

**Executive Summary Saffron Workshop**  
**March 15, 2019**

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**UVM North American Center for Saffron Research and Development**

The North American Center for Saffron Research and Development at the Univ. of VT Entomology Research Laboratory held its third grower workshop on saffron titled: *Saffron: Production Progress & Market Promise*, building on the last two workshops. Our goal was to address outreach needs that growers identified at the 2018 workshop and provide the program on-line (via Zoom) as well as on-site to accommodate participants who could not make the trip to Vermont. The workshop was held at the University of Vermont Davis Center, and the on-line transmission was facilitated by Marcus Tracy, from UVM Extension. Most of the 150 attendees were from Vermont (~33%), but people from 25 other states also came (See list below). In addition, people from 8 other countries took part (The Netherlands, Italy, Iran, Canada, Nigeria, Germany, Tunisia and Morocco). The program this year was very full and diverse. Gaetano De Felice, a saffron grower from Italy spoke about his production system and marketing strategies. Hans Rotteveld of Roco Saffron, The Netherlands spoke about corm production and import requirements. Mohamed Amine Ayari, from Laval University and Rhamatallah Gheshm, Univ. of Rhode Island spoke about their research results on saffron production. Mounira Lage from Morocco spoke about saffron quality in her country. Arash Ghalehgholabbehbahani, UVM post doc, and Chester Elliott of Peck Solar presented recent work on growing saffron in solar array fields. Hassan Ashktorab, from Howard University, spoke about his research on medicinal aspects of saffron. Several growers representing a broad geographical range, took part in a grower-to-grower session, which was particularly popular with the audience. Steve Leach, owner of Red Thread Farmstead, Swanton, VT (an emerging commercial saffron grower), Parker Shorey, who has started a saffron marketing business and Gaetano discussed marketing strategies. The comments and personal statements from attendees are proof that this workshop was useful, and will encourage saffron production by a wide array of growers in the future. The session that received the highest score in terms of educational value was the open forum when growers were able to share their experiences and ask specific questions about production. Several attendees mentioned that they would like more specific recommendations on technical aspects of saffron production, marketing, value added products, and medicinal aspects of saffron. The attendees appreciated the diverse topics covered in the program. We hope to address many of the questions for which growers seek answers. However, given the limited funding we have, sadly progress will be slow. Others asked for field visits and to have farmers present in the future. We hope to hold demonstration events in the August and October during planting and harvesting. In general, the attendees expressed great appreciation for our efforts and look forward to more educational opportunities in the future. There were issues with the audio both for the on-line and on-site audience. Some of the speakers were not skilled in presenting in front of a large audience, and English was not the first language for many of the presenters, making communication at this venue more challenging. While it was great to offer the on-line option, it clearly is not ideal for transferring information.

### **General Summary**

- 150 people took part in the workshop. Over 48% of the attendees completed an exit evaluation; 22% were growers of field crops; 13% were growers with greenhouses or high tunnels, 23% were home gardeners, and 30% were others, including beginning farmers, marketing specialists and educators.
- On a scale of 1 (not useful) to 5 (very useful), attendees rated the workshop 3.7.
- 92% of the attendees indicated they made new contacts. Specifically: the guest speakers, other growers, researchers, and suppliers.
- Over 59% of the attendees grew saffron in the past few years; 82% plan to grow it in 2019.
- Many attendees commented on how thankful they were for the event.
- Growers listed many topics they want to learn about in future workshops; including: marketing and the economics of saffron; saffron production in different climates and settings, quality testing, organic certification, establishing co-ops for buying corms and selling saffron, research results on field production; and details on management of pests and diseases.

## March 2019 Saffron Workshop Summary of Evaluations

Note: Information highlighted in green were from zoom session online survey

**1. Number of on-site & On-line attendees:** VT: 50, NY: 20, ME: 13, NH: 8, MA: 7, CA: 4, RI: 4, PA: 4, NJ: 3, OR: 3, OH: 3, Quebec: 3, MD: 2, NC: 2, TX: 2, MI: 1, MN: 1, MO: 1, MT: 1, CO: 1, IL: 1, KY: 1, VA: 1, NM: 1, WI: 1, Ontario: 1, Italy: 1, Netherlands: 1, Morocco: 1, Tunisia: 1, Italy: 1, Nigeria: 1, Canada: 4.

**2. Number of evaluations:** 61 (on-site); 11 (on-line) 33%

**3. Primary Profession of Participants who Completed Evaluations (%)**

Grower in Greenhouse/ high tunnel	Grower of Field Crops	Researcher	Home Gardener	Extension System	Nursery Grower	Other <sup>1</sup>
13.5%	22.0%	3.5%	23.0%	9.0%	3.5%	30.5%

<sup>1</sup> Other: Economist, Marketing/Tech, Retired, Educator, Environmentalist, Engineer, Real Estate, Nurse; Beginning farmer; Student

**4. How useful was this workshop to you for gaining information about saffron production, processing or marketing? 1 (not useful) – 5 (very useful)**

On-site: 3.34; On-line 4.09

**Notable Comments:** As I begin my saffron research this seminar was extremely helpful; Most interested in practical application - production, voles, pricing, processing, purchasing, etc. (3); All presenters were great. Enjoyed the new topics this year (2); I was particularly interested in research on new uses for saffron. I learned a lot but need so much more support as I am a complete novice to this - I sent in questions and am looking forward to the answers but in the meantime certainly have my homework to research my state guidelines and governmental websites (NOPs etc); Like how science and farmers are a part of speakers. So many heavy in one or the other. This is a good balance

**5. In the past few years, have you grown saffron?** Yes 49% (18%) No 51% (82%)

Number of corms					
Less than 200 corms	200-500 corms	501-1000 corms	1001 – 3000 corms	3001-5,000 corms	Over 5001 corms
6	5	6	6	1	4
Acreage in production					
Less than 10 sq ft	10-100 sq ft	101-500 sq ft	501-1000 sq ft	1001 – 2,000 sq ft	Over 10,000 sq ft
4	9	7	3		2
Production methods					
Pots	Grow bags	Crates	Low tunnel	Raised beds	Field
2	1	2	2	14	9

**6. Do you plan to grow saffron in 2019?** Yes 82% No 10%

**If YES, Please describe how:**

Production methods					
Mixed methods for tests	Containers	Low tunnel	High tunnel	Raised beds	Field
5	3	1	1	4	10
Amount of production					
Small pilot tests	Same as last year	More than last year	less than ¼ acre	up to an acre	In 2020
12	6	3	2	1	4

7. Did attending this workshop provide you with new contacts? Yes: 92% No 8%

Please specify:

Corm suppliers	Saffron marketers	Saffron growers	UVM, URI and other saffron researchers	Growers in my state	Reconnected with contacts
5	8	12	7	5	2

**Other comments:** Sadly, I was unable to attend in person but look forward to next year and in the meantime hope to make connections and get advice on Saffronnet; SaffronNet is an excellent and extremely useful resource- I was glad to hear from many people active on there at the workshop.

8. Please rate the following aspects of this workshop: 1 (poor) – 5 (excellent): fee 1 (too much) – 5 (good value)

Aspect	In Person	On-line
Site	4.82	-----
Length	4.64	-----
Size	4.79	-----
Fee	4.11	3.57
Average	4.59	3.57

**Comment:** Having the ability to attend via Zoom was excellent. I would not have been able to attend if an online option wasn't available.

9. Please rate the educational value of each workshop section: 1 (poor) - 5 (excellent)

Session	On site	On-line
Saffron Production in Europe	3.89	3.27
Soil Mycorrhizae & Fertilizers for Better Saffron Yield	3.84	3.09
Effects of Climate & Soils on Saffron Production	3.92	3.18
Saffron Quality Assessment in Morocco	3.49	2.82
Saffron Solar: A Win/Win Partnership	3.67	2.73
Grower to Grower Forum	4.25	3.82
Saffron Corm Production	3.98	3.36
Saffron: A Promising Natural Gastrointestinal Drug	3.95	3.55
Average	3.87	3.23

**Comments:** Would like to receive pdfs of speakers presentations.

**Saffron Production in Europe**

**Comments:** Thorough. Enjoyed his passion; Videos helpful (2). Translating from metric would have been helpful. Great Q&A. Slides hard to follow. Not sure relevance to NE; Language difficult; The subtitles in the videos were a bit too fast otherwise excellent; Good to hear from people that have been at it for a few years. On-line: Accent became even tougher with zoom (2)

**Soil Mycorrhizae & Fertilizers for Better Saffron Yield**

**Comments:** Info good esp. for VT but difficult to understand; Very technical, fast - want to know bottom line recommendations for production. Language difficult; He spend too much time with the introduction, not enough on results. Thank god we found out where the tests were done to explain the poor flower harvest.

**Effects of Climate & Soils on Saffron Production**

**Comments:** Very informative; Appreciated the info and maps regarding climate change; Interesting, not sure relevance; Better language but still hard to hear

**Saffron Quality Assessment in Morocco**

**Comments:** The info seems useful but I could not hear most of it; this presentation should have been first on the agenda as it included 'what is saffron'; Great info, well presented; too much general background – need better coordination between presenters; want to know how to rate overall quality; Hard to hear her because she turned away from the mic. (4); Mostly a statistics talk about Morocco but not much info helpful to us in growing and ensuring quality.

**Saffron Solar: A Win/Win Partnership**

**Comments:** Intriguing; Love this!; Curious to see how plays out (2); too early to tell (3); Learned about solar; Great idea but not relevant to my situation

**Grower to Grower Forum**

**Comments:** Extremely helpful (2); Sound was a problem on-line.

**Saffron Corm Production**

**Comments:** Helpful background, too similar last year, less relevant to small growers; Great to hear from Roco on their practices

**Saffron: A Promising Natural Gastrointestinal Drug**

**Comments:** Thank you for this information, which was new to me!; This is particularly interesting for me & perhaps the most important piece - had no idea of the nutritional medicinal qualities of saffron. Awesome!; Very interesting findings want to know how to share info in accessible way.; Great to learn about - want more info; Excellent information, language understandable, didn't read the slides; Loved it. A bit too technical - words I had no idea what they meant (2); Rather technical, but get that is important topic; Interesting but not as relevant to growing; Always enjoy learning about potential new medicinal opportunities.

**10. What other topics would you like included in a future saffron workshop?**

Topic	# resp.	Topic	# resp.	Topic	# resp.
Marketing ideas	19	Harvesting	3	Overwintering guidelines	1
Economics of saffron production	6	Value added saffron products	6	Use of other saffron parts (stamens, petals)	1
Wholesale markets	1	Planting methods	2	Medicinal uses (old & new)	4
Disease control	3	Organic production	3	Regulations on selling	1
Quality & testing	3	Saffron cooking	1	Marketing medicinal saffron	1
Saffron coop	5	Processing/drying	3	Taste testing of products	1
Labor issues	2	Production guidelines	7	History of saffron	1
Corm physiology	1	Irrigation	1	Production calendar	1
How to get started with saffron production	3	Improving yields - which fertilizers enrichments are best for soil for saffron.	3	Presentations of local growers, best practices, failures.	1
Production to maximize quality	1	Weed management, incl. Cover crops, mulch,	2	Hands-on sensory evaluation & grading	1
Presentations of local growers, best practices, failures & successes	2	How long do corms last; When do you get daughters? How do you harvest and re-plant?	1	Info on other systems for growing saffron, eg., hydroponic, vertical greenhouse systems, raised beds and crates	1
More tips and results for growing saffron in cold climates (as the results and general experience increase)	1				

**11. How can we improve this type of workshop in the future?**

Improvements	# resp.	Improvements	# resp.	Improvements	# resp.
More time for networking	3	Hands on groups	1	Improve the audio	2
Room was cold	3	More topics, multiple days	2	Answer online questions	1
Encourage presenters to make slides simple.	1	A better camera angle for us virtual participants	1	Online audio was a bit garbled at times	2

More time for questions for presenters	3	workshop that includes field trip to farms.	2	remind presenters to face audience when talking	6
Audio was difficult for much of the workshop (esp. for on-line participants)	5	It was hard to understand the accent of some speakers, esp. for the on-line session	2	Mid-afternoon we needed to stand up and run around out tables 2x	1
Coach presenters ahead of time about using the microphone	1	field trips included in the workshop - extend to 2 days	2	Jan or Feb would be better than March for maple producers	1
Separate room for posters and time for people to talk with authors	1	make more oriented to practical considerations. Make sure that the connections between research and application to real growing are clear			3

## 12. Additional Comments:

Comments	# resp.	Comments	# resp.	Comments	# resp.
Great job/work!	10	It was fascinating, well done!	1	Well organized	3
Keep it up!	4	Small group sessions	1	Keep increasing diversity	3
Best workshop yet!	1	Overall very informative	2	Saffronnet is very useful	2
Very good time management, Margaret.	1	Learned a lot and am looking forward to spring	1	The question card was a good idea.	1
Thank you very much!/Thanks!	12	Loved the farm tours and sugar house visit	2	Marketing panel was very informative I give that a 5.	3
You have identified areas of saffron I didn't know existed.	1	The pricing talk easy to understand, information I can immediately use	1	Appreciate the whole package from growing to medicinal.	1
More of the same	3	online option is a big plus	3	Excellent program overall.	1
Really liked the format. Lots of information. Pace of the day was good.	1	Most helpful but a little tough done remotely. Wish I could have attended in person	1	We need hands on sensory evaluation & grading workshop!	1
Really hope you do the workshop again next year.	3	Add another day. Loved the site visits.	1	Thanks for the research and sharing!	1
More time for people to network. Maybe an extended lunch.	1	All of UVM's resources have been extremely useful.	1	thank you UVM for leading the way with saffron research!	1
Need to try to get growers of saffron to keep price up even though they have a big inventory. They are the ones that actively bring the price down	1	Hopefully fledgling U.S. saffron producers will be able to bypass the many pitfalls of crops new to the U.S. and contribute, in a relevant way, to feeding a population in need of affordable, wholesome foods.	1	I attended the web-version and thought it was well planned, coordinated and executed- everything I could need from a satellite attendance.	1

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