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with repeat applications, but growth regulation and slight injury will occur. Oxadiazon, glufosinate, glyphosate, flumioxazin are not options.

The point is that changing to another herbicide or herbicide mode of action is not as easy as simply substituting another herbicide in for the one you lost. It is much more dynamic than that. In most situations one will have to totally restructure your application regime and modify your expectations for control. Trying to simply place a new herbicide in your current management plan is often the proverbial square peg in a round hole.

PREVENTING HERBICIDE RESISTANCE

When herbicide resistance prevention is discussed the first prevention strategy

that is mentioned is "rotate modes of action." But what does this mean?

Let's use the example of using Specticle, which currently does not have any resistance issues, for preemergence control. Does rotating modes of action mean that in one year you should use Specticle and the next year use something completely different? And how often should you rotate modes of action — 1, 3, 5 years? Or do you change and treat half the acreage with Specticle and half with something else? What about tank-mixing another mode of action? Does that count as 'rotating herbicides?'

A final thought is that "spraying low herbicide rates increases resistance development." There is little to no evidence for this. It is possible that spraying low rates can aid in selection of non-target resistance mechanisms

but not target site, but that is only speculative. One could also speculate that increasing herbicide rate, which increases selection pressure, could speed-up resistance development. In either case, one has to remember that herbicides do not cause the mutation, herbicides select for the mutation. Applying lower rates actually lowers the selection pressure.

Herbicide resistant annual bluegrass is a real and immediate problem in turfgrass management. Superintendents across the country are struggling with this issue and they do not even know it. Herbicide resistance will likely continue to develop in other weed species in the future as well.

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