Heat LQ herbicide
Pre-harvest
2017 Staging Guide

Heat® LQ
Powered by Kixor® Herbicide

We create chemistry
Faster harvest. Better weed control.

- Easy-to-use liquid formulation for fast dry down of crops and broadleaf weeds
- Improved crop uniformity and harvestability
- Tank mixed with glyphosate, for fast broadleaf weed dry down and cleaner fields next season
- Facilitates straight cutting canola

Tank mixing Heat® LQ herbicide with glyphosate or using it alone for pre-harvest applications quickens the rate of crop dry down and reduces the chance of regrowth to improve crop uniformity and facilitate direct combining. When tank mixed with glyphosate, it also provides excellent weed control that includes control of fall perennials, for cleaner fields next spring. Correct application timing is essential when using Heat LQ in pre-harvest. Use this staging guide to help ensure the best results.
Use of Heat LQ in seed production

For seed production fields, Heat LQ should be used as a standalone product only. BASF and third party research have shown no decrease in seed germination from an application of Heat LQ.

When used standalone, Heat LQ does not control grassy weeds. It will provide a faster crop dry down and control of annual broadleaf weeds only.

Contents

Harvest timing application tips 3
Follow crops 4
Application rates 5
Product specifications 6
Mixing order 6
Crop staging
- Canola (all types) 7
- Chickpeas 9
- Dry common beans¹ 11
- Field peas 13
- Red lentils² 15
- Soybeans 17
- Sunflowers³ 19

¹When tank mixed with glyphosate, consult glyphosate label or your BASF Sales Representative for information regarding use on specific varieties of dry common beans. ²BASF supports the use of Heat LQ for pre-harvest for red lentils, however we are still in the process of aligning the Maximum Residue Limit (MRL) in the European Union with other trade jurisdictions. NOTE: Heat LQ is supported for pre-harvest use on red lentil varieties only. DO NOT apply Heat LQ pre-harvest to green lentils. Please check with your grain buyer prior to the pre-harvest application of Heat LQ in red lentils.³Glyphosate is not registered for pre-harvest use in sunflowers. For sunflowers, use Heat LQ as a standalone product only.

NOTE: At time of printing (2017), BASF remains in the final stages of establishing import tolerances (maximum residue limits (MRLs)) for flax, mustard, wheat, barley, and triticale for markets around the world. While establishing a complete set of MRLs is progressing, the European Food Safety Authority has not yet completed their review. Because these crops are heavily exported, and some exports are made to the EU, BASF does not recommend the use of Heat LQ for pre-harvest on flax, mustard, wheat, barley, and triticale, for the 2017 application season.
Harvest timing

The dry down of crops will be best under favourable environmental conditions with warm temperatures and low moisture conditions. Weather conditions such as rainfall, cool temperatures and high humidity may slow the plant dry down and keep moisture levels high which can delay the start of harvest after the Heat LQ application.

Application tips

Rainfastness – Heat LQ is extremely rainfast and is only limited by glyphosate. Follow the glyphosate manufacturer’s recommendation for rainfast guidelines.

For best results, be sure to use higher water volumes to maximize coverage and drive sprayers at slower speeds. Use nozzles that point backwards and adjust sprayer pressure for finer droplets. This will help penetrate the canopy, leading to a more thorough and even dry down.
Follow crops

In the spring, following a fall application of Heat LQ.

Barley
Canary seed
Canola (all types incl. Clearfield® canola)
Chickpeas
Corn (field, sweet)
Field peas
Flax
Forage legumes
Lentils
Mustard
Oats
Soybeans
Wheat (spring incl. Clearfield wheat, winter, durum)

Follow crops supported (not on current label).

Dry beans
Faba beans
Forage grasses

NOTE: Dry beans, faba beans and forage grasses are supported as follow crops following a fall application of Heat LQ but are not included on the current label.
**Application rates**

One case treats 40 acres tank mixed with glyphosate or 30 acres standalone. One tote treats 1,000 acres tank mixed with glyphosate or 730 acres standalone.

- **Heat LQ with glyphosate rate**
  - 43 to 59 ml/ac
  - (106 to 146 ml/ha)

- **Glyphosate**
  - (360 g ae/L)
  - 1.0 L/ac (2.5 L/ha)

- **Merge® adjuvant**
  - 200 to 400 ml/ac
  - (0.5 to 1 L/ha)

- **Heat LQ standalone rate**
  - 59 ml/ac (146 ml/ha)

- **Merge adjuvant**
  - 400 ml/ac (1 L/ha)

**Water volume**

Ground application tank mixed with glyphosate rate

- 40 L/ac (10 gal/ac) min.

Ground application standalone rate

- 80 L/ac (20 gal/ac) min.

Aerial application

- 20 L/ac (5 gal/ac)

---

4 Glyphosate is not included in the case. 5 Merge adjuvant is required and included. BASF recommends using Merge at high rate (400 ml/ac) when tank mixed with glyphosate. Use both Merge jugs included, when applying Heat LQ at 40 acres per case. Use all the Merge in the tote when applying at 1,000 acres per tote. 6 Higher water volumes are recommended for best results. 7 Heat LQ is registered for aerial applications. Some glyphosate formulations are also registered for aerial applications; therefore, Heat LQ plus glyphosate can be applied through aerial applications when both products have aerial registrations.
Heat LQ specifications

Active ingredient: Saflufenacil – Group 14

Formulation: Water-based suspension concentrate

One case contains: 1.73 L jug of Heat LQ herbicide
2 x 8.1 L jugs of Merge adjuvant

One tote contains: 4 x 10.79 L of Heat LQ herbicide
with 400 L of Merge adjuvant

Storage: Protect from freezing.
Store in cool, dry, ventilated area.

Mixing order

1. Fill clean spray tank 1/2 full of clean water and start agitation.

2. Add the correct amount of Heat LQ herbicide and continue to agitate until mixed.

3. If tank mix is being applied, add the correct amount of glyphosate while continuing agitation.

4. Add the correct amount of Merge adjuvant to the tank last.

5. Continue agitation while adding the remaining amount of water.

6. Continue agitation or run the by-pass system.
Canola

(All types of canola, including **Clearfield** canola, Liberty Link® and Roundup Ready®)

For most canola, harvest can typically commence 2 to 3 weeks after application, when environmental conditions are favourable and the product has been applied at accurate crop staging and tank mixed with glyphosate. Under cool temperatures, overcast conditions, or rainy periods, time from application to harvest may be delayed.

**Optimal timing**

Apply when 75% of seeds have changed colour. Canola timing for application cannot be determined by pod colour. Pods must be opened to determine the amount of seed colour. Canola flowers upwards, so the lowermost pods will contain the first mature seeds, while the upper pods will contain the last maturing seeds. Seeds on the bottom 2/3 to 3/4 of the plant will have changed from green to dark brown or black in canola.
Too early for application

Applications may result in yield loss.

Pods have started changing colour, but upon opening the pods to examine seeds, the seeds have not changed colour or just started to change colour. Application prior to correct physiological timing can potentially reduce yield and/or impact quality.

NOTE: BASF does not recommend Heat LQ standalone (high rate) in canola crops. Dry down efficacy is significantly improved in canola crops when tank mixed with glyphosate.
For chickpeas, harvest can typically commence within 14 days after application, when environmental conditions are favourable and the product has been applied at accurate crop staging. Under cool temperatures, overcast conditions or periods of rain, time from application of Heat LQ to harvest may be delayed.

**Optimal timing**

Application timing should occur when the majority of the plants have matured, with only the upper part of the plant remaining green. At this point the seed moisture is at 30% or less. The majority of seeds should have changed colour from green to yellow/brown for Desi type or tan/white for Kabuli type chickpeas.
Too early for application

Applications may result in yield loss.

For both Kabuli and Desi types, the crop may look like it has reached maturity, but it may not be at the recommended stage if the peas inside are green and soft, the pods are brownish, the plants have dried down while the tops are still green, and the fields appear to have green and brown patches. Applying a pre-harvest herbicide at this point may cause a reduction in seed size and quality.
For dry common beans, harvest can typically commence within 14 days after application, when environmental conditions are favourable and the product has been applied at accurate crop staging. Under cool temperatures, overcast conditions or periods of rain, time from application of Heat LQ to harvest may be delayed.

**Optimal timing**

The bean crop will have 90% of the pods with a colour change from green to yellow and/or light brown. 80% to 90% of the original leaves have dropped. The stems are green to brown in colour. The pods on the lower canopy mature first, so the few remaining green pods will only be located in the top of the canopy.
Too early for application

Applications may result in yield loss.

Green pods are found all through the canopy, no pods have turned brown yet. Applying a pre-harvest herbicide at this point may cause a reduction in seed size and reduce quality.

NOTE: For more detailed information regarding use of Heat LQ on specific varieties of dry common beans, contact your BASF Sales Representative. When tank mixing with glyphosate, consult the glyphosate label or your BASF Sales Representative.
Field peas

For field peas, harvest can typically commence within 14 days after application, when environmental conditions are favourable and the product has been applied at accurate crop staging. Under cool temperatures, overcast conditions or periods of rain, time from application of Heat LQ to harvest may be delayed.

Optimal timing

Field pea plants ripen over time, therefore all pods will not be dry at the same time. Apply Heat LQ when about 75% of the pods have dried down (turned colour). About 25% of the pods will still be green, however, the peas in these pods should be firm.
Too early for application

Applications may result in yield loss.

50% of the pods are still green and the pods that are starting to dry down have peas inside that are still soft and can be split by squeezing. Application prior to correct physiological timing can potentially reduce yield and/or impact quality.
For red lentils, harvest can typically commence within 14 days after application, when environmental conditions are favourable and the product has been applied at accurate crop staging. Under cool temperatures, overcast conditions or periods of rain, time from application of Heat LQ to harvest may be delayed.

**Optimal timing**

Red lentils are indeterminate in growth and will have a variety of pods in different stages. They may still have green leaves on the plant at pre-harvest application. The lowermost pods of the red lentil plant will ripen first. The bottom 15% of the pods should be mature and brown with ripened lentil seeds inside that are firm when squeezed. At optimal timing the bottom pods should rattle when shaken.
Too early for application

Applications may result in yield loss.

The bottom pods have not ripened. Limited colour change has occurred. The seeds are not firm and no rattling can be heard. Application prior to correct physiological timing can potentially reduce yield and/or impact quality.

BASF supports the use of Heat LQ for pre-harvest for red lentils, however we are still in the process of aligning the Maximum Residue Limit (MRL) in the European Union with other trade jurisdictions.

NOTE: Heat LQ is supported for pre-harvest use on red lentil varieties only. DO NOT apply Heat LQ pre-harvest to green lentils. Please check with your grain buyer prior to the pre-harvest application of Heat LQ in red lentils.
For soybeans, harvest can typically commence within 2 to 3 weeks after application, when environmental conditions are favourable and the product has been applied at accurate crop staging and tank mixed with glyphosate. Under conditions of cool temperatures, overcast conditions, or periods of rain, time from application of Heat LQ to harvest may be delayed.

**Optimal timing**

Apply when 90% of the pods in the soybean crop have changed colour, with the lower pods essentially being all brown and the upper pods being a yellowish-brown or grey in some varieties. At this point 80% of the leaves should have dropped with the remaining leaves being yellow.
Too early for application

Applications may result in yield loss.

More than 10% of the pods within the soybean crop are still green. There is limited leaf drop and many green leaves. Application at this time may cause a reduction in yield and seed quality.
Sunflowers

Optimal timing

The plant should be starting to dry down and the heads drooping. Looking at the back of the sunflower head, the bracts and very back of the heads which are green throughout the season are now turning yellow. The heads feel dry when touched and moisture content is between 20% and 30%.
Too early for application

Applications may result in yield loss.

The sunflower head is not drooping or the back of the head is still green. Application at this stage may cause reduction in seed size and impact seed quality.

NOTE: For sunflowers, Heat LQ is to be used as a standalone product only. Do not tank mix with glyphosate.
Always read and follow label directions.

**AgSolutions** is a registered trade-mark of BASF Corporation. HEAT, and KIXOR are registered trade-marks of BASF SE. Clearfield is a registered trade-mark of BASF Agrochemical Products B.V.; all used with permission by BASF Canada Inc. MERGE is a registered trade-mark of BASF Canada Inc. © 2017 BASF Canada Inc.

Liberty Link is a registered trade-mark of Bayer Intellectual Property GmbH. Roundup Ready is a registered trade-mark of Monsanto Technology LLC, Monsanto Canada, Inc.

For more information:
Call **AgSolutions® Customer Care** at 1-877-371-BASF (2273) or visit agsolutions.ca/HeatLQPreHarvest