alder, aspen poplar, cherry western snowberry (buckbrush), wolf willow (silverwillow), wild rose	At 2.9 L /1000 L of water +	4.0 L of 2,4-D amine (500 g/L formulation) OR 3.3 L of 2,4-D L.V. (600 g/L formulation)
aspen poplar	At 4.5 L/ha +	4.4 L/ha of 2,4-D amine (500 g/L formulation) OR 3.75 L/ha of 2,4-D L.V. ester (600 g/L formulation)
prickly rose	At 5.01 L/ha +	4.4 L/ha of 2,4-D amine (500 g/L formulation) OR 3.75 L/ha of 2,4-D L.V. ester (600 g/L formulation)
western snowberry	At 5.01 L/ha +	3.75 L/ha of 2,4-D L.V. ester (600 g/L formulation)

Grazing Restrictions

- DO NOT permit lactating dairy animals to graze fields within 7 days after application
- DO NOT harvest forage or cut hay within 30 days after application
- Withdraw meat animals from treated fields at least 3 days before slaughter

SEED PRODUCTION

DO NOT apply by air

Treatment Notes for New/Established Stands of Red Fescue

1. Apply FeXapan Herbicide Plus Vaporgrip Technology or FeXapan Herbicide Plus Vaporgrip Technology tank-mixes in at least 110 litres of water/ha.
2. Applications to new seedling stands may be made when the crop is 5 cm tall.
3. Application to established stands may be made up to the shot-blade stage of the crop.
4. For dandelion control, apply FeXapan Herbicide Plus Vaporgrip Technology plus 2,4-D amine in the fall when weeds are in the rosette or early bud stage.

Weeds Controlled	FeXapan Herbicide Plus Vaporgrip Technology Rate	Tank Mix
wild buckwheat, Tartary buckwheat, cow cockle, clover, lady's-thumb, perennial sow-thistle (top growth), corn spurry, green smartweed, Canada thistle (top growth)	Alone at 823 mL/ha	none
<i>All of the above plus:</i> additional weeds found on the 2,4-D amine label	At 823 mL/ha +	1.5 L/ha of 2,4-D amine (500 g/L formulation)

For Canary seed (*Phalaris canariensis*)

1. The canary seed (*Phalaris canariensis*) should only be used as bird seed.
2. For specific weeds controlled, refer to the FeXapan Herbicide Plus Vaporgrip Technology + MCPA amine weed spectrum list under "Cereals".

Herbicide	Rate	Canary Seed (<i>Phalaris canariensis</i>) Stage
FeXapan Herbicide Plus Vaporgrip Technology alone	398 mL/ha	3 - 5 leaf stage
FeXapan Herbicide Plus Vaporgrip Technology + MCPA amine	398 mL/ha + 850 mL/ha (500 g/L formulation)	3 - 5 leaf stage

For Seedling Grasses (seeded alone or underseeded with cereals)

For seed and forage production of the following seedling grasses

bromegrass, smooth	wheatgrass, crested
fescue, meadow	wheatgrass, Intermediate
fescue, tall	wheatgrass, pubescent
foxtail, meadow	wheatgrass, slender
orchard grass	wheatgrass, streambank
red fescue, creeping	wheatgrass, tall

1. Apply FeXapan Herbicide Plus Vaporgrip Technology or FeXapan Herbicide Plus Vaporgrip Technology + tank-mixes in at least 110 litres of water/ha.
2. Application to new seedling grasses may be made when they are in the 2 to 4-leaf stage. If the seedling grass is under seeded with a cereal crop, refer to "Cereals" for additional restrictions pertaining to application type and rate.
3. If the crops are to be used as feed or pasture following treatment with FeXapan Herbicide Plus Vaporgrip Technology, FeXapan Herbicide Plus Vaporgrip Technology plus 2,4-D amine or MCPA, refer to "Grazing Restrictions".

Weeds Controlled	FeXapan Herbicide Plus Vaporgrip Technology Rate	Tank Mix
Tartary buckwheat, wild buckwheat, cow cockle, cleavers (higher rate only), lady's-thumb, perennial sow-thistle (top growth), green smartweed, corn spurry, Canada thistle (top growth)	Alone at 315 -398 mL/ha	none
All of the above plus: burdock (young seedlings), volunteer canola*, cocklebur, flixweed, hemp-nettle**, kochia, redroot pigweed, Russian pigweed, wild radish, shepherd's-purse, volunteer sunflower***, Russian thistle	At 315 - 398 mL/ha +	850 mL/ha of 2,4-D amine (500 g/L formulation) OR 850 mL/ha of MCPA amine (500 g/L formulation) OR 1.1 L/ha of MCPA K (400 g/L formulation)

* Best results will be obtained if application is made prior to bolting of canola, when this weed is at the 2 to 4 leaf stage.

** Use FeXapan Herbicide Plus Vaporgrip Technology + MCPA K for hemp-nettle control. Apply at the 2 to 3 leaf stage of weed for best control. Hemp-nettle may not be controlled if application is made at a more advanced stage of crops and weeds.

*** Depending on the growing conditions, control may be delayed slightly.

For Established Grass Pasture

1. Apply FeXapan Herbicide Plus Vaporgrip Technology at 823 mL/ha with 1.5 L/ha of 2,4-D amine (500 g/L formulation) to suppress volunteer alfalfa.
2. Apply FeXapan Herbicide Plus Vaporgrip Technology + 2,4-D amine in 110-220 L/ha in the spring to actively growing alfalfa at greater than 5 cm in height.

LOW-BUSH BLUEBERRIES

DO NOT apply by air

Treatment Notes

1. FeXapan Herbicide Plus Vaporgrip Technology can be used alone or in a tank-mix with 2,4-D L.V. ester.
2. Apply FeXapan Herbicide Plus Vaporgrip Technology or the FeXapan Herbicide Plus Vaporgrip Technology tank-mix in 550 litres of water per hectare.
3. Apply in the fall while the sweet-fern is still moderately green after 90% of the blueberries have dropped their leaves. This should be done before the area is burned. Fall burning or cutting should be carried out 4 to 5 weeks after spraying. If spring burning or cutting is planned, it should be done as early as possible in the spring to reduce injury to the blueberries.

Weeds Controlled

Weeds Controlled	FeXapan Herbicide Plus Vaporgrip Technology Rate	Tank Mix
sweet fern, lambkill (sheep laurel)	6.3 - 9.7 L/ha	None
additional broadleaf control	3.2 L/ha +	5.7 L of 2,4-D L.V. ester (600 g/L formulation)

RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, FeXapan Herbicide Plus Vaporgrip Technology is a Group 4 herbicide. Any weed population may contain or develop plants naturally resistant to FeXapan Herbicide Plus Vaporgrip Technology and other Group 4 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance:

- Where possible, rotate the use of FeXapan Herbicide Plus Vaporgrip Technology or other Group 4 herbicides within a growing season (sequence) or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group when such use is permitted. To delay resistance, the less resistance-prone partner should control the target weed(s) as effectively as the more resistance-prone partner.
- Herbicide use should be based on an integrated weed management program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical control methods), cultural (for example, higher crop seeding rates; precision fertilizer application method and timing to favour the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Monitor weed populations after herbicide application for signs of resistance development (for example, only one weed species on the herbicide label not controlled). If resistance is suspected, prevent weed seed production in the affected area if possible by an alternative herbicide from a different group. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- Have suspected resistant weed seeds tested by a qualified laboratory to confirm resistance and identify alternative herbicide options.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Production Agriscience Canada Company at 1-800-667-3852.

PRECAUTIONS

- KEEP OUT OF REACH OF CHILDREN.
- Thaw if frozen. Shake before use.
- Applicators must wear a long-sleeved shirt, long pants and chemical-resistant gloves. For applications to non-crop areas, applicators must also wear coveralls.
- DO NOT enter treated fields until 12 hours after application to Roundup Ready 2 Xtend Soybeans, barley, low bush blueberries, canary seed (*Phalaris canariensis*), corn (field and sweet), fallow, oats, pastures, red fescue, spring rye, seedling grasses, stubble fields, summer fallow and wheat (spring, durum) and Roundup Ready 2 Xtend soybeans.

FIRST AID

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

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

If swallowed: Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

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

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

TOXICOLOGICAL INFORMATION

Dicamba may cause severe irritation to the eyes and irritation to the skin and mucous membranes. Symptoms of overexposure to dicamba may include dizziness, muscle weakness, loss of appetite, weight loss, vomiting, decreased heart rate, shortness of breath, excitement, tenseness, depression, incontinence, cyanosis, muscle spasms, exhaustion and loss of voice.

Treat symptomatically.

DISPOSAL

Do not reuse this container for any purpose. This is a recyclable container, and it is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

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

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

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

CLEANING SPRAY EQUIPMENT

FeXapan Herbicide Plus Vaporgrip Technology alone or with 2,4-D or MCPA

If you have used FeXapan Herbicide Plus Vaporgrip Technology alone or FeXapan Herbicide Plus Vaporgrip Technology in a tank-mix with 2,4-D or MCPA, to clean the spray equipment follow these steps:

1. Thoroughly hose down the inside and outside of equipment surfaces while filling the spray tank half-full with water. Flush by operating the sprayer until the system is purged of the rinse water.
2. Fill the tank with water, adding 1 L of household ammonia for every 100 L of water. Operate the spray pump to circulate the ammonia solution through the sprayer solution for 15-20 minutes and discharge a small amount of the ammonia solution through the spray boom and nozzles.
3. Flush the solution out of the spray tank through the boom.
4. Remove the nozzles and screens and flush the system with two tanks full of water.

FeXapan Herbicide Plus Vaporgrip Technology with other Herbicides

To clean spray equipment used to apply FeXapan Herbicide Plus Vaporgrip Technology as a tank-mix with wettable powders (WP), emulsifiable concentrates (EC) or other types of water-dispersible formulations, follow these steps: (Note that if you use FeXapan Herbicide Plus Vaporgrip Technology tank-mixes with water-dispersible formulation, you must add detergent to the rinse water.)

1. Thoroughly hose down the inside and outside of equipment surfaces while filling the spray tank half-full with water. Flush by operating the sprayer until the system is purged of the rinse water.
2. Fill tank with water while adding 1 kg of detergent for every 150 litres of water. Operate the pump to circulate the detergent solution through the sprayer system for 5-10 minutes and discharge a small amount of the solution through the boom and nozzles. Let the solution stand for several hours, preferably overnight.
3. Flush the detergent solution out of the spray tank through the boom.
4. Repeat step 1 and follow steps 2 and 3.

Bulk Container Refilling

1. The container is to be refilled only with FeXapan Herbicide Plus Vaporgrip Technology.
2. Reseal and return to an authorized Production Agriscience Canada Company bulk site.
3. Prior to refilling, inspect thoroughly for damage such as cracks, punctures, bulges, dents, abrasions and damaged or worn threads on closure devices.
4. Check for leaks after refilling and before transportation.
5. Do not refill or transport damaged or leaking containers.
6. For disposal, this container may be returned to the point of purchase (dealer/distributor). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.
7. If the container is not being refilled, refer to Section on "Disposal".

STORAGE

1. Store FeXapan Herbicide Plus Vaporgrip Technology in its original container only, away from other pesticides, fertilizer, food, or feed.
2. Keep the container closed to prevent spills and contamination.
3. Keep packages dry at all times.

NOTICE TO USER

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

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