There has been a lot of spraying and hay making done between showers over the last week or so. It looks like most of the corn post work has wrapped up and we are heavy into soybean post spraying; watch the wind, sensitive crops and feel free to refer to the drift reduction information we shared last week.

**Improving Post Emerge Soybean Weed Control... and watch Rotation Restrictions...**

We've been behind the 8-ball most of the year with planting, haying, corn spraying and now bean spraying. The number of questions about “the waterhemp is getting pretty big, what can we do?” have escalated as we get deeper into June. Speaking of getting into June... or early July with some of our post trips... we need to watch the rotational restrictions with one of our more popular Group 14’s, Flexstar (aka fomesafen and also in Reflex, Marvel and is a component of Prefix). Remember it has a 10 month crop rotation restriction to corn. For example, an application of a fomesafen product on July 1 would mean a corn planting date after May 1, 2016 to comply with label guidelines.

OK, onto the performance part of the equation. Label instructions for these Group 14’s that we usually tank mix with glyphosate (Flexstar, Cobra, Phoenix, Ultra Blazer, Cadet, Reflex, etc.) to knock down waterhemp often describe a six-leaf weed size with a four-inch weed height as the optimum time for application. It looks like we are getting past that in a lot of fields, so no matter what we do control may not be as good as we’d like. Here are a few thoughts to improve control if weeds are getting on the big side;

- whatever Group 14 you pick (they are all pretty similar so work with your dealer to pick a favorite), by now we are probably into the “full recommended rate” window.
- 15 GPA minimum; 20+ is really where we should be, if the label allows. Yes, a couple of the burners have labels from 30 up to 50 GPA... we ran anywhere from 15 up to 30 through our post rigs chasing big waterhemp, marestail, giant ragweed, and other large escapees over the years. 20-25 was typically the sweet spot for control vs getting anything done besides filling and mixing. But... if we had a real jungle out there, meaning a dense canopy of large weeds and beans worse than the usual escapee level... 30 GPA seemed to give us more consistency. Your mileage may vary, as they say.
- Keep the pressure up... usually 40psi is about the lower end of what I’d recommend and I’d prefer higher... but don’t exceed the recommended pressure for your nozzles or herbicides. We want good coverage, which means a mix of medium to fine droplet sizes, but if we run too much pressure, our percentage of fines can get too high. Too many small droplets can mean drift- and drift is bad in a couple ways when chasing big weeds. Not only do we run the risk of off target injury, but every spray droplet that moves off site is one less that is covering our weeds. Some nozzles have slightly different pressure recommendations depending on design to double check that and then lean to the upper end of their range.
- Consider taking a look at the newer styles of “twin fan” nozzles; they attack weeds at different angles with slightly different nozzle orientations and sizes. In theory, this increases coverage while decreasing drift; in the field applications I have seen, these nozzles do a great job. The downside is that they are expensive, but then so are weed escapes, so as a customer told me “it’s all relative; my sprayer ran well over six figures, so $17 nozzles didn’t seem that bad”.
- Use relatively aggressive additives; if the label allows, methylated seed oils (MSO) or high surfactant oil concentrates (HSOC) are typically more effective than crop oil concentrates (COC). Yes, they may burn the beans worse; but if we are heading out to control large weeds in the beans, we want the best odds in our favor. Typically the burn does not equate to yield loss, but once in a while it can- more on that in a minute. Burn will occur with the less aggressive additives anyway, so I hate to have a guy run less aggressive additives, still burn his beans, and control fewer weeds. We are really rolling the dice here...
anyway; even with perfect coverage, we won’t have perfect control of these larger weeds. Good luck if you have to take a shot at them.

**Do Post Emerge Burners Hurt Soybean Yields?**

We are getting this question a lot with the number of brown bean fields that popped up over the last week; it doesn’t take long (or a very high rate) for the Group 14’s to burn soybean tissue when we have good growing conditions. I’ve seen it happen exceptionally fast this season, last Friday maybe being one of the fastest response days I’ve seen in years; bean leaves went from green and lush to crispy in short order. My favorite quote of the weekend; “My beans crunch when I walk in them and you are telling me that is normal?”

We’ve worked with these products for decades, but as they faded from use in the years where glyphosate could stand alone, we forgot how visually disturbing it can be to have a field of beans turn from green to brown over lunch break. So... does burning our soybean fields like that reduce yield? It can... but the vast majority of the time it does not. Our experiences tell us this, and some research done a while back in Illinois and Iowa (sponsored by checkoff funds from the Soybean Research and Development Council) did a good job of ID’ing when we can run into trouble;

*Injury from postemergence herbicides is not a good predictor of soybean yield loss. There are a number of factors that likely influence the potential for postemergence herbicide injury to cause soybean yield reductions. These high risk factors include late planting dates, late herbicide applications, and poor environmental conditions for soybean recovery, such as low soil moisture and high temperatures. If no visual injury develops from the postemergence herbicide, there is a minimal risk of soybean yield reductions. However, just because herbicide injury is observed, soybean yields are not necessarily reduced.*

For the three-year, multi-location study, more than 95% of the (288) postemergence herbicide applications did not reduce soybean yield regardless of the herbicide or level of soybean injury observed. Significant yield loss occurred in only 3.5% of the treatments. These few instances often did not correlate to severe early-season injury and were usually associated with late herbicide applications to late-planted soybeans. These factors (late-planted soybean and late-season herbicide applications) were more conducive to environmental conditions that may have not been ideal for soybean recovery.

Back to the crunchy bean question from my friend; 5 days later he sent me some pics of his formerly brown/crispy field; with all the nice new deep green trifoliates on his beans it was a lot harder to see the burned leaves. Hope it goes that well for all of us.

**Marestail Issues**

We also have a fair amount of marestail that escaped earlier control attempts that guys are trying to knock back into submission for a short period.

Notice the term “submission for a short period”... there really isn’t much we can do about marestail in conventional or RR soybeans once it is past around 3-4”. Most of the populations we run into, at least in SW/WC IA, aren’t phased by high rates of glyphosate or post emerge treatments of ALS products (Group 2’s like Classic, FirstRate). Group 14’s like Flexstar, Cobra, Cadet, etc. can perform fairly well on very small (the 3-4” or preferably smaller) marestail but once they get beyond that we burn some growth back for a couple weeks and then they poke back up through the soybean canopy. (If you happen to have Liberty soybeans you have a little better shot at controlling marestail up to around 6” or so). If you are chasing other weeds with a tank mix that happens to have marestail activity as well, then the thoughts about large waterhemp above apply well to marestail, just don’t set expectations too high, it is
a long shot. If marestail are a primary issue and beyond the reasonable reach of our herbicides, carefully weigh the risk and expense of a spray trip, including yield loss from wheel tracks

http://www.extension.iastate.edu/CropNews/2014/0709Hanna.htm

If marestail are a consistent challenge for some of your fields, stay tuned, we’ll talk about how to get a jump start on them this fall. Heck we might even talk about this at Weeds Week... speaking of that...

**Weeds Week!**
This will be a great series of field days/educational programs for farmers and retailers with a focus on understanding weed resistance and a hands-on, practical approach to developing long-term weed management plans that work.
Aug 3-7, with Aaron, Rich and I speaking at the one at Armstrong on Aug 4.
http://www.aep.iastate.edu/weeds/