



ADAMA

HERBICIDE

QUASAR® CO-PACK

Proven one pass weed control, with multiple flush control of shallow germinating weeds like green foxtail and wild mustard in peas, dry beans and soybeans.



Active Ingredient:

Imazamox
Imazethapyr

Chemistry Groups:

Group 2

Application Rates and Packaging:

One co-pack treats
80 acres

1 X 6.47 L Imazamox
(DAVAI® 80 SL)

1 X 2.08 L Imazethapyr
(PHANTOM® 240 SL)

Recommended Surfactants:

Merge or methylated seed oils like Norac MSO or Hasten NT at 0.5% v/v, or a non-ionic surfactant

Registered and Supported Tank-Mix

Glyphosate
Bentazon
ARROW® 240 EC,
ARROW ALL IN™ or Quizalofop

KEY BENEFITS:

- Can be used in all soil zones in Western Canada
- Lasting activity helping to control shallow germinating flushing weeds
- Convenient 80 acre package
- Can be used in peas, soybeans and dry beans
- Liquid formulation allowing for easy mixing

HOW IT WORKS:

The two active ingredients in QUASAR® are readily absorbed through both leaf and root uptake and are translocated in the plant to inhibit amino acid production and cell division. Plant growth is inhibited and a few days after application, chlorosis and terminal bud death become evident. Leaves and stems become yellow and purple, and root growth may be inhibited.

KEY WEEDS CONTROLLED:

Grass weeds
(1-4 true leaf stage or early tillering):

- Green foxtail (including Group 1 resistant)*
- Tame oats
- Wild oats (including Group 1 resistant)*
- Yellow foxtail
- Barnyard grass^s
- Volunteer barely^s

Broadleaf weeds
(Cotyledon to 4 leaf stage):

- Chickweed
- Green smartweed
- Lamb's quarters
- Redroot pigweed
- Stinkweed
- Wild mustard
- Volunteer canola^s
- Wild buckwheat^s

*The QUASAR® co-pack will not control weed biotypes resistant to group 2 herbicides.

^sSuppression

UNDERSTANDING YOUR HERBICIDE OPTIONS

PRODUCT NAME	DAVAI® 80 SL	DAVAI® 80 SL + ARROW ALL IN™	DAVAI® 80 SL + LEOPARD®	PHANTOM® 240 SL	PHANTOM® 240 SL + ARROW ALL IN™
When to Use	Low grass pressure, freedom to grow canola, flax and oats the following year, as a tank mix with glyphosate in RR soybeans to control RR canola.	High grass pressure, freedom to grow canola, flax and oats the following year.	Harder to kill brome grass pressure, freedom to grow canola, flax and oats the following year.	Black soil zone, looking for flushing control of shallow germinating weeds, with relatively low grass pressure, cleaver and hemp-nettle control.	Black soil zone, higher grass pressure looking for flushing control of shallow germinating weeds, with high grass pressure, cleaver and hemp-nettle control.
Replaces	Solo® ADV/Solo® WDG	Solo® Ultra	Solo® + Assure® II	Pursuit®	Pursuit® + Poast® Ultra
Registered Crops	Peas, Soybeans, Dry beans	Peas, Soybeans, Dry beans	Peas, Soybeans, Dry beans	Peas, Soybeans, Dry beans, Alfalfa	Peas, Soybeans, Dry beans
Crop Staging	Soybeans - emergence to 3 expanded trifoliate leaves; Peas - 1-6 true leaf stage; Dry beans - 1-2 leaf	Soybeans - emergence to 3 expanded trifoliate leaves; Peas - 1-6 true leaf stage; Dry beans - 1-2 leaf	Soybeans - emergence to 3 expanded trifoliate leaves; Peas - 1-6 true leaf stage; Dry beans - 1-2 leaf	Soybeans - emergence to 3 expanded trifoliate leaves; Peas - 1-6 true leaf stage; Dry beans - up to 2 trifoliate	Soybeans - emergence to 3 expanded trifoliate leaves; Peas - 1-6 true leaf stage; Dry beans - up to 2 trifoliate
Rate Of Application	100 ml/ac DAVAI® 80 SL	100 ml/ac DAVAI® 80 SL + 150 ml/ac ARROW ALL IN™	100 ml/ac DAVAI® 80 SL + 190 ml/ac LEOPARD®	85 ml/ac PHANTOM® 240 SL	85 ml/ac PHANTOM® 240 SL + 150 ml/ac ARROW ALL IN™
Adjuvant & Rate	Merge® at 0.5% v/v, NORAC MSO at 0.5% v/v, Hasten® NT Ultra at 0.5% v/v or Agral® 90 at 0.25% v/v	Not required	Merge®, Sure-Mix®, LI700® or Liberate™ at 0.5% v/v	Nonionic surfactant 0.25% v/v	Not required
Re-Cropping	Barley, Canary seed, Canola, Chickpeas, Corn, Peas, Flax, Lentil, Oats, Soybeans, Clearfield® sunflowers, Spring wheat, Durum wheat	Barley, Canary seed, Canola, Chickpeas, Corn, Peas, Flax, Lentil, Oats, Soybeans, Clearfield® sunflowers, Spring wheat, Durum wheat	Barley, Canary seed, Canola, Chickpeas, Corn, Peas, Flax, Lentils, Oats, Soybeans, Clearfield® sunflowers, Spring wheat, Durum wheat	Alfalfa, Peas, Lentils, Spring barley, Spring wheat	Alfalfa, Peas, Lentils, Spring barley, Spring wheat
Weed Stage at Application	Broadleaf Weeds - cotyledon to 4 leaf, Grasses - 1-4 true leaf	Broadleaf Weeds - cotyledon to 4 leaf, Grasses - 1-6 true leaf	Broadleaf Weeds - cotyledon to 4 leaf, Grasses - 2 leaf to early tillering	Broadleaf Weeds - cotyledon to 4 leaf, Grasses - 1-4 true leaf	Broadleaf Weeds - cotyledon to 4 leaf, Grasses - 1-6 true leaf



Always read and follow label directions.

UNDERSTANDING YOUR HERBICIDE OPTIONS

PRODUCT NAME	PHANTOM® 240 SL + LEOPARD®	QUASAR®	QUASAR® + ARROW ALL IN™	QUASAR® + LEOPARD®	PYTHON™	SQUADRON®
When to Use	Black soil zone, looking for flushing control of shallow germinating weeds, with brome grass pressure, cleavers and hemp-nettle control.	All soil zones, flushing weed control of shallow germinating weeds.	All soil zones, flushing weed control of shallow germinating weeds, higher grass pressure.	All soil zones, flushing weed control of shallow germinating weeds with brome grass pressure.	Mutiple modes of action to manage resistant biotypes.	Pre-seed or post-emergence application gives you another tool to fight weed resistance.
Replaces	Pursuit® + Assure® II	Odyssey®/ Odyssey® NXT	Odyssey® Ultra	Odyssey® + Assure® II	Viper® ADV	Sencor®
Registered Crops	Peas, Soybeans, Dry beans	Peas, Soybeans, Dry beans	Peas, Soybeans, Dry beans	Peas, Soybeans, Dry beans	Peas, Soybeans, Dry beans	Peas, Soybeans, Lentils
Crop Staging	Soybeans - emergence to 3 expanded trifoliolate leaves; Peas - 1-6 true leaf stage; Dry beans - up to 2 trifoliolate	Soybeans - emergence to 3 expanded trifoliolate leaves; Peas - 1-6 true leaf stage; Dry beans - 1-2 leaf	Soybeans - emergence to 3 expanded trifoliolate leaves; Peas - 1-6 true leaf stage; Dry beans - 1-2 leaf	Soybeans - emergence to 3 expanded trifoliolate leaves; Peas - 1-6 true leaf stage; Dry beans - 1-2 leaf	Soybeans - unifoliolate to 2 expanded trifoliolate leaves; Peas - 3-6 true leaf stage; Dry beans - 1-3 trifoliolate	Pre-seed incorporation or post-emergence - pea vines must be less than 6 inches long at time of post-emergent spraying
Rate Of Application	85 ml/ac PHANTOM® 240 SL + 190 ml/ac LEOPARD®	80 ml/ac DAVAI® 80 SL + 26 ml/ac PHANTOM® 240 SL	80 ml/ac DAVAI® 80 SL + 26 ml/ac PHANTOM® 240 SL + 150 ml/ac ARROW ALL IN™	80 ml/ac DAVAI® 80 SL + 26 ml/ac PHANTOM® 240 SL + 190 ml/ac LEOPARD®	100 ml/ac PYTHON™ A + 364 ml/ac PYTHON™ B	Post-emergence: SQUADRON® 275-375 g/ha; Pre-plant incorporated (Spring) - SQUADRON® 375-475 g/ha plus 1.7-3 L/ha Treflan® EC or 2.2-2.8 L/ha Rival® EC
Adjuvant & Rate	Merge®, Sure-Mix®, LI700® or Liberate™ at 0.5% v/v	Merge® at 0.5% v/v, NORAC MSO at 0.5% v/v, Hasten® NT Ultra at 0.5% v/v or Agral® 90 at 0.25% v/v	Not required	Merge®, Sure-Mix®, LI700® or Liberate™ at 0.5% v/v	800 ml/ac UAN 28% + adjuvant (Merge® at 0.5% v/v, NORAC MSO at 0.5% v/v, Hasten® NT Ultra at 0.5% v/v or Agral® 90 at 0.25% v/v)	Not required
Re-Cropping	Alfalfa, Peas, Lentils, Spring barley, Spring wheat	Clearfield® canola, Spring barley, Spring wheat, Lentils, Peas	Clearfield® canola, Spring barley, Spring wheat, Lentils, Peas	Clearfield® canola, Spring barley, Spring wheat, Lentils, Peas	Barley, Canary seed, Canola, Chickpeas, Corn, Peas, Flax, Lentils, Oats, Soybeans, Clearfield® sunflowers, Spring wheat, Durum wheat	Specialty crops and non-triazine-tolerant canola (rapeseed) are sensitive and may be injured if seeded in soil treated with SQUADRON® during the year of application or the following crop year. Fall seeded or cover crops such as wheat, oats and rye may be injured when seeded within the same season as the application of SQUADRON®.
Weed Stage at Application	Broadleaf Weeds - cotyledon to 4 leaf, Grasses - 2 leaf to early tillering	Broadleaf Weeds - cotyledon to 4 leaf, Grasses - 1-4 true leaf	Broadleaf Weeds - cotyledon to 4 leaf, Grasses - 1-6 true leaf	Broadleaf Weeds - cotyledon to 4 leaf, Grasses - 2 leaf to early tillering	Broadleaf Weeds - cotyledon to 4 leaf, Grasses - 1-4 true leaf	Pre-emergent to early post-emergent



Always read and follow label directions.

BROADLEAF WEEDS CONTROLLED BY PRODUCT

Product Name	Weed Stage at Application	Chickweed	Cleavers	Cow cockle	Flixweed	Green smartweed	Hemp-nettle	Kochia	Lamb's quarters	Redroot pigweed	Russian thistle	Shepherd's purse	Stinkweed	Stork's bill	Tartary buckwheat	Vol. canola	Wild buckwheat*	Wild mustard
DAVAI® 80 SL	cotyledon to 4 leaf	–	S	C	C	C	–	–	C	C	–	C	C	C	–	C ⁴	S	C
DAVAI® 80 SL + ARROW ALL IN™	cotyledon to 4 leaf	–	S	C	C	C	–	–	C	C	–	C	C	C	–	C ⁴	S	C
DAVAI® 80 SL + LEOPARD®	cotyledon to 4 leaf	–	S	C	C	C	–	–	C	C	–	C	C	C	–	C ⁴	S	C
PHANTOM® 240 SL	cotyledon to 4 leaf	C	C	–	–	C	C	–	–	C	–	C	C	–	–	C ⁴	S	C
PHANTOM® 240 SL + ARROW ALL IN™	cotyledon to 4 leaf	C	C	–	–	C	C	–	–	C	–	C	C	–	–	C ⁴	S	C
PHANTOM® 240 SL + LEOPARD®	cotyledon to 4 leaf	C	C	–	–	C	C	–	–	C	–	C	C	–	–	C	S	C
QUASAR®	cotyledon to 4 leaf	C	–	–	–	C	–	–	C	C	–	–	C	–	–	S	S	C
QUASAR® + ARROW ALL IN™	cotyledon to 4 leaf	C	–	–	–	C	–	–	C	C	–	–	C	–	–	S	S	C
QUASAR® + LEOPARD®	cotyledon to 4 leaf	C	–	–	–	C	–	–	C	C	–	–	C	–	–	S	S	C
PYTHON™	cotyledon to 4 leaf	–	S	C	C	C	–	–	C	C	–	C	C	C	–	C	C	C
SQUADRON®	Pre-emergent to early post-emergent	C	–	C ^{6,7}	–	C	C	C ⁷	C	C ^{6,7}	C ⁶	C ^{6,7}	C	–	C	C ⁵	C ^{6,7}	C ^{6,7}

^C control | ^S suppression | ¹ 2-5 leaf stage | ² 3 leaf to 4 leaf + 3 tillers | ³ 1-5 leaf up to 2 tillers | ⁴ non-Clearfield® varieties only
⁵ non-triazine tolerant canola only | ⁶ preplant incorporated with Treflan® Liquid EC herbicide | ⁷ preplant incorporated with Rival® EC herbicide

GRASSY WEEDS CONTROLLED BY PRODUCT

Product Name	Weed Stage at Application	Barnyard grass	Crabgrass	Downy brome	Fall panicum	Foxtail barley	Green foxtail	Japanese brome grass	Witch grass	Persian darnel	Proso millet	Quackgrass	Vol. barley	Vol. canary seed	Vol. corn	Vol. durum wheat	Vol. tame oats	Vol. wheat	Wild oats	Yellow foxtail
DAVAI® 80 SL	1-4 true leaf	C	-	-	-	-	C	S	-	C	-	-	C	C	-	C	C	C	C	C
DAVAI® 80 SL + ARROW ALL IN™	1-6 true leaf	C	C	-	C	-	C	-	C	C	C	S	C	C	C	C	C	C	C	C
DAVAI® 80 SL + LEOPARD®	2 leaf to early tillering	C	-	C ¹	C	C ²	C	C ¹	C	-	C	S	C	-	C	C	C	C	C ³	C
PHANTOM® 240 SL	1-4 true leaf	-	-	-	-	-	C	-	-	-	-	-	-	-	-	-	-	-	C	-
PHANTOM® 240 SL + ARROW ALL IN™	1-6 true leaf	C	C	-	C	-	C	-	C	C	C	S	C	C	C	C	C	C	C	C
PHANTOM® 240 SL + LEOPARD®	2 leaf to early tillering	C	-	C ¹	C	C ²	C	C ¹	C	-	C	S	C	-	C	C	C	C	C ³	C
QUASAR®	1-4 true leaf	S	-	-	-	-	C	-	-	-	-	-	S	-	-	-	C	-	C	C
QUASAR® + ARROW ALL IN™	1-6 true leaf	C	C	-	C	-	C	-	C	C	C	S	C	C	C	C	C	C	C	C
QUASAR® + LEOPARD®	2 leaf to early tillering	C	-	C ¹	C	C ²	C	C ¹	C	-	C	S	C	-	C	C	C	C	C ³	C
PYTHON™	1-4 true leaf	C	-	-	-	-	C	S	-	C	-	-	C	C	-	C	C	C	C	C
SQUADRON®	Pre-emergent to early post-emergent	C ^{6,7}	-	C ^{6,7}	-	-	C ^{6,7}	-	-	C ^{6,7}	-	-	-	-	-	-	-	-	C ^{6,7}	C ^{6,7}

C control | S suppression | ¹ 2-5 leaf stage | ² 3 leaf to 4 leaf + 3 tillers | ³ 1-5 leaf up to 2 tillers | ⁴ non-Clearfield® varieties only

⁵ non-triazine tolerant canola only | ⁶ preplant incorporated with Treflan® Liquid EC herbicide | ⁷ preplant incorporated with Rival® EC herbicide

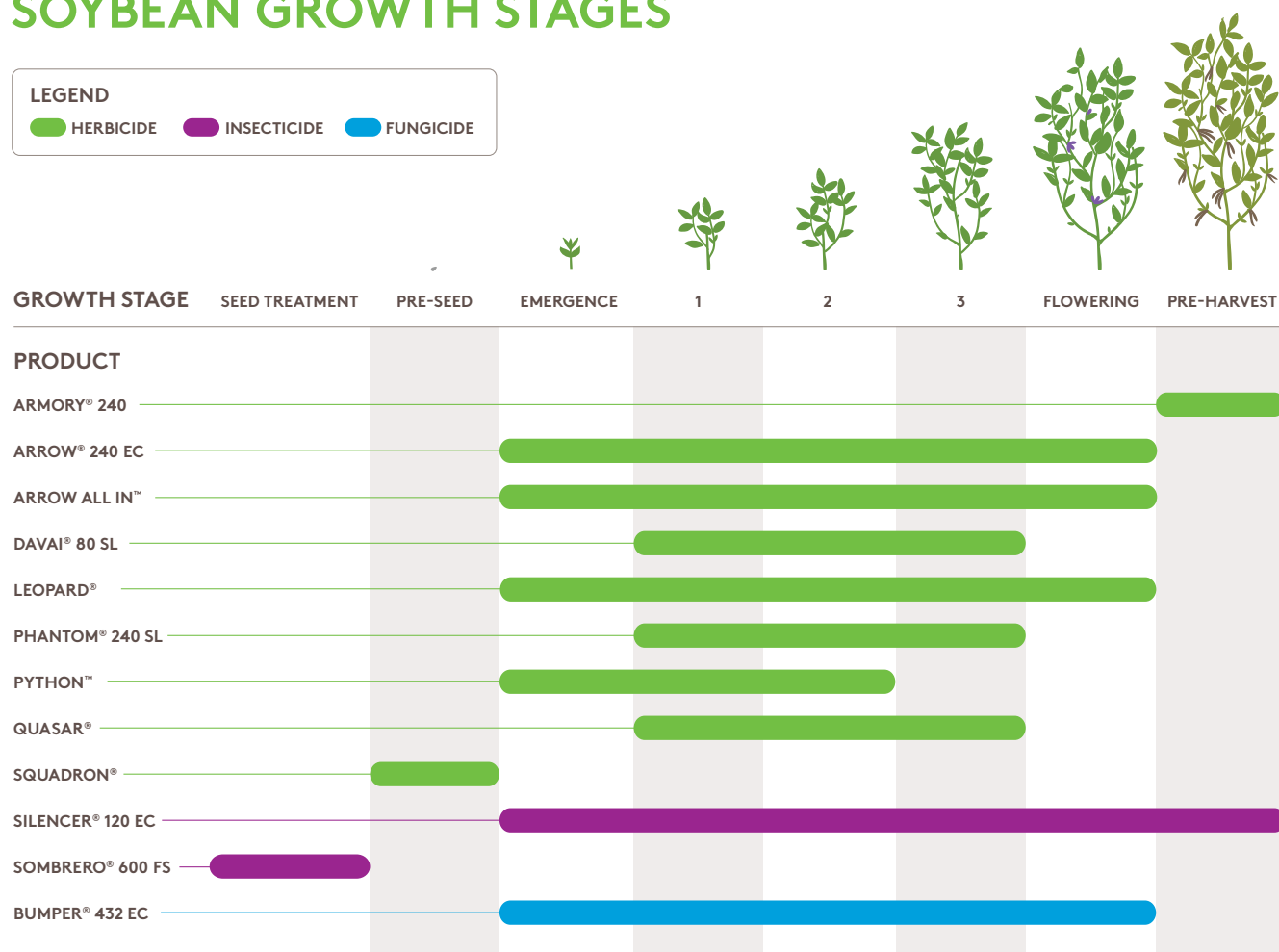
PEA GROWTH STAGES



SOYBEAN GROWTH STAGES

LEGEND

HERBICIDE INSECTICIDE FUNGICIDE



Timing based on using the product alone. Please refer to tank-mix partners label for crop timing.

Always read and follow label directions.

QUASAR®

WATER VOLUME:

Ground: 40 L/ac or 10 gal/ac

RAINFASTNESS:

3 hours

MIXING INSTRUCTIONS:

1. For ground application use 40 L/ac.
2. Use a 50-mesh (or coarser) filter screen.
3. Fill the spray tank $\frac{3}{4}$ full with water.
4. Add the required amount of DAVAI® 80 SL into the sprayer.
5. Add the required amount of PHANTOM® 240 SL into the sprayer.
6. Agitate until thoroughly mixed.
7. Continue agitation and add the required amount of recommended adjuvant.
8. Complete filling the tank to the desired level with water.

CROP ROTATIONS:

There is the possibility of residual soil activity from DAVAI® 80 SL and PHANTOM® 240 SL the year following application. Research studies have shown that the following crops may be safely grown in black and grey wooded soil zones the year following DAVAI® 80 SL and PHANTOM® 240 SL applications:

- Clearfield® canola
- Spring barley
- Spring wheat
- Lentils
- Peas

Conduct a field bioassay (a test strip grown to maturity) the year *before* growing any other crop than those listed above.

PRE-HARVEST INTERVALS:

Peas – 60 days

Soybeans – 85 days

Dry beans – 75 days

GRAZING RESTRICTIONS:

Do not allow livestock to graze or feed green forage to livestock. Do not graze treated crop. Peas may be fed to livestock 30 days after application.

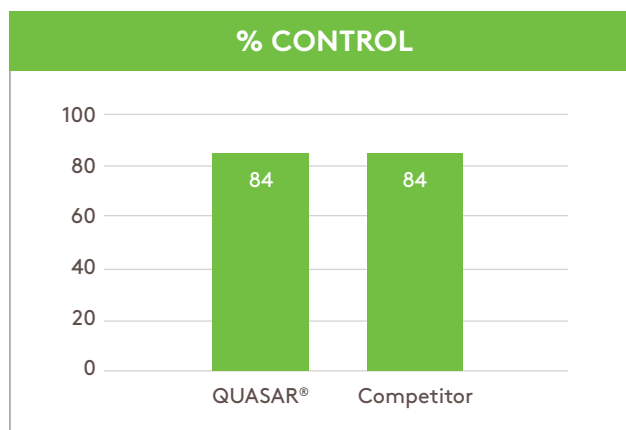
STORAGE:

1. Store above 5° C in original, tightly closed container.
2. Do not ship or store near food, feed, seed and fertilizers.

Field Test Results

Summary

8 trials were conducted in Western Canada (3 in dry beans, 3 in soybeans and 2 in peas), consistently QUASAR® matched the competitive brand in weed control at 84%.



Always read and follow label directions.
Toll-free: 1.855.264.6262
Website: ADAMA.COM/CANADA



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