

QUESTIONS & ANSWERS

Since introducing **Ascend²[™]** plant growth regulator to the marketplace, we've gotten some questions from retailers like you. If you too have questions, we hope you find the answers in this document.

If you would like more information, please contact your WinField United representative or reference the additional resources listed below.

PLANT GROWTH REGULATORS

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Can Ascend² PGR be applied with 2x2 liquid starter fertilizers or 28% UAN that is off to the side and still generate a positive yield outcome?

Ascend² can be applied 2x2, which you will find indicated on the label. However, most of our testing has been done in-furrow and combined with a pop-up starter (phosphorus based + zinc) to focus on enhancing results during germination. You may expect to have some delayed responses if you choose to apply it off the seed as a 2x2 since it could take some time for the roots to access it.

Aren't there a number of gibberellic acids (GA)? What's the difference? Which ones are in Ascend²?

There are several forms of GA used in various PGR products – more than 100, in fact. The GAs used in all Ascend² formulations are a mixture of GA4 and GA7, which you can find on the label. Through thorough research, we found these forms are the most stable and plant available.

How many days after corn spiking/emergence will a grower see effects of increased root development when comparing treated to untreated plants?

Typically, you will be able to see the increased root growth and development even prior to spiking if you are ambitious enough to go dig seed that early. Otherwise, you may also see differences after spike continuing sometimes throughout vegetation and even into reproduction.

Is there any data comparing Ascend² to the competition or past Ascend formulations?

Yes, most of our comparisons are against previous Ascend formulations since we were really focused on making the best in-furrow option possible. Please reach out to your WinField United representative and they can share more comparative data with you.

How does Ascend² impact emergence uniformity?

Based on data from 14 different Answer Plot[®] locations, Ascend² leads

to a 1,500 plant per acre increase in emergence when compared to starter fertilizer alone. In this webinar recording, Crop Protection Product Manager Jon Zuk goes into more detail, sharing side-by-side comparison images and explaining how consistent ear set height can also be traced back to emergence uniformity. This is likely because the GA helps the seed break dormancy more consistently, and the auxin assists the seedling in moving up toward the sunlight.

What is your recommendation for applying Ascend² along with Xyway[®] fungicide?

We do not have any internal research on this pair-up at this time. The application of Xyway requires it to be off the seed, which is not where we typically want to see Ascend² applied. With that said, we have seen some local information and grower trials showing promising results.

Can we expect to see the same benefits of Ascend² on wheat?

As of right now, we have not done any research using Ascend² at-plant in wheat. The main focus of this product has been in-furrow on corn. Knowing wheat physiology and how PGRs work in the plant, it's likely you may see impacts on wheat similar to what we have seen in corn. With that said, the label does list wheat for in-furrow application with a rate of 4.7-6.3 oz./ac.

Do you think you would see a higher yield response in lower yield environments or no change?

WinField United has done a lot of research on Ascend² in many different environments. Its performance in a low-yield environment will depend on the reason why the yield environment is low. For example, Ascend² is not meant to fix any soil's physical, chemical or biological problems. However, Ascend² may help the plant through tougher times given enhanced root and shoot growth early in the season. Please reach out to your WinField United representative to discuss performance in your area and how it may relate to your yield environment.

Have you looked at using Ascend² for seed treatments?

We have other projects in the pipeline that will specifically look at seed treatments and PGRs. Right now, we do have options for seed treating current formulations. Reach out to your WinField United representative for more information.

Is Ascend² included in OptiStart[®] starter fertilizer?

No, it is not. However, using OptiStart or a pop-up starter with Ascend² will only increase the likelihood of a positive response. Using OptiStart will also allow you or the grower to take advantage of the rebate program.

What Ascend² rate on do you recommend in northern climates? More the better?

The rate of Ascend² to be applied in-furrow is 4.7-6.3 oz./ac. I would work within that range to get the right response within your geography. We have done all our testing at 5.3 oz./ac. More is not always better. Watch this webinar recording to learn more about why.

If cytokinin is the throttle control for the auxin, what impact does it have on the plant to increase the rate of auxin by three times and still be able to lower amount of cytokinin to 1/10th?

It is important to remember that auxin and cytokinin also do plenty of other things in the plant. One of the things cytokinins have been shown to do is slow the rate of leaf senescence and growth. Conversely, auxin speeds that process up. We know the plant naturally wants to grow fast during vegetation but would prefer to slow down during reproduction to better pack its seeds with nutrition to feed its offspring. Cytokinin helps with that.

What we see in Ascend² is that the increased auxin helps promote more root growth as well as some vegetative shoot growth. We know cytokinins are mainly produced in the roots, so more root growth in theory would lead to more cytokinin production. These would be relatively self-balancing. By looking at 17 different formulations/ ratios of PGRs to begin designing Ascend², we found having a small amount of cytokinin was way better than not having any, and when we increased the concentration of cytokinin in the product testing stage, the response was either unchanged or dulled.

Are you increasing the rate of Ascend SL for foliar use to increase the amount of GA and cytokinin?

No, we are not increasing the rate used for Ascend SL when it comes to foliar application. The label rate for Ascend SL for foliar application is 6.7-10.8 oz./ac. from V3-V10 and 6.7 oz./ac. from VT-R3. Most of our research has been done using the foliar rate of 6.7 oz./ac. on corn.

Can Ascend² be used through a Dosatron or Raven Sidekick Pro[®] direct injection system?

Yes, Ascend² will mix fine in a Doastron or Sidekick, and it also mixes well with any of the fertilizers. For product stability purposes, we recommend mixing it fresh every time, so using one of these systems is a great way to do just that. One watch out with these application methods, however, is that if they are not set up properly, rates of injected product may vary by row unit.

What is the rate for using Ascend² on soybeans?

The label rate for Ascend SL on soybeans is either 3.4 oz./ac at V3-V5 followed by 3.2 oz. at R1-R3 or one application at R1-R3 at 6.4 oz./ ac. The same rates and timings apply for Ascend². Please reach out to your WinField United representative if you need more assistance.