

Lehigh Valley Organic Growers, Inc.

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A Company of LVOG Inc.

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June 9, 2017

Ms. Lisa M. Brines, Ph.D.
National List Manager
USDA/AMS/NOP Standards Division
1400 Independence Avenue S.W.
Room 2648 – So., Ag Stop 0268
Washington, D. C. 20250-0268

Dear Dr. Brines:

We are in receipt of the Technical Evaluation Report (TAP) for the Green Ag Supply Petitioned Material for Fatty Alcohols to Be Added to the National List for Crops. Overall we find this evaluation report was very well done and we thank those who prepared this report.

However, we did find a few **Required Corrections and Additional Comments** to be considered by the NOP, NOSB and especially the NOSB Crops Subcommittee.

We have included herewith two (2) copies of the Corrections and Additional Comments for your use. Please do contact me if, we can be of further assistance in anyway?

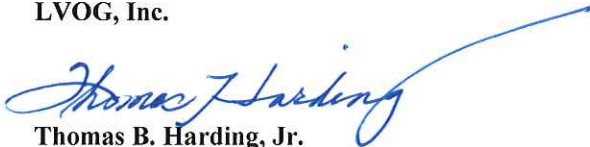
It is our understanding the **Fatty Alcohols Material** is up for a final review and approval vote at the next NOSB Meeting in Jacksonville, Florida? We will certainly be there to support this most important petitioned material!

This concludes our formal Addition and Corrections to the TAP if, you have any questions, please do not hesitate to contact me.

Thank you very much for all of your professional assistance.

Sincerely yours always,

LVOG, Inc.



Thomas B. Harding, Jr.
President & CEO
Organic Program Consultant
Lehigh Valley Organic Growers, Inc.
(LVOG, Inc.)

FATTY ALCOHOL SUBMISSION (CORRECTIONS)

1. Page 1 line 12 Trade Names

Add Fair 85, OFF-SHOOT -T, N-TAC, Fair-Tac, and Royal Tac
Alfol 80 should be Alfol 810

CAS NUMBERS

Add 111-87-5

2. Page 1 line 37

(tween - 20) should be Tween 80

3. Page 2 Table

Composition for N-TAC should be the same as O-TAC
EPA Reg. No. for N-TAC is 51873-20

4. Page 4 Line 121

(tween-20) should be (Tween 80)

5. Page 10 line 342

(tween 20) should be (Tween 80)

FATTY ALCOHOL SUBMISSION (COMMENTS)

It is very important to reinforce that the fatty alcohols octanol and decanol are approved as food additives by the FDA: see page 3 lines 75, 76, 77 and 78; see page 6 lines 169, 170 and 171.

In addition, the inert ingredient, Tween 80 is also approved as a food additive by the FDA. See page 4 lines 124, 125 and 126.

It is important to reinforce Summary Statements to the Evaluation Questions pages 5-13 as follows:

1. Fatty alcohols are registered by EPA only for tobacco sucker control.
2. Fatty alcohols are manufactured using various methods, but the most common method employed is the Davey process for the fatty alcohols used for tobacco sucker control.
3. Fatty alcohols are readily biodegradable.
4. Fatty alcohols are included on EPA's Safer Choice Program and are safer than traditional chemical ingredients based on all available toxicological and environmental fate data and are of low concern.
5. Not only are the fatty alcohols a natural component in tobacco leaves (over 7000ppm) but are also present in many living organisms from bacterial to man, and are widely present throughout the natural world.
6. Fatty Alcohols are readily biodegradable with an estimated half-life in soil of 2.3 days. The portion of applied chemical that does volatilize degrades in the area with half-life of about 10 hours.
7. There is a low hazard concern for fatty alcohols via the oral, dermal and inhalation routes of exposure. There has been no evidence of carcinogenic potential for the fatty alcohols and no mutagenic activity is evident. No adverse findings in the reproductive organs, fertility and reproductive toxicity.
8. Topping and suckering are the most time consuming tasks associated with growing organic tobacco. Suckers can be removed by hand or by carefully applying approved soybean oil or mineral oil. The most effective and less time consuming method for sucker control in organic tobacco is the spray application(s) of O-TAC.

Additional Comments: Fatty Alcohols Petition

Socio-Economic, Cultural and Environmental Benefits

. Keep in mind these certified organic tobacco and crop farmers, culturally are doing what their families have done on their land for generations, Except: they practice the sustainable stewardship principles of organic agriculture and are providing their markets and consumers with a choice.

. These farms are diversified, utilizing sustainable cropping and crop rotation methods, replacing intensive monocultures, with at least one (1) or (2) other organic cash crops; including soil and organic matter building systems which greatly benefits the soil biology and plant health.

. These organic polycultures provide strong environmental and natural resources protection, preventing contamination and conserving vital forestland, hedgerows, lakes and waterways and preserving wildlife habitats.

. By growing certified organic crops, with trusted contract partnerships that guarantee high earned farm-gate prices, whereas finished crop quality and organic certification is rewarding these farmers through incentives that benefit the Whole Farm System, without farm subsidies.

Earned farm-gate prices provide sustainable and quality of life benefits and farm profit margins, that internalizes the externalities at the farm-gate, and not shift them downstream.

And provides for the opportunity for the next generation to stay or return to the farm and thus family organic agriculture continues.

Importance of Effective Sucker Control to Organic Tobacco Production

Loren R. Fisher
Department of Crop and Soil Sciences
North Carolina State University

Suckers in tobacco are shoots that develop in the leaf axils after removal of the flower. If sucker growth is not controlled, shoots will produce additional flowering structures and become a sink for energy in the plant. Flower removal and control of sucker growth is essential in tobacco production to maximize leaf yield and quality. Without sucker control after flower removal, yield is reduced 35-40% and leaf quality is substantially reduced. EPA registration of sucker control chemicals in conventional production systems is widely considered one of the most important developments that allowed growers to reduce labor inputs from 600 man hours/Acre down to approximately 60 man hours/Acre in the last 50 years.

Prior to the registration of O-Tac for sucker growth suppression in organic tobacco, growers did not have any viable and effective options for acceptable chemical control of sucker growth compared to conventional growers. Growers had to employ ineffective chemical control measures, such as mineral oil, and then remove suckers by hand, which resulted in a high labor requirement and reduced yield. In many cases, growers reported applying mineral oil (or related products) by "hand" with backpack because alternatives to fatty alcohols were not effective when applied with mechanical sprayers. This method was extremely laborious and tedious and created undue exposure of labor to extreme working conditions. It is estimated that an additional 30 hours of labor per acre are required to manage suckers without using a fatty alcohol, or an additional labor cost of \$338 per acre. It is also estimated that there is an additional 5-8% (\$375-\$600 per acre) loss in tobacco value from reduced yield and quality due to poor sucker control. Growers report that the lack of effective sucker control products registered for use in organic tobacco production, and the subsequent labor requirement for sucker management, were the most limiting factor to either entering the market or expanding organic production. In addition, the tobacco industry has reported negative effects of mineral oil on marketable consumer products, specifically staining of cigarette paper.

It is estimated that O-Tac is used on approximately 20,000 acres (estimated 500+ farm families) across the tobacco producing states in the US. Approximately 1/3 of the farms where O-Tac is used are producing certified organic tobacco with the remainder producing pesticide residue free tobacco. Acreage of organic tobacco has increased dramatically since the registration of O-Tac as growers employed this effective sucker control measure which reduced management costs and allowed for expansion of organic tobacco production without substantially increasing labor inputs.

The total value of organic tobacco production in the United States was estimated at \$49.5 million and included production in North Carolina, Virginia, Kentucky, Tennessee, Pennsylvania, and

Wisconsin. In North Carolina, tobacco leads the state in total value of organic production totaling over \$29 million in 2015 (estimated at less than \$3.5 million in 2011) with the next highest crop, sweet potato, at just over \$10 million (USDA Certified Organic Production Report, 2016). In 2016, Gary Bullen, with the NCSU Department of Agriculture and Resource Economics surveyed 25 organic tobacco growers in NC, representing approximately 1,250 acres of organic tobacco (or 30% of the total acreage in NC in 2016), to develop an estimated production budget. The budget is attached along with a conventional budget for comparison. As you will note from the budget, organic tobacco production can be profitable (quadruple the profit of conventional tobacco on average) and is very important to the economic viability of farm families in tobacco producing areas of the United States. This is especially true for smaller farms (common in tobacco producing areas and with organic producers in general) with limited total farm acreage where profit per acre of farmland managed must be maximized to sustain the operation. Because of the potential profitability of organic tobacco in an organic cropping system rotation, growers are now producing other organic crops such as peanut, soybean, small grain, sweet potatoes, and corn that otherwise would not have been produced. For every acre of organic tobacco in production, two additional acres of organic crops are also brought into production as farmers employ a three year crop rotation. In North Carolina alone, it is estimated that organic tobacco acreage has increased by approximately 2,500 acres since 2011, resulting in an additional 5,000 acres of additional crops brought into organic production.

**Table 1-3. Flue-cured tobacco—hand harvest—piedmont North Carolina:
2017 estimated costs per acre**

	Unit	Quantity	Price or Cost/ Unit	Total Per Acre	Your Farm
1. GROSS RECEIPTS					
Stalk position		Yield	Price/lb.		
Lugs	lb.	0.00	\$0.00	\$0.00	
Cutter	lb.	0.00	\$0.00	\$0.00	
Leaf	lb.	0.00	\$0.00	\$0.00	
Tips	lb.	0.00	\$0.00	\$0.00	
Total receipts:	\$0.00				
2. VARIABLE COSTS					
Plants (greenhouse)	thou	0.00	\$40.00	\$240.00	
Multipurpose fumigation	gal	10.50	\$17.13	\$179.87	
Fertilizer					
6 - 6 - 18	cwt	5.80	\$38.50	\$223.30	
15.5 - 0 - 0	cwt	5.60	\$26.25	\$147.00	
Lime (prorated)	ton	0.33	\$56.00	\$18.48	
Pest Control	acre	1.00	\$232.05	\$232.05	
Sucker Control	acre	1.00	\$189.54	\$189.54	
Scouting	acre	1.00	\$20.00	\$20.00	
Hauling	lbs.	2500.00	\$0.05	\$125.00	
Cover crop	acre	1.00	\$25.00	\$25.00	
Curing fuel	gal	325.00	\$1.00	\$325.00	
Electricity	kwh	1580.00	\$0.08	\$126.40	
Crop insurance	acre	1.00	\$100.00	\$100.00	
Irrigation	cycle	3.00	\$13.94	\$41.82	
Baling supplies	lbs.	2500.00	\$0.003	\$7.50	
Tractor/machinery	acre	1.00	\$140.37	\$140.37	
Labor					
Pre-harvest	hrs.	46.25	\$10.72	\$495.80	
Harvest/Baling	hrs.	59.60	\$10.72	\$638.91	
Postharvest	hrs.	9.00	\$10.72	\$96.48	
Interest on op. capital	\$	\$1,309.08	4.8%	\$62.18	
Total variable costs:				\$3,454.79	
3. INCOME ABOVE VARIABLE COSTS					
4. FIXED COSTS					
Tractor/Machinery	acre	1.00	\$165.81	\$165.81	
Bulk barn	acre	1.00	\$132.58	\$132.58	
Bailer	acre	1.00	\$7.50	\$7.50	
Tobacco box loading system	acre	1.00	\$38.75	\$38.75	
Irrigation	acre	1.00	\$63.50	\$62.27	
Total fixed costs:				\$408.14	
5. TOTAL COSTS					
				\$3,862.93	
6. NET RETURNS TO LAND, RISK, AND MANAGEMENT					

* Note: This budget is for planning purposes only and does not include land rent or overhead cost

* Crop insurance: 75% based premium, no disaster subsidies

Prepared by: Gary Bullen, Derek Washburn and Taylor Cowan – NCSU Agricultural and Resource Economics Department, and Matthew Vann – NCSU Tobacco Extension Specialist

Organic Tobacco, Hand Harvest-2016

ESTIMATED COSTS AND RETURNS PER ACRE, 2016

	UNIT	QUANTITY	PRICE OR COST/UNIT	TOTAL PER ACRE	YOUR FARM
1. GROSS RECEIPTS					
Stalk Position	LBS	2000.00	\$3.75	\$7,500.00	_____
TOTAL RECEIPTS:				\$7,500.00	_____
2. VARIABLE COSTS					
PLANTS (GREENHOUSE)	THOU.	6.00	\$48.00	\$288.00	_____
FERTILIZER					
8-5-5	CWT	8.00	\$52.25	\$418.00	_____
16-0-0	CWT	2.00	\$52.75	\$105.50	_____
0-0-50	CWT	2.00	\$43.25	\$86.50	_____
LIME (PRORATED)	TON	0.33	\$69.00	\$22.77	_____
HERBICIDES	ACRE	1.00	\$0.00	\$0.00	_____
INSECTICIDES	ACRE	1.00	\$85.00	\$85.00	_____
SUCKER CONTROL	ACRE	1.00	\$316.82	\$316.82	_____
SCOUTING	ACRE	1.00	\$40.00	\$40.00	_____
CURING FUEL	LBS	325.00	\$1.00	\$325.00	_____
ELECTRICITY	KWH	1580.00	\$0.08	\$128.40	_____
HAULING	LBS	2000.00	\$0.020	\$40.00	_____
COVER CROP	ACRE	1.00	\$70.000	\$70.00	_____
IRRIGATION	CYCLE	2.00	\$13.94	\$27.88	_____
BALING SUPPLIES	LBS	2000.00	\$0.003	\$6.00	_____
CROP INSURANCE	ACRE	1.00	\$225.00	\$225.00	_____
TRACTOR/MACHINERY	ACRE	1.00	\$169.46	\$169.46	_____
LABOR					
Pre-Harvest	HRS	68.00	\$10.72	\$728.96	_____
Harvest/Baling	HRS	75.00	\$10.72	\$804.00	_____
Post Harvest	HRS	18.00	\$10.72	\$192.96	_____
INTEREST ON OP. CAP.	DOL.	\$1,628.99	5.3%	\$85.52	_____
TOTAL VARIABLE COSTS:				\$4,163.77	_____
3. INCOME ABOVE VARIABLE COSTS:					
4. FIXED COSTS					
TRACTOR/MACHINERY	ACRE	1.00	\$199.14	\$199.14	_____
BULK BARN	ACRE	1.00	\$200.00	\$200.00	_____
CONVEYOR/PICK LINE	ACRE	1.00	\$38.75	\$38.75	_____
BALER	ACRE	1.00	\$7.50	\$7.50	_____
IRRIGATION	ACRE	1.00	\$63.50	\$63.50	_____
TOTAL FIXED COSTS:				\$508.89	_____
6. TOTAL COSTS:				\$4,672.66	_____
7. NET RETURNS TO LAND, RISK, AND MANAGEMENT:				\$2,827.34	_____

* CROP INSURANCE: 75% BASED PREMIUM. NO DISASTER SUBSIDIES.
 * PLEASE NOTE: THIS BUDGET IS FOR PLANNING PURPOSES ONLY, IT DOES NOT INCLUDE LAND RENT

TOBACCO - HAND HARVEST						
PER ACRE MACHINERY AND LABOR REQUIREMENTS FOR HAND HARVEST TOBACCO						
MONTH	OPERATION	TIMES	LABOR	MACHINE	VARIABLE	FIXED
		OVER	HOURS	HOURS	COSTS	COSTS
11,3	HEAVY DISK 20'	5.00	0.55	0.50	\$18.15	\$18.45
3	TOBACCO BEDDER 4-ROW	2.00	0.35	0.32	\$3.66	\$3.20
4	TOBACCO BED SHAPER 4-ROW	1.00	0.18	0.16	\$1.73	\$1.41
4	TOBACCO TRANSPLANTER 4-ROW	1.00	13.85	0.88	\$23.51	\$15.06
4,5	CULTIVATOR 4-ROW	5.00	1.27	1.15	\$15.55	\$11.35
3 thru 8	HIBOY	11.00	1.36	0.33	\$24.97	\$39.49
7,8,9	TOBACCO TRAILER	4.00	2.15	10.32	\$80.20	\$108.04
9	BUSHHOG 14'	1.00	5.36	0.15	\$1.69	\$2.14
PER ACRE TOTALS FOR SELECTED OPERATIONS			25.07	13.81	\$169.46	\$199.14

CHEMICAL USE ASSUMPTIONS FOR HAND HARVEST TOBACCO					
	UNIT	QUANTITY	PRICE OR COST/UNIT	TOTAL PER ACRE	MONTH
HERBICIDES & FUNGICIDES:					
SUCKER CONTROL:					
O-Tac	GAL	14.00	\$22.63	\$316.82	JUL AUG
INSECTICIDES:					
Dipel	LBS	5.00	\$11.80	\$59.00	
Grandevo	LBS	1.00	\$26.00	\$26.00	
Biological Controls					
FUNGICIDES:					
TOTAL:				\$401.82	

Prepared by: Gary Bullen, Derek Washburn, Matthew Vann
 North Carolina State University, Dept. Agricultural and Resource Economics

2016 Grower Production Survey

We thank you for your time to complete this survey. Your input is critical to help us evaluate labor cost and investment decisions. With the uncertainty in labor supply and rising labor cost, understanding farm level effects of the changes will provide useful information to tobacco growers and extension agents. No names or individual results of this survey will be shared, numbers will be reported so that each survey will remain anonymous.

1. Total farm acres _____
2. Owned _____
3. Rented _____
4. Total tobacco acreage of your farming operation.

Acres			
Crop	2014	2015	2016
Tobacco Flue Cured			
Organic Tobacco Flue Cured			

Labor: (tobacco production only)

5. What is the average hourly rate paid (excluding benefits) for tobacco labor? (Complete chart below using the rate you pay for labor averaging full time, seasonal, migrant, and family workers)
 - a. 2014 _____
 - b. 2015 _____
 - c. 2016 _____

6. In addition to hourly rate paid by H2A, what total additional costs are associated with your H2A workers?
 - a. Housing _____
 - b. Transportation _____
 - c. Growers Association _____
 - d. Workman comp _____
 - e. Utilities _____

7. What is the number of **full time** employees on your farm? _____
8. What is the total number of hired workers on your farm? _____
9. What is number of H2A? _____
10. What percentage of your tobacco labor is allocated for each of the categories?

Labor Category	Percent
A. Family member's	_____
B. Seasonal (resident) workers	_____
C. Migrant Labor	_____
D. H2A workers	_____

Production:

11. What is the average man-hours (excluding machinery work) per acre used for tobacco production?

Number of times	Operation	Number men in field	Number men in barn	Equipment Support- non driver	Acres per day	Total Man hours Per acre
	Pre-plant					
	Transplanting					
	Cultivate					
	Hand Hoeing- Weeding					
	Topping					
	Suckering					
	Harvest 1(prime)					
	Harvest 2(prime)					
	Harvest 3(prime)					
	Bale					
	Equipment Cleaning					
	Other:					

12. What was your *total labor* cost for tobacco production?

A. 2014 _____

B. 2015 _____

C. 2016 _____

13. Do you use a *mechanical* topper? (Yes or No) _____

If YES then what percentage of your tobacco acreage do you *mechanically* top? _____ %

14. Do you use a *mechanical* harvester? (Yes or No) _____

If YES then what percentage of your tobacco acreage do you *mechanically* harvest? _____ %

15. Do you use a box loading system? (Yes or No) _____

16. In what part of tobacco production do you have the greatest labor needs?

Additional comments:

Home County (This is only used to determine geographical location): _____

Date:

Name:

Phone #:

Email:

Mailing Address: