



TARGET PLANT POPULATIONS FOR MAJOR CROPS

| CROP | | PLANTS PER SQ FOOT | 1000 KERNEL WEIGHT |
|-------------------|--------|--------------------|--------------------|
| Wheat | | 16 - 24 | 30-40 |
| Wheat - CPS | | 16 - 24 | 30-40 |
| Wheat -Soft white | | 14 - 20 | 34 |
| Wheat - Durum | | 16 - 24 | 30-40 |
| Barley | | 30 - 24 | 30-45 |
| Peas | | 7 - 14 | 125-300 |
| Oats | | 20 - 24 | 30-45 |
| Canola | | 7 - 12 | 4-6 |
| Corn | | 0.5 - 0.7 | 380 |
| Rye | | 24 | 30-45 |
| Soybean | | 5 | 100-200 |
| Triticale | Fall | 24 | 43 |
| | Spring | 30 | 34-45 |
| Fababean | | 4-5 | 350-425 |
| Lentil | | 10 - 14 | 30-80 |
| Flax | | 40 | 5-7 |
| Alfalfa | | 40 | 2.27 |

Seeding Rate Calculations using TKW

- Weight of 1000 kernels needs to be completed.
- Determine the expected survival rate of the crop (germination % - seedling mortality).
 - Varies by crop
 - Common value for cereals is 80-90%. Canola is 60-75%.

Seeding Rate (lb/ac) = target plant population/ft² X TKW (grams) ÷ Seed Survival Rate (%) ÷ 10

OR

1000 Kernel Wt (grams) X 10,000 m² X Target Plant Pop. X 1 KG = Seed Rate
 1 seed 1 hectare meter² 1000 grams (kg/hect)

The calculation of each equation above are not exactly the same number but are close.



REGIONAL **GROWING TIPS**

We have Customer Account Managers across the province who understand your local conditions better than anyone. Read what a few of them have to say about best solutions for pre-seed burndown and glyphosates in their region.

PEACE COUNTRY REGION

Charlene Hannotte

PEAS I recommend Goldwing® for pre-seed burndown with multiple modes of action for use before planting peas. Goldwing in front of peas gives increased control of cleavers and faster activity than Group 2 herbicides.



CEREALS Blackhawk® is a safe product to use as pre-seed burndown in wheat, barley and oats as well.

We are experiencing volunteer canola popping up everywhere, which is in fact occurring across the province. In many instances, these volunteers can be tolerant to the herbicide system you are using and provide a host for dangerous diseases that may not feature the same agronomic traits as your new canola crop. Pardner® is newly registered as a pre-seed, tank-mix partner with RoundUp WeatherMAX® herbicide and other similar glyphosate technologies for control of all volunteer canola, even if they're tolerant to other herbicide groups. It also protects from 28 broadleaf weeds, including Group 9- and 2-resistant kochia.

NORTHERN ALBERTA

Sheldon Budzak

CANOLA I always recommend Conquer® added in with Roundup® in front of canola. These products provide another option other than group 2 and 4 chemistry that works well on tough weeds such as over-wintered cleavers and dandelion.



WHEAT In front of any cereal crop, I recommend using Prepass™ as a pre-burn. It works very well on over-wintered perennial weeds and will provide extended soil residual control.

PEAS In front of peas we use a pre-burn mix of Roundup®, Express® SG and Valtera™. The Roundup and Express SG products work on any weeds that are already up and the Valtera provides a solid four weeks of extended soil residual control of emerging broadleaf weeds.



CENTRAL AB

Bruce Kemmere

Always use a tank mix partner with glyphosate to avoid resistance when doing a pre-seed burndown. You don't want to miss any potential resistant weeds escaping. Tank mixing with different groups will help kill those resistant weeds



CEREALS Prepass™ XC, Paradigm™ and Express® are effective herbicides to consider before cereals on fields that had canola in 2017. The residual in the soil will help control broadleaf weeds like volunteer canola for two to three weeks.

OTHER PRODUCTS TO CONSIDER - Conquer® on canola and Valtera™ on peas. For growers with resistant wild oats, look for products like Avadex® and Fortress®. For a wheat only product you may want to consider Focus®. Avadex, Fortress and Focus offer different groups than the regular Group 1 and 2 that we usually spray in crop.

SOUTHERN AB

Randy Campbell

It is becoming more important to start adding a different group of chemical to your glyphosate. Having two or more active ingredients not only will give you better weed control, but will reduce the chance of developing weed resistance.



When doing a pre-seed burndown there are several products that are available to add to your glyphosate that will give you good early weed control before your crop emerges.

When selecting any add-in product, you must be careful because they are crop specific. In our area, I recommend the following for each crop:

CANOLA AIM® or Conquer® mixed with your glyphosate works well because there no residual left in the soil that can harm your crop.

PEAS Goldwing® and Heat work well before peas. If you want extended control of certain weeds, the Valtera™ or Authority® would be your choice because it has a residual for flushing weeds, but these products require moisture to activate, so dry conditions may affect weed control.

CEREALS There are many products that can mix with your glyphosate, but the main products that seem to work well in our area is Prepass™, Express® Pro, Paradigm™, Korrex™ and Blackhawk®. Kochia has always been an issue in our area with narrow leaved hawksbeard becoming a bigger problem. If you have those two weeds, the product I would recommend is Korrex.