



Missouri Produce Growers Bulletin

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Will The Food Safety Modernization Act (FSMA) Regulations Get Rolled Back?

by James Quinn, Tim Baker and Pat Byers

This question has justifiably surfaced, to my knowledge, three times: at the FSMA training (see FSMA article), at the Western Produce Auction annual meeting (in November in S. Iowa) and at the Central Missouri Produce Auction annual meeting (Dec. 2nd). President-elect Trump did campaign on reducing regulations. So the short answer is, no one knows.

There are several reasons to not expect it. They are as follows:

- FSMA passed with bipartisan support.
- FSMA is a law, not an executive order. The latter is much easier for a new president to roll back or eliminate than a law.
- This issue is relatively low profile, compared to the regulations getting much discussion. Much anti-regulation discussion has centered on health care reform, energy (e.g. power plant emissions, especially from coal), labor (e.g. overtime regulations), and finance (some regulations under the Dodd-Frank Wall Street Reform). These have received active discussion all through the campaign and are still ‘in the news’.
- There is some industry support for FSMA, or at least a recognition that without it, there could be confusion about ‘where now?’
- However, there was some mention on this subject specifically during the campaign. The Packer Magazine (the Business News of the Produce Industry: <http://www.thepacker.com/>) reported on this on Sept. 19th, by Andy Nelson.
- It reported that a fact sheet was posted on a Trump campaign web site on Sept. 15th. In this document, the campaign criticizes the “FDA Food Police, which dictate how the federal government expects farmers to produce fruits and vegetables,” among other things. By Sept. 19th this fact sheet was no longer on the web site.

The Packer continues to cover this issue, with two December articles. One concerned the selection of Scott Pruitt to lead the EPA, as being positive for growers, given he’s against the EPA extending regulations (agriculture included). Also mentioned was the cabinet level nomination of Tom Price of Georgia, for Department of Health and Human Services, who as a representative voted against FSMA. This cabinet position oversees the FDA.

the short answer, no one knows. Unfortunately, for anyone wanting to wait on this issue, one might not know anything for some time. And then changes could get challenged and complicated. The good news for most growers selling at produce auctions (between \$25K & \$250K in annual sales), is that they have until January of 2020 to comply. So if one wants to wait and see, one likely has enough time.

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Orondis products: new fungicide co-packs listed for downy mildew and late blight diseases of cucurbits and Fruiting Vegetables

by **Zelalem Mersha**

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Orondis, a brand new portfolio in the list of fungicides, is finally introduced from Syngenta at the beginning of this year. The product has been studied under the name DPX-QGU42 in the past several years and many studies reported it to be effective in controlling downy mildews and late blight diseases on cucurbits, fruiting vegetables, herbs, and other crops. I personally had a firsthand experience working with this product and its efficacy in controlling basil downy mildew caused by the oomycete *Peronospora belbahrii* was excellent. This article highlights some of the recommendations based on the 2017 Midwest Vegetable Production Guide. Before using any of Orondis products, however, growers need to strictly check and follow the currently approved EPA labels www.syngenta-us.com/labels/orondis to find out details on label rates, crops, safety precautions and registry status in Missouri.

Active ingredient of Orondis, Oxathiapiprolin, belongs to U15 mode of action according to the 2016 FRAC (Fungicide Resistance Action Committee) mode of action list. It is labelled as an effective fungicide against a range of diseases caused by oomycetes (fungi like organisms, also known as water molds) on many vegetables. Oxathiapiprolin (OXT) is mobile through xylem and hence systemic. It is claimed to have a novel mode of action, not cross-resistant to any other fungicide. OXT is a single site inhibitor and hence risk of resistance is assumed to be medium to high. At the moment, Orondis is sold as one of the following three co-packs: Orondis Opti, Orondis Ultra, and Orondis Gold. The reason for combining OXT with others in a co-pack could partly be a precautionary step to avoid development of insensitivity to this single site inhibitor fungicide. Growers shall strictly follow the longer Pre-Harvest Interval (PHI) of the two partners in the co-pack before harvesting.

The following is a brief view of these three co-packs in terms of their active ingredient (a.i.), restricted entry interval (REI), pre-harvest interval (PHI) and efficacy (G = good, VG = very good) on cucurbit downy mildew (CDM), cucurbit *Phytophthora* blight (CPB), Late blight on tomatoes (TLB) and PB on peppers (PPB). Orondis products are also labelled for other crops. A comprehensive detail can be found in the 2017 Midwest Vegetable Production Guide.

Trade names (fungicide combination), REI/PHI	Common name (MOA) code [Label for Greenhouse Use]	CDM	Efficacy		
			CPB	TLB	PPB
Orondis Opti (Orondis + Bravo WeatherStik), 4/0	OXT (U15) + chlorothalonil (M) [Prohibits GH use]	G	G	VG	VG
Orondis Ultra (Orondis + Revus), 48/5	OXT (U15) + mefenoxam (4) [Silent on GH use]	-	G	VG	VG
Orondis Gold* (Orondis + Ridomil Gold SL*), 4/0	OXT (U15) + mandipropamid (40) [Prohibits GH use]	G	G	-	VG

Just on December 12, 2016 Syngenta has announced that Orondis Opti is now registered in premix formulation instead of the multi-pack. For any further assistance with Orondis products, you may contact me (Phone: 573-681-5634 or e-mail: mershaz@lincolnu.edu) or any of your county extension educator.

*Editor's note: Late blight of tomato hasn't (yet) been a problem in Missouri and downy mildew on Cucurbits is not typical, except in the Bootheel. So for most auction growers, the benefit will likely be as a new product for *Phytophthora* blight of peppers or Cucurbits.*

Grower Training for Food Safety Coming in 2017

By James Quinn, Tim Baker, Patrick Byers and Patricia Miller

The long awaited Grower Training for the Food Safety Modernization Act (FSMA) is finally ready. Individuals to lead or assist with these trainings prepared for their role(s) in Olathe, KS at the end of November; this included the authors of this article. The curricula for the trainings, a comprehensive manual and complimentary visuals (slides) are high quality and obviously had a thorough review by the Produce Safety Alliance. The purpose of this article is to review what to expect with upcoming trainings.*

Who will need to take it?

In brief, produce auction growers who sell more than \$25,000 annually of fresh produce will eventually have to take this training. Even growers who are GAP certified will need to. A fact sheet from MU/Kansas State University was sent in the April MPG Bulletin that reviews this matter completely.

By when?

Growers with annual produce sales of between \$25K and \$250K will have until Jan. 2020 to comply. Growers with greater sales than \$250K will need to comply by Jan. 2019.

Where will trainings be offered?

The first is being offered at Great Plains Growers Conference on Jan. 12, 2017, in St. Joseph, MO. After that we'll take the trainings closer to the communities of auction growers. One each is planned for the Fall of 2017 in the SW, near Jamesport, and in Morgan County (Patrick, Tim & Jim, respectively). Another is planned for Great Plains Growers Conference in Jan. of 2018, and later that winter for Rich Hill (Patricia). A training near Windsor is expected in the Fall of 2018, and again in Morgan County.

We'll adjust and add trainings depending on demand/need. Training is not to exceed 50 individuals at once, so we'll likely need to return to communities twice or more.

How much will it cost? How often is it needed?

The minimum cost for Missouri growers is \$105, which is comprised of the following, \$50 manual, \$35 certification, and \$20 MU Extension fee. We do expect some grant support or similar, that may reduce this cost, or at least keep it at \$105. There are other costs like lunch, travel expenses for presenters or room rental.

The training is only needed once, by a given individual. But the certification is specific to that person. So if they move or leave the operation, that farm will need to get another person certified.

How long does it take?

It takes almost 7 hours. So with some breaks, it really needs about 8½ hours, like 9 am to 5:30 pm. Spreading the training over 2 days has a number of benefits, but given travel time and schedules probably isn't likely.

Once I'm trained, then what?

You then need to keep records and carry out a number of processes to be compliant. These are similar to the requirements for GAPs certification. The big difference is one does not get an annual inspection or audit, so there is no annual fee. The FDA is working with the Missouri Department of Ag regarding inspections of FSMA compliant farms, but if an inspection occurs, there is no cost. We would hope that by the Fall of 2017 we would have more information on the inspection process and could have a MDA representative at these trainings to answer questions.

** Background information on this topic was covered in an April MPG Bulletin "Complying with the Food Safety Modernization Act- use GAPs or not?".*

GroupGAP Offers a Cost Effective Alternative

Please note the insert about the USDA program that was made available in April 2016. Because it was sprung so late in the growing season, only growers with prior experience were able to use it, and this included a grower group from Rich Hill. These growers have been ahead on GAPs certification, because a large buyer/distributor has required GAPs certification efforts a number of years ago. For the entire state of Missouri, the USDA has about 30 farms listed as GAPs certified and of those, over 25 are from the Rich Hill area.

The GroupGAP model applies very well to produce auctions in that many growers are producing in a similar fashion and they are organized around a common delivery facility. GroupGAP allows farms to be inspected by an 'Internal Producer Auditor', and then only a sample of those farms are inspected by USDA inspector. This substantially reduces the cost. The 'Internal Producer Auditor' must go thru a specific course for this. GroupGAP is explained in detail in a thirty page 'User's Guide' at <https://www.ams.usda.gov/services/auditing/groupgap>. Let your local extension specialist know if you'd like a copy. There would be time organize a GroupGap in 2017 but one would need to move on it quickly.

In a future article we'll look at this process that the Rich Hill growers used. We'll try to get some of their comments and suggestions for others considering GroupGAP.

Thrips Insecticide Rotation Recommendations Available

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Some growers in the central part of Missouri have noted difficulty in controlling thrips on tomatoes the last couple of years, both field and in tunnels. Dry bulb onions have gained in popularity by many growers as well. While onions have always been noted as being plagued by thrips, tomatoes do not have thrips listed as a pest in the 2017 Midwest Vegetable Production Guide for Commercial Growers. We expect thrips to be added as a tomato pest to the 2018 edition of the guide. The 2017 edition of the guide expanded its insect control section to provide both an action threshold, and a recommended insecticide rotation. Note the example below which was developed for onion.

Example of Insecticide Rotation for Onion Thrips Management

The table below provides an example of an insecticide rotation growers can use to manage onion thrips in dry bulb onion. It provides thresholds for use with each product. Note: Only apply Exirel® a maximum of two back-to-back applications during the season.

Week	Product	IRAC No.	Action Threshold
1	Movento®	23	1 thrips/leaf
2	Movento®	23	1 thrips/leaf
3	Agrimec® or Exirel®	6 or 28	1 thrips/leaf
4	Agrimec® or Exirel®	6 or 28	1 thrips/leaf
5	Radiant®	5	1 thrips/leaf
6	Radiant®	5	1 thrips/leaf
7	Lannate® or Exirel®	1A or 28	1 thrips/leaf
8	Lannate® or Exirel®	1A or 28	1 thrips/leaf

Growers could use this rotation for other crops, such as tomatoes in the field or a tunnel. When growers struggle with thrips control, it is often because they get established on the tomatoes early. Use of sticky cards can be helpful to notice an emerging population. Then be conscientious about regular applications of pesticides while the plants are smaller or when thrips pressure is high. Thrips often develop on onion sets and move to tomatoes, or move to tomatoes from adjoining fields, such as when hay is cut. Therefore, isolating tomato plants from crops known to harbor thrips (e.g. onion) is an important part of thrips management.

It is worth noting that two of the products in the above rotation are relatively new: Movento and Exirel. Both are in chemical classes not used much, IRAC #23 and 28, respectively. Use of Agri-Mek (IRAC #6) for thrips control may not be familiar to many growers, as it is more known for spider mite control. If a grower expects problems with thrips, obtaining products such as Exirel, Movento and Radiant (IRAC #5) ahead of time may be worthwhile, since they are not as readily available as other pesticides. Unfortunately, none of these products is recommended for stink bug control. Additionally, the guide's revised thrips control section for onions notes several pyrethroid products (e.g., Ambush, Pounce & Warrior II) have lost effectiveness against thrips due to the development of resistant populations.

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