



GAPs and FSMA – an Overview for Hop Growers in Virginia

Holly Scoggins

Associate Professor and Extension Specialist, Dept. of Horticulture, Virginia Tech

Laura Siegle

Agriculture and Natural Resource Agent, Virginia Cooperative Extension, Amelia County

Amber Vallotton

Fresh Produce Safety Team Coordinator and Extension Specialist, Dept. of Horticulture, Virginia Tech

Food safety is a hot topic for hop growers and brewers. With multiple acronyms for various practices, standards, and regulations: GAPs, FSMA, PSR, PCR, and more; the confusion is understandable. Let’s examine where the small-acreage hop grower fits in. This fact sheet serves as an orientation to these standards, regulations, and practices as they may apply to hops; it is in no way a complete set of guidelines or substitute for training. First, a brief review of terms:



Freshly-harvested hops from the Virginia Tech Research Hop Yard.

Photo: Holly Scoggins.

FSMA	Food Safety Modernization Act	Includes 7 main rules and covers the entire supply chain from farm to processing to distribution to end-user. Umbrella organization: Food and Drug Administration (FDA). Note that FSMA guidelines and regulations for some crops/products are a work in progress. Compliance dates vary depending on the rule in question and commodity, product, and gross sales.
GAP	Good Agricultural Practice(s)	Broadly defined, GAPs target on-farm food safety risks and are aimed at reducing those risks as well as providing traceability. <u>Voluntary</u> . Umbrella organization: United States Department of Agriculture (USDA) (among others). Audit and certification by accredited third party, similar to USDA Organic.

The Food Safety Modernization Act (FSMA)

We all have more questions than answers, as hops are only addressed by FSMA in a few places. Know that hops, from field to dryer, are not under “priority scrutiny” because they are “rarely consumed raw.” A few simple questions can help determine whether or not FSMA regulations, in their current format, apply to small growers (at this time, and subject to interpretation):

Q1: Do you grow hops and sell them wet (fresh) and/or dried (whole leaf) to an end user such as a commercial or home brewer?

If you answered “yes” to the above question, this is considered a farm product, not processed. Hops are considered “raw agricultural commodities” and a “farm product.” Farm products can still be regulated under the Produce Safety Rule (PSR) of FSMA, but right now, it appears unprocessed hops may be exempt, because they are “rarely” consumed raw. The FDA has added “drying/dehydrating” to the farm definition of these raw commodities. Drying does not produce a “distinct commodity” so is not considered processing for hops. Processing of raw commodities falls under the Preventive Controls Rule (PCR). So...are we in the clear? Not quite. A bit more information is required:

If you answered “yes” to question 1, and are making less than \$25,000 in gross sales of hops, it is highly probable you are exempt from FSMA, as are farms growing all sorts of commodities that have less than \$25,000 in annual sales.

If you answered “yes” to question 1, but are making \$25,000 or more in gross sales of hops, congratulations! If you’re selling that much, you may be processing them so you may need to answer more questions to determine your FSMA status.

Q2: Do you grow, dry, and also process (pelletize) hops?

The added step of pelletizing has some inherent food safety concerns and MAY fall under the Preventive Controls Rule (PCR) for processing, but it is still not clear. At the state level (Virginia), hop growers who process (pelletize) hops may need to have a facility inspection. For now, the best course of action for growers would be to call VDACS directly for guidance and a decision about the inspection requirement. Contact Sarah Good, Food Technical Specialist, Virginia Department of Agriculture and Consumer Services, Food Safety Program. Office [\(757\)-363-3840](tel:757-363-3840)
<http://www.vdacs.virginia.gov/>

Good Agricultural Practices (GAPs)

Good Agricultural Practices, as certifiable standards for various food sectors, have been created in response to foodborne illnesses and outbreaks. Don’t forget we are growing a component of a food product, so risk assessment and GAP implementation is good for all involved. GAP training and certification for produce growers is offered by Virginia Cooperative Extension’s Fresh Produce Food

Safety Team. A hop-specific program for growers is available through the national Hop Growers Association (HGA) (www.usahops.org). An interactive module on food safety will be available to HGA members in the near future and will generate a certificate of compliance. For non-members, HGA offers a complimentary food safety module on harvest practices, along with handy document templates. Download the presentation and "self-certify" at no charge (www.usahops.org/growers/food-safety.html).

Important: while food safety training is important, it is just one part of the GAP certification process. To obtain GAP certification, a third-party must certify that the farm is GAP-compliant and following prescribed standards, not unlike organic certification. Another upside of following GAPs is that it may open access to new markets that otherwise would be closed – certification can be a great marketing tool. Brewers and end consumers will appreciate your attention to food safety concerns, as well as sustainable growing practices, record-keeping, pesticide harvest intervals, and sanitation throughout the harvest (and drying) process. Much of this is just common sense, so there is no need to be intimidated!

Some production examples of GAPs that would apply to hops:

- Test well or surface water for pathogens/other contaminants if used for irrigation.
- Observe pre-harvest intervals (PHIs, as shown on pesticide labels) for all pesticides (fungicides, herbicides, pesticides)
- Keep careful, thorough records of chemical applications. (Virginia Cooperative Extension can meet all your needs for pesticide applicator training and record-keeping resources.)
- Monitor growing areas for presence of wildlife and take corrective actions if necessary

For harvest and handling, hop GAPs are also similar to those for fresh produce. Think “hygiene” and “safety” – for you, your workers, and your hops. Example harvest and handling procedures that would apply to hops:

- Wash and sanitize harvesters, all picking and storage containers, and packing tables.
- Keep harvest/cone-picking area free of food and drink (water in non-breakable bottles o.k.)
- No animals in the harvest vicinity.
- Provide a wash station with potable water and toilet facilities for all helpers. Provide soap, disposable paper towels, and a trash receptacle
- First aid kits should be available.
- Pest management systems in place for harvest area, drying apparatus, and hop storage.
- No smoking, dipping, spitting, or eating in harvesting and packing areas.

Finally, GAPs can be a part of your total marketing package. Providing information about your growing practices and crop is a great way to gain brewer/customer confidence! Your packet of information might contain the following:

- Complete contact information for you and your farm
- Growing field map identifying fields (as it ties into your traceback codes)
- Copy of GAP training certificate and any training materials

- Copy of pesticide applicator’s license
- USA Hop Grower Number issued by Hop Growers of America (do not have to be member of Hop Growers of America; just have at least 0.25 acres in production with commercial intent).
- Water test results (if well/surface water used for irrigation)
- Hops percent moisture and alpha/beta acids (Virginia Tech Hops Analysis Lab – Hops Acid Panel – 24 hours turn-around).

Repeating the previous caveat: this is in no way a complete set of guidelines or substitute for training. We, your VCE specialists and agents, are working to help you negotiate these new standards and regulations. We welcome your questions and feedback as we develop publications, training resources, and more.

Contact:

Holly Scoggins at hopyard@vt.edu or call (540) 231-5783

Laura Siegle at laurab08@vt.edu or call (804) 561-2481

Amber Vallotton at avallott@vt.edu or call (540) 231-5655

More resources

- You may be interested in the online “FSMA Compliance Wizard” offered at www.registrarcorp.com - it walks you through a few generic questions about your operation, then produces a summary report as to FSMA exemptions and possible obligations (at absolutely no charge or commitment). Registrar Corp is located in Hampton, VA and is a third party organization that assists businesses with FDA compliance.
- Virginia Cooperative Extension - Hops site: <http://www.ext.vt.edu/topics/agriculture/commercial-horticulture/hops/>
- Virginia Cooperative Extension – On-farm Food Safety site: <http://www.ext.vt.edu/agriculture/commercial-horticulture/on-farm-food-safety.html>
- Virginia Tech Cultivar Trials/Research Hop Yard: <https://www.facebook.com/HopsVT/>
- Hops Analysis Lab, Virginia Tech: <http://www.hops.fst.vt.edu/>
- Old Dominion Hops Cooperative: <http://www.olddominionhops.com/>