



# THE CENTER FOR FOOD SAFETY

13 November 2011

Ms. Lorraine Coke  
National Organic Standards Board  
USDA-AMS-TMP-NOP  
1400 Independence Ave. SW  
Room 4008 – So., Ag Stop 1268  
Washington, DC 20250-0268

RE: **Docket No.** AMS-NOP-11-0081

## **Center for Food Safety Comments to the National Organic Standards Board**

The Center for Food Safety (CFS) is a non-profit membership organization that works to protect human health and the environment by curbing the proliferation of harmful food production technologies and by promoting organic and sustainable agriculture. Our list of True Food members has rapidly grown to include over two hundred thousand people across the country that support organic food and farming, grow organic food, and regularly purchase organic products.

Our comments will address the following issues: contamination of Organic by Genetically Engineered (GE) Organisms, Sulfites in Wine Petition, Aquaculture, Conflict of Interest, Transparency, and Public Participation.

### **GE CONTAMINATION OF ORGANIC — NOSB Full Board**

#### CFS Urges NOSB to Adopt the “Sense of the Board Statement on Genetically Engineered Crops”

At the National Organic Standards Board’s (NOSB) April Meeting in Seattle, the Board received over 100 written comments and public testimony by people from all sectors of the organic community who expressed concerns about the potential contamination of organic by genetically engineered (GE) organisms. Although the issue was not on the Board’s official agenda, the public felt compelled to raise their concerns in hopes of obtaining a deliberate NOSB response. Again, at the NOP Listening Session in Washington, D.C., on September 20<sup>th</sup>,

members of the public addressed the concern of GE contamination of organic and the need for the National Organic Program (NOP) to be more proactive in preventing contamination from GE organisms. These comments demonstrate the public's belief that the NOSB and the NOP can and need to do more to ensure that GE-contamination does not make its way into certified organic foods and farms.

As stated by NOP Deputy Administrator, Miles McEvoy, in his Policy Memo on Genetically Modified Organisms (GMOs) and Organic:

Since organic certification is a process-based standard, presence of detectable GMO residues alone does not necessarily constitute a violation of the regulation. The NOP relies on organic certifiers and producers to determine preventative practices that most effectively avoid contact with GMOs on an organic operation.<sup>1</sup>

Although technically correct, this narrow response to the growing threat of GE contamination of organic is simply not enough to retain public confidence in the USDA organic seal in the long-run.

A fourth-generation cattle rancher, Beth Robinette, had this to say to the NOSB at its April meeting in response to the NOP's recent Policy Memo on GMOs:

I am here today to ask you to stand in solidarity with farmers and ranchers who face the imminent threat that GMOs face to producers...[C]oexistence with GMOs is not possible. There is no way for me to prevent GMOs from contaminating my fields. If nothing is done, then very soon no farmer or rancher who grows alfalfa can make a claim that their crops are GMO-free. In an effort to protect organic producers, the NOSB has stated that GMOs will be allowed in organic food as long as they are the result of contamination and not intentional introduction. This erodes the meaning of "organic."<sup>2</sup>

CFS strongly agrees with Robinette that GE has no place in our nation's organic farming and food systems.

Research has shown, and it is widely recognized by scientists and the biotechnology industry, that GE contamination is inevitable as long as GE crops are grown unrestricted in open fields.<sup>3</sup> This argument has been corroborated by research scientists at the U.S. Government

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<sup>1</sup> McEvoy, Miles. (2011) "Policy Memorandum: Clarification of Existing Regulations Regarding the Use of Genetically Modified Organisms in Organic Production and Handling," 15 April, p. 1.

<sup>2</sup> Robinette, Beth. (2011) Public testimony presented at the USDA Agriculture Marketing Service Meeting of the National Organic Standards Board, 23 April, Seattle, WA, transcripts, pp. 333-336.

<sup>3</sup> Marvier, Michelle & Rene C. Van Acker. (2005) "Can Transgenes be Kept on a Leash?" *Front Ecolo Environ*, 3, 2: 96-106.

Accountability Office (GAO) in their partial list of contamination events listed in Appendix A. The 2008 report concludes: “Unauthorized releases of GE crops in to food, animal feed, or the environment beyond farm fields have occurred, and *it is likely that such incidents will occur again*” [emphasis added].<sup>4</sup>

GE contamination results from a variety of human, animal, and environmental activities across the commodity chain, from seed to plate. Once released into the environment, transgenes cannot be recalled. Their traits can be uncontrollably passed on to subsequent generations of commercial crops, wild relatives, and feral plants, depending upon the specific species.<sup>5</sup> Yet, the burden for GE contamination prevention rests solely on the shoulders of organic producers, even though they do not benefit from the use of GE technology. Organic farmers suffer harm when organic seeds, crops, and food become contaminated and they cannot sell their products in markets that restrict GE products. Farmers may also face legal recourse from companies that own the intellectual property rights of the escaped transgenes that contaminate their organic farms.

The organic community wants the NOSB and NOP to do more to protect organic food producers from these unintentional and inadvertent GE contamination events. It is not enough to simply state as policy that since “organic is a process-based standard, presence of detectable GMO residues alone does not necessarily constitute a violation of the regulation.” It is the NOSB and NOP’s role to actively protect organic integrity.

NOSB’s “Principles of Organic Production and Handling,” which guide the creation and implementation of organic standards, further underscore the incompatibility of GE with organic production systems:

Genetic engineering (recombinant DNA technology) is a synthetic process designed to control nature at the molecular level, with the potential for unseen consequences. As such, it is not compatible with the principles of organic agriculture (either production or handling). Genetically engineered/ modified organisms (GEO/GMOs) and products produced by or through the use of genetic engineering are prohibited.<sup>6</sup>

The organic community understands this incompatibility and recognizes the inevitability of GE seeds and crops to migrate beyond their intended destination of the farm. That is why they expect the NOSB and NOP to do more to prevent GE contamination to ensure organic integrity with respect to GE contamination prevention.

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<sup>4</sup> Government Accounting Office (GAO). (2008) “Genetically Engineered Crops: Agencies are Proposing Changes to Improve Oversight, but Could Take Additional Steps to Enhance Coordination and Monitoring, November, GAO-09-60, p. 1.

<sup>5</sup> Alteri, M. A. (2005) “The Myth of Coexistence: Why Transgenic Crops are not Compatible with Agroecologically Based Systems of Production,” *Bulletin of Science, Technology and Society*, 25. N4: 365.

<sup>6</sup> National Organic Standards Board. (2001) “Principles of Organic Production and Handling,” adopted October 17, 2001, 1.11.

In accordance with the Federal Advisory Committee Act (5 U.S.C. app. 2 et seq.), one of the NOSB's major roles is to advise to the Secretary of Agriculture about critical issues affecting the implementation of OFPA. The law specifically states that the NOSB shall be established by the Secretary of Agriculture to "assist in the development of standards for substances to be used in organic production and *to advise the Secretary on any other aspects of the implementation of this chapter* [emphasis added].<sup>7</sup> Yet, with respect to GE contamination, the NOSB has fallen short of fulfilling this obligation by not responding to repeated public requests to address their concerns about GE contamination, either at the Seattle meeting or any time thereafter.

In a letter to the NOSB, signed by the National Organic Coalition (NOC) and CFS, we expressed support for the initiative taken by NOSB member, Jennifer Taylor, to draft a "Sense of the Board Statement on Genetically Engineered Crops" (see Appendix 1). We believe that it is appropriate and desirable for the NOSB in its advisory role to acknowledge to the Secretary of Agriculture that the public feels strongly that "USDA actions on genetically engineered crops have been insufficient to protect the organic industry."<sup>8</sup> Although it is true that the Secretary can access the public record and that he is aware of the GE contamination problem, as some NOSB members have suggested, it is entirely warranted for the Board to convey the sentiments repeatedly expressed by the organic community, particularly when it falls outside of its regular agenda.

After reviewing the agenda for this meeting, CFS was disappointed to learn that the NOSB had not only failed to send a Sense of the Board statement to the Secretary, but also neglected to post an explanation of the Board's deliberations on the matter to date. Moreover, the issue is noticeably absent from the upcoming NOSB meeting agenda. Since this was an issue discussed openly and publicly at the last meeting, the public expected some public NOSB response and so did CFS, especially in light of the letter we sent. Clearly, this is a critical area of concern to the wider organic community that needs to be addressed in this forum. CFS strongly believes that for the NOSB and NOP to remain silent on the issue of GE contamination of organic is to abdicate responsibility for ensuring organic integrity and the continuing success of organic markets

CFS urges NOSB to take the necessary steps at its November meeting to adopt the "Sense of the Board Statement on Genetically Engineered Crops," with the removal of the phrase "zero tolerance," as suggested in our attached letter. This action will go a long way in reassuring the organic community that the NOSB remains responsive to its concerns. We view this statement as a small first step in opening up the dialog within the organic community about how the NOP can share responsibility for preventing GE contamination with the Animal and Plant Health Inspection Service (APHIS) of the USDA, which is charged with GE regulation.

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<sup>7</sup> Organic Foods Production Act of 1990. Sec. 2119. [7 U.S.C. 6518] National Organic Standards Board.

<sup>8</sup> "Sense of the Board Statement on Genetically Engineered Crops." (2011) National Organic Standards Board Meeting, Seattle, WA, 26-29 April.

## SULFITES IN WINE PETITION—Handling Committee

### CFS Opposes Changing the Sulfites in Wine Annotation

When the Organic Foods Production Act of 1990 (OFPA) was originally passed by Congress in 1990, sulfites were not allowed in any certified organic product. In fact, sulfites were deliberately placed in the category of strictly prohibited substances, along with two other substances — nitrates and nitrites. However, just days before the Final Organic Rule was scheduled to be published in 2000, a quick rule change allowed sulfur dioxide (sulfites)<sup>9</sup> in wine “made with organic grapes.” This switch was made in response to significant lobbying on the part of wineries that use sulfites and organically grown grapes, because they were not going to be allowed to use the word “organic” anywhere on their label. It was a significant compromise that satisfied all sides.

As one organic winemaker explains, the special organic wine label “allows consumers to understand the way we farm without trying to hide anything from them...By using [both] terms on the label...we are letting customers know how we farm while having the amount of sulfur dioxide controlled.”<sup>10</sup> Despite whether you agree with allowing sulfites in organic wine, the label promotes transparency by clearly indicating to consumers that the wine contains grapes grown using organic farming methods and that it contains the synthetic preservative, sulfites.

### **Sulfites can cause adverse health effects and should not be allowed in Wine Labeled Organic**

One of the main reasons sulfites are prohibited in organic food is because they are a known food allergen. It is estimated that more than 20 percent of people are affected by some sort of food sensitivity.<sup>11</sup> Sulfite additives are one of the nine most common food products that cause severe adverse reactions in humans, along with peanuts, tree nuts, sesame seeds, milk, eggs, seafood (fish, crustaceans and shellfish), soy, and wheat.<sup>12</sup> Sulfite sensitivities can occur at anytime in a person’s life, and reactions may not emerge until the age of forty or fifty. The Food and Drug Administration (FDA) estimates that one out of every hundred people has a sulfite sensitivity and that asthmatics comprise five percent of that group.<sup>13</sup>

On many occasions, sulfites have been at the center of protracted debates and food industry-initiated lawsuits about whether sulfites should retain its FDA status as a generally recognized

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<sup>9</sup> “Sulfur dioxide” and “sulfites” are used interchangeably in this text.

<sup>10</sup> Fetzer, Katrina. 2005. “Re: Continued Placement of SO<sub>2</sub> on the NOP National List,” Docket No. TM-0407., August 12.

<sup>11</sup> Gillman, A., and Jo A. Douglass. 2010. “What do asthmatics have to fear from food and additive allergy?” *Clinical & Experimental Allergy* 40, no. 9: 1295-1302. (accessed November 1, 2011).

<sup>12</sup> “Sulphites: One of the nine most common food products causing severe adverse reactions.” [http://www.hc-sc.gc.ca/fn-an/alt\\_formats/hpfb-dgpsa/pdf/secureit/allergen\\_sulphites-sulfites-eng.pdf](http://www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/secureit/allergen_sulphites-sulfites-eng.pdf). Government of Canada. (accessed November 2, 2011).

<sup>13</sup> Grotheer, P., M. Marshall & Amy Simonne. 2005/2011. “Sulfites: Separating Facts from Fiction,” University of Florida Institute of Food and Agriculture Sciences (IFAS) Extension, Publication #FCS8787. <http://edis.ifas.ufl.edu/fy731> (accessed Nov. 8, 2011).

as safe (GRAS) food additive, due to the long list of health concerns brought to light over more than two decades. In response, FDA decided to take regulatory action that, to this day, requires companies to list sulfites on food labels that contain 10ppm or higher—the equivalent of 40 drops in a 55 gallon drum of water.<sup>14</sup>

People with asthma are five times more likely to report adverse reactions to certain foods, including those with added sulfites.<sup>15</sup> Scientists have found a significant association between wine-induced asthmas and reactions to foods containing sulfites.<sup>16</sup> Reactions include skin sensitivities, respiratory sensitivities, hypertension, abdominal pain and diarrhea, among other things.<sup>17</sup> These adverse symptoms can occur at oral ingestion levels below 50mg, with acute bronchospasm occurring in asthmatic patients with doses between 10mg and 50mg. Significantly, many of those reacting to oral ingestion do not experience a reaction to skin testing of sulfites and, therefore, they may not be aware of the allergy until the sulfites are ingested.<sup>18</sup>

In late October of this year, the Food and Drug Administration (FDA) announced that the New York State Agriculture Commissioner recalled dried dates, due to the presence of undeclared sulfites. The alert warned: “People who have severe sensitivity to sulfites may run the risk of serious or life-threatening reactions if they consume this product... Anaphylactic shock could occur in certain sulfite sensitive individuals upon ingesting ten milligrams or more of sulfites.”<sup>19</sup> This is not the kind of substance that people tend to associate with USDA certified organic food.

In 1987, the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) started requiring a warning label on all alcoholic beverages containing more than 10ppm of sulfites “to alert individuals who are sensitive to sulfites.”<sup>20</sup> That is because sulfites are not only debilitating to those who are knowingly allergic to them, but also to those who have food sensitivities and seek to avoid ingesting synthetic additives and preservatives such as sulfites. Out of approximately 70 chemicals and additives allowed by the government in conventional wine making, only sulfur dioxide is considered dangerous enough to require a mandatory warning labeling.<sup>21</sup> The Joint Expert Committee on Food Additives of the World Health Organization

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<sup>14</sup> Ibid

<sup>15</sup> Gillman, A., and Jo A. Douglass. 2010. "What do asthmatics have to fear from food and additive allergy?." *Clinical & Experimental Allergy* 40, no. 9: 1295-1302. (accessed November 1, 2011).

<sup>16</sup> Vally, H., P. J. Thompson, and N. L. A. Misso. 2007. "Changes in bronchial hyper-responsiveness following high- and low -sulphite wine challenges in wine-sensitive asthmatic patients." *Clinical & Experimental Allergy* 37, no. 7: 1062-1066. *Academic Search Premier* (accessed November 1, 2011).

<sup>17</sup> Vally, H., N. L. A. Misso, and V. Madan. 2009. "Clinical effects of sulphite additives." *Clinical & Experimental Allergy* 39, no. 11: 1643-1651. (accessed November 2, 2011).

<sup>18</sup> Gillman, A., and Jo A. Douglass. 2010. "What do asthmatics have to fear from food and additive allergy?." *Clinical & Experimental Allergy* 40, no. 9: 1295-1302. (accessed November 1, 2011).

<sup>19</sup> FDA. (2011) “Consumer Alert – Undeclared Sulfites in Dried Dates,” 21 October. <http://www.fda.gov/Safety/Recalls/ucm276800.htm>

<sup>20</sup> <http://www.atf.gov/press/releases/2000/07/071300-atf-missing-declaration-on-aperitif-wine.html>

<sup>21</sup> Federal Register. 2007. “Materials Authorized for the Treatment of Wine and Juice,” 11 September. <http://www.law.cornell.edu/cfr/text/27/24/246>. (accessed November 12, 2011)

recommends a maximum daily intake of less than 0.7mg of sulfur dioxide per kilogram of bodyweight (less than 1/3 of a bottle of white wine with a sulfite presence of 200 mg/l for the average, adult male.)<sup>22</sup>

Changing the “made with organic grapes” wine label to “organic” would open the door for sulfites to illegally enter the organic food supply chain via organic wine sold for use in the production of organic vinegar and other wine-based and vinegar-based products. If sulfited wine is allowed to be labeled “organic,” without the requisite “made with” qualification, sulfites would undoubtedly find their way into organic salad dressings, organic soups, and other prepared foods, undermining the intent of the organic law to prohibit sulfites in food. (Sec. 2111 [7 U.S.C. 6520] HANDLING). This would create a significant and unfair health threat to those with sulfite sensitivities who could *unknowingly* purchase products containing sulfites.

Allowing sulfites in certified “organic” wine would decrease organic integrity and consumer confidence in organic and the USDA organic seal, because consumers expect that the organic food and beverages they buy are the healthiest and safest on the market and that they do not contain synthetic additives and preservatives. Organic consumers are quite familiar with the meaning of organic wine labels, particularly since the passage of the Final Organic Rule was adopted more than ten years ago. Those who seek to avoid drinking wine without sulfites know that “organic” wines do not contain added sulfites because it is clearly indicated on the label.

### **Synthetic sulfites are not essential to the production of organic wine**

#### *Millions of Bottles of Organic, Non-sulfited Wines are Produced and Sold*

A vibrant certified organic wine industry has been growing for over 30 years. By 2009, eight certified organic wineries in California reported selling a combined total of 3,794,400 bottles of organic non-sulfited wine.<sup>23</sup> Organically grown grapes are one of the fastest growing organic sectors in wine growing regions, and crop acreage of organically grown grapes continues to grow, even despite a weak US economy in recent years. California Certified Organic Farmers (CCOF) reported a 2,500 increase in acres it certifies of organically grown wine grapes between 2001 and 2010. California alone has seen wine grape acreage more than double in the last seven to ten years. AS these data suggest, the existing organic wine labeling requirements do not adversely affect either the desire of grape growers to adopt organic farming methods or consumers to buy certified organic wine.<sup>24</sup>

In response to consumer demand In the European Union (EU) and elsewhere, a new label and branding scheme has emerged to meet the market demand in countries where organic wine

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<sup>22</sup> Vaslie, M. 2010. “Sulfites and Foods, Toxicity and Hypersensitivity.” [http://www.unitbv.ro/ecoagritourism/Revista/2010\\_4/Vasile%20Maria.pdf](http://www.unitbv.ro/ecoagritourism/Revista/2010_4/Vasile%20Maria.pdf). (accessed November 2, 2011).

<sup>23</sup> Frey, Paul, Frey Vineyards, Ltd. Personal Communication, February 12, 2011.

<sup>24</sup> Brodt, Sonja & Karen Klonsky. 2008. “Marketing Reports for Three Organic Crops in California,” Dept. of Agricultural and Resource Economics, University of California, Davis.

regulations and labels have yet to be developed. *No Sulfites Added* or NSA wines are becoming increasingly popular in European countries with France taking the lead.<sup>25</sup> In fact, this new, emerging market of NSA wines is increasing the demand for U.S.-produced certified organic wines that contain no added sulfites.<sup>26</sup> Currently, there is a growing number of restaurants and bars in Europe stocking NSA wines, most notably Pierre Jancou's Vivant wine bar in Paris.<sup>27</sup> NSA wine has also taken off in South Africa where Stellar Winery has led the charge with its brand of "No-Sulphur-Added" organic wines that it exports to the US and the EU.

Websites such as EcoVine Wine Club advertise "Sulfite Free NSA Organic Wines" which include four Italian NSA wines: Cabernet, Merlot, Prosecco, and Blended as well as U.S. produced Badger Mountain, Frey, Hallcrest, and La Rocca wine. They span the spectrum of varietals from Chardonnay and Riesling to Pinot Noir, and Cabernet Sauvignon.<sup>28 29</sup> This self-styled, family-owned Wine Club sends two to four wines from its Eco collection every month or two for its members to sample.

Lion Distributors, a Chicago metropolitan area based organic wine importer and distributor, posted this advice on its website about NSA organic wines:

For consumers with a sensitivity to sulphites, the easiest way to make Sure that your wine purchase is free of added sulphites is to check the back label. By law, all producers are required to declare the presence of sulphites in their product. Look for the words "Contains Sulphites." No-Sulphur-Added Wines (NSA / No SO<sub>2</sub> Added)<sup>30</sup>

### *Technological Advances in Non-Sulfited Wines Make Sulfites in Wine Non-Essential*

Advanced technologies developed during the 1980s and 1990s have led early innovators and adopters of organic wine production systems to alleviate the need to add sulfites in wine for the purpose of preventing bacteria growth, oxidation, and spoilage. These same technologies that are used to produce high quality and award-winning USDA certified organic wines are briefly described below.<sup>31</sup>

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<sup>25</sup> Goode, Jamie. 2008. "No-sulphite-added wines hit the marketplace." Wine Business International. (accessed November 10, 2011). The late Jules Chauvet, scientist and winemaker from Beaujolais, France, has been credited as the "unofficial father of NSA wines.

<sup>26</sup> Goode, Jamie. 2008. "No-sulphite-added wines hit the marketplace." Wine Business International. (accessed November 10, 2011).

<sup>27</sup> "Paris Wine Bars ( & Restaurants) : Vivant." Wine Tasting, Vineyards, In France.

[http://www.wineterroirs.com/2011/04/vivant\\_pierre\\_jancou\\_paris.html](http://www.wineterroirs.com/2011/04/vivant_pierre_jancou_paris.html). (accessed November 11, 2011).

<sup>28</sup> The Organic Wine Company. <http://www.ecowineclub.com/> (accessed November 12, 2011).

<sup>29</sup> See Appendix 2 for some examples of NSA wines currently on the market.

<sup>30</sup> Lion Distributors. <http://www.liondistributors.com/organic-nsa-wines/> (accessed November 12, 2011).

<sup>31</sup> Greater technical details can be provided by the certified organic wine producers that use the technologies at the upcoming NOSB meeting in Savannah, GA, 29 November – 2 December 2011.

- **Sterile Filtration** — Wine makers use of *micropore* filters small enough to filter out yeast and bacteria to prevent further fermentation of wine at the appropriate maturation stage, without the use of added sulfites.<sup>32</sup>
- **Stainless Steel Tanks** — Aging wine in stainless steel versus wood improves the cleanliness at wine making facilities.<sup>33</sup> Because stainless steel is resistant to corrosion, it is easier to be kept clean and reduces the need to add sulfites to wine to prevent bacteria growth.<sup>34</sup>
- **Keeping Wine Vats of wine Completely Filled**— If vats are filled to the top without any headspace and kept that way until the bottling begins, it prevents oxidation.<sup>35</sup> When vats are full, there is no room for oxygen to make its way into the vat.
- **Gas-blanketing** — This practice involves covering wine with a blanket of nitrogen or carbon dioxide to protect it from oxidizing during short-term storage or transfer from tank to tank.<sup>36</sup> The nitrogen or carbon dioxide settles low against the liquid wine and it keeps the lighter oxygen gas from coming into contact with the wine.
- **Zero Oxygen Bottling** — Although wine needs oxygen during the maturation process, and red and white wines need different amounts of oxygen during different stages of production, oxygen must be removed during bottling to prevent oxidation. The zero oxygen bottling process requires flushing individual wine bottles three times with nitrogen and then sucking out the air using vacuum sealing technology to eliminate the need for added sulfites to stop oxidation.<sup>37</sup>

Sulfur Dioxide Technical Review is Fatally Flawed: Fails to Mention the Existence of a Vibrant Organic Wine Industry, Among Other Problems

Given the burgeoning market of certified organic and organic NSA wines in the US, EU, and elsewhere, now reaching approximately ten million bottles per year,<sup>38</sup> it is surprising to see that the Technical Review (TR) on sulfites in wine failed to investigate, or in any way acknowledge,

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<sup>32</sup> Bland, Alastair. 2008. "A Simple Vin: Produced for thousands of years, organic wine makes a comeback." <http://www.freywine.com/press/bohemian-simple-vin.html>. (accessed November 10, 2011).

<sup>33</sup> "Notes on No-Sulphur-Added Wines." Stellar Organic Wine Cellar, [http://www.stellarorganics.com/media/general/No-sulphur-added\\_wines\\_QandA.pdf](http://www.stellarorganics.com/media/general/No-sulphur-added_wines_QandA.pdf). (accessed November 9, 2011).

<sup>34</sup> Tuthill, Arthur. "Stainless Steel: Surface Cleanliness." *Pharmaceutical Engineering*. <http://www.twincityplating.com/resources/9%20SST%20-%20Surface%20Cleaning.pdf>. (accessed November 11, 2011).

<sup>35</sup> Bland, Alastair. 2008. "A Simple Vin: Produced for thousands of years, organic wine makes a comeback." <http://www.freywine.com/press/bohemian-simple-vin.html>. (accessed November 10, 2011).

<sup>36</sup> Bland, Alastair. 2008. "A Simple Vin: Produced for thousands of years, organic wine makes a comeback." <http://www.freywine.com/press/bohemian-simple-vin.html>. (accessed November 10, 2011).

<sup>37</sup> (2010). Scott Laboratories. <http://www.scottlab.com/product-198.aspx>. (accessed November 12, 2011).

<sup>38</sup> Jeremy Shapely, International Organic Wine Distributor, The Triton Collection. Personal Communication November 12, 2011.

the existence of the non-sulfited wine industry. What is equally surprising is that the flawed TR was approved and used by the Handling Committee as a basis for voting in favor of the change in the annotation for sulfites.

#### *Irregularities in the Evaluation Criteria for Substances Added to the NL Decision Sheet*

It is also worth noting here that there are four significant irregularities in the "Evaluation Criteria for Substances Added to the National List" Decision Sheet which includes the following:

1. The citations used to support the answers in the Evaluation Criteria questions on the right hand side of the decision sheet refer to a "TAP" draft, dated 9/26/11" and the line numbers in that document. Yet, there is no "TAP draft" on the NOP/NOSB website with that date for public review.
2. Even if the Committee mislabeled the "TR" a "TAP", there is still no "draft TR" on the NOP/NOSB website to review dated 9/26/11. Therefore, the public is unable to find the specific line numbers referenced in the TR so it can review and comment on the decision sheets as they relate to the TR.
3. There is also a TAP dated 1/14/11, referenced in the "Evaluation Criteria," which does not appear to be either in the documents made available for the discussion of this agenda item or on the NOP/NOSB website.
4. The date on the bottom of the cover sheet documenting the Handling Committee's decision is 10/14/10 which if correct would mean that the Committee's decision on sulfites was finalized months before the final TR was issued. This could be a typo and that the date is supposed to be 10/14/11, which would make more sense. If that is the case, the date needs to be changed for the public record.

These irregularities in the documents posted for the public review and comment make it difficult to obtain a transparent picture of the Handling Committee's decision-making process and justification for voting in support of the sulfite petition.

#### Conclusion

As our remarks have demonstrated, sulfites in wine can be harmful to human health. As early as the mid 1980s, enough people experienced allergenic type reactions to sulfites to prompt the ATF to require *all* alcoholic beverages containing more than 10ppm to disclose the existence of sulfites on the label. The FDA also followed suit with its labeling regulations. Despite ongoing discussions and lawsuits related to the use of sulfites in food and alcoholic beverages, these warning labels have justifiably remained in effect for nearly 25 years.

Sulfites are not essential for the production of organic wine, as demonstrated by the growing number of organic, non-sulfited wines produced in the US and around the world. Clearly, the

OFPA requirement to label wines “made with organic grapes” that have added sulfites has neither hindered the expansion of the organic wine market nor inhibited farmers from growing organic grapes.

Changing the annotation for organic wine would unfairly damage the markets of those wineries that follow the best organic management practices -- namely those producing wine without the use of synthetic chemicals, preservatives or additives of any kind, while also strictly adhering to organic farming practices, as required by OFPA.

In light of the above evidence, CFS concludes that the petitioner’s justifications for changing the sulfite annotation in wine grown with organically grown grapes are not warranted, and we urge the NOSB to vote against the petition.

## **AQUACULTURE—Materials Committee**

### CFS supports the Development of Organic Aquaculture Standards for Herbivorous Fish in Closed, Recirculating Inland Facilities

We believe that the development of organic standards for aquaculture has the potential to alleviate the environmental and human health impacts associated with existing industrial aquaculture production methods and to supply an alternative, efficiently produced source of human food protein.<sup>39</sup> However, a truly holistic approach of organic system management is needed — from facility siting to fish harvesting — that upholds the principles of organic. This includes enhancing biodiversity and biological cycles in and around the facility (as applicable), prohibiting dangerous inputs and outputs, supplying nutritious vegetarian organic feed, minimizing releases of nutrients and waste into the surrounding environment, and preventing fish escapes into inland waterways and the ocean.

Keeping these and other important organic parameters in mind, as discussed below, it is clear that not every type of fish farming or fish can be certified organic. CFS’s previous comments submitted to the NOSB have discussed in detail the many reasons why we do not support the development of organic regulations for the production of carnivorous fish in open-ocean and other open water based aquaculture facilities.<sup>40 41</sup> The voluminous number of escapes, and the significant and long-lasting adverse impacts, such as the transmission of disease, parasites, and sea lice to wild populations, have been well-documented. (See Appendix 2 chart for a List of Escapes). In fact, just this past week, scientists in British Columbia found evidence of infectious salmon anemia (ISA) in two wild sockeye smolts along Canada's Pacific Coast, for the

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<sup>39</sup> Research has shown that it takes over three tonnes of wild fish to produce one tonne of farmed salmon. (Naylor, R. et al. (2000) “Effect of aquaculture on world fish supplies, *Nature*, 405 (6790), 1017-1024).

<sup>40</sup> Kimbrell, George. 2008. “Comments on National Standards Board (NOSB) Livestock Committee Proposed Organic Aquaculture Standard,” Center for Food Safety, 3 Nov.

<sup>41</sup> Mendelson, Joseph. 2008. “Comments on Development of Organic Feed Standards for Organic Aquaculture,” Center for Food Safety, 4 September.

first time in history. While this has not been confirmed in follow-up tests, the issue of fish diseases is a very important one for aquaculture and the next shipment of eggs for aquaculture could bring ISA to the North American Pacific. In its most lethal form, the virus has killed tens of millions of farmed salmon in Norway, Chile, Scotland and New Brunswick, Canada, and some scientists fear it could mutate and pose a risk to wild fish.<sup>42</sup> As this latest incidence clearly suggests, ocean-based salmon farming continues to be a huge ecological problem and it is inconsistent with the principles and practices of organic farming, due to the threats it poses to human health and the environment.

CFS supports the careful development of organic aquaculture standards for herbivorous fish in contained inland facilities. Such a system can be compatible with the principles of organic which support ecological production and management. Inland recirculating aquaculture systems minimize risks to the environment by recycling clean water throughout the closed system with the aid of beneficial bacteria and plant species. Closed systems reduce the risk of fish escape and inland locations further minimize the risks of an unintentional escape resulting in establishment in the wild. To ensure that such systems can adhere to strict organic standards, we advocate requiring a trial period to test and evaluate model herbivorous fish systems and species before they are allowed to be fully commercialized in hopes of avoiding the pitfalls of permitting a type of fish or system that cannot meet the spirit, intent and letter of OFPA. We do not believe that carnivorous fish, like salmon, whose culture depends on harvesting fish for feed should ever be approved as “organic.”

#### *Development Process for Board Discussion and Public Comment*

As a public interest organization and advocate of consumer and environmental concerns, CFS's remarks in this section will directly address Question # 3. *How can the review of aquaculture proceed cautiously while not compromising consumer expectation of the organic label? What do consumers expect from organically produced aquaculture products, and how does that translate into specific requirements regarding materials?*

CFS believes that the best way for moving forward with the development of aquaculture standards is to first outline the broad parameters of what an ideal inland, herbivorous, closed, recirculating organic aquaculture system would look like. We agree with the Committee's position that “the review of aquaculture materials needs to align with NOP's drafting of proposed aquaculture standards.” To that end, we suggest that the organic aquaculture standards development focus solely on closed systems of production and that they include the following criteria:

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<sup>42</sup>Welch, Craig. 2011. “Plan for huge fish farm in Strait roils the waters.” The Seattle Times, 20 October. [http://seattletimes.nwsourc.com/html/localnews/2016565085\\_fishfarms21m.html](http://seattletimes.nwsourc.com/html/localnews/2016565085_fishfarms21m.html). (accessed November 12, 2011)

- Closed-loop, recirculating aquaculture systems that allow for the routine regulation, monitoring, and control of inputs, outputs, pH, water quality, and fish health and welfare. Escapes of farmed fish into inland waterways or the ocean must be made impossible.
- Facility siting takes into account past uses of site and nearby local land uses to ensure that toxic runoff from industrial production systems, landfills and other waste handling and management operations, medical facilities, military operations, farming, and livestock operations is avoided.
- Fish breeds are bred and reproduced using natural and not genetically engineered means. Fish are raised organically from development and fertilization of the egg onward once there is a sufficient quantity of organic breed stock. Strong preference must be given to fish breeds that are locally adapted and regionally established and exotic or potentially invasive species are excluded from the organic label.
- Nutritional needs are supplied from organic plants and fish within the system with minimal, if any, external inputs. Feeding methods encourage natural feeding behavior and minimize losses to the environment.
- Waste products generated are utilized and incorporated into the aquaculture system to eliminate the need for waste disposal outside of the system. For those wastes that cannot be avoided, they are composted and otherwise managed in the same way that livestock waste is required to be managed under the organic standards. Waste can be used on farms as fertilizers, provided that run-off is contained and does not reach inland waterways or the ocean.
- Biological diversity and biological cycling within the system and surrounding area should be maintained and enhanced. Any water discharge from the system shall be as clean as or cleaner than when it entered the system. Nutrient flow in water discharge will be avoided through recirculation of water and up-cycled through the use of beneficial bacteria and tandem plant growth. Again, strong preference must be given to fish breeds that are locally adapted and regionally established and exotic or potentially invasive species excluded to minimize problems in the event of any unintentional release.
- Materials such as antibiotics, genetically engineered inputs, hormones, growth regulators, synthetic pesticides and fertilizers, synthetic dyes and colorants or any other substances that are prohibited under OFPA cannot be used in certified organic aquaculture systems, without exception. This includes antibiotics or vaccines administered directly to fish or added to feed and water. Extra-label uses of drugs and experimental drugs also must be prohibited.

- Fish are fed 100 percent organic feed, as required for all organic livestock and poultry producers under OFPA. Wild or farmed fish meal and fish oil is prohibited in feed.
- Stocking rates for organic herbivorous fish are designed to avoid the problems of overcrowding common in conventional, industrial aquacultural systems. The living environment of this system promotes and maintains the health and welfare of the animals in a non-stressful environment that is appropriate to the species, breed, and region in which the facility is located.

Given the newness of this type of technology for organic production, a trial period is needed to test model herbivorous fish systems and species to ascertain which systems and which species can be produced as vegetarian fish within an organic aquaculture system

### **CONFLICT OF INTEREST POLICY — Policy Development Committee**

CFS commends the Policy Committee for taking initiative to update its conflict of interest (COI) provisions, in response to organic stakeholders' request. As noted in the Committee's August 28, 2011 proposed recommendations, CFS urged the Board to revisit this issue in the comments it submitted to the Board's April 2011 biannual meeting.

Given the fact that the NOSB is comprised of stakeholders from the organic community with direct expertise, experience, and personal, organizational and/or corporate interests in the outcomes of Board decisions, conflicts of interest are bound to arise. That is the nature of a dynamic Board of this type. Therefore, we agree with the Committee that it is important to ensure that decisions made by the NOSB are not unfairly influenced by those with an inherent conflict of interest, at all stages of investigation, evaluation, and decision-making. To that end, a strong, transparent COI policy and procedure is essential to maintain the credibility and transparency of the Board. The successful implementation of this policy relies upon the integrity of individual Board members and the actions of a strong Chair.

CFS fully supports the Committee's recommendation with the following additions:

#### **Recommendation #3**

Disclosure of a possible COI should occur when an issue is first being discussed in Committee. If a vote is taken within a Committee and a recommendation is presented for public comment, the Committee must record the COI, in writing, along with the Committee vote in the documentation posted in the website.

CFS supports disclosure of COI each time a discussion item is brought to the floor at the NOSB's biannual meetings. This ensures transparency between Board members during public discussions and debates, and when votes are made. It is worth emphasizing that disclosure of

COI is not intended, and does not render the comments of those with an announced COI less important, it merely ensures member transparency and fairness in the decision-making.

### *Conflict of Interest Disclosures Needed in TRs and TAPs*

In the spirit of minimizing COI and encouraging full transparency in all stages of NOSB policy development, including technical assessments, CFS recommends that all subcontractors are required to list report authors and to disclose any potential COI related to both the authors and the subcontracting agency.

### **COMMITTEE TRANSPARENCY — Policy Development Committee**

CFS appreciates the work of this Committee in thoughtfully addressing issues of transparency in NOSB operations, and we fully support its recommendation. We agree with the sentiment expressed that the public accessibility to NOSB records is “critical to the meaningful engagement of the full organic community in public decision-making.”

As an NGO with a mission to engage in public policy debates on organic agriculture and food policy, we believe that it is extremely important to retain the ability to communicate with NOSB members and Committees during the research and development of its positions and recommendations. Therefore, we support an NOSB policy that allows for NOSB members to receive communications from the public, via the NOSB Executive Director, during all stages of policy development and not just during the official public comment period.

CFS urges the NOSB to establish a reasonable and consistent timeframe within which to receive public comment. We believe that 60 days is a reasonable amount of time for the public to review and comment on documents, as per the NOSB Procedures and Policy Manual.<sup>43</sup> During this most recent public comment period, less than 30 days was given to respond to some documents, which is an insufficient amount of time for the public to thoughtfully consider the full range of documents on the NOSB’s agenda and to prepare meaningful responses. What this demonstrates, along with the irregularities in supporting documentation as described in the sulfites in wine section of this submission, is that the NOSB may be trying to tackle too many issues at one time. Board tasks need to be prioritized with an eye towards creating a more manageable workload for Committee members.

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<sup>43</sup> See NOSB Policy and Procedures Manual. 2010. Agriculture and Marketing Service (AMS0, pp 35 & 55 <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELDEV3013893> (accessed November 13, 2011).

## **PUBLIC PARTICIPATION — Policy Development Committee**

CFS highly values the public participation process that is built into the functioning and success of the NOSB. This private/public partnership, embedded in OFPA, affords a unique role for all stakeholders in the wider organic community to have their expertise and opinions considered in the decision-making process.

We urge the NOSB to support the detailed recommendations and answers to the Committee questions supplied by the National Organic Coalition (NOC) on this topic. In addition, CFS would like to reinforce four points worthy of further expansion.

First, CFS supports the use of proxies at the NOSB meetings. Although we strongly oppose the abuse of this privilege, we believe that there are extenuating circumstances which can prevent attendance at NOSB biannual meetings and that a proxy should be allowed in order to accommodate the needs of those who cannot be in attendance.

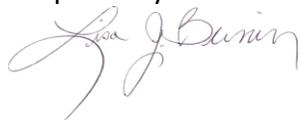
Second, we support the allowance of members of the public, living in the vicinity of where an NOSB meeting is being held, to give public testimony on the day of the meeting, without pre-registering. This will ensure the widest public involvement of those who may not otherwise have the opportunity to address the Board in person.

Third, we support the NOSB practice of routinely sending a “Sense of the Board” statement to the Secretary of Agriculture, outlining overarching issues of concern that are repeatedly raised by the public at the meeting, even if the issues they raise are not on the meeting’s agenda. The statement on GE contamination of organic represents a case in point.

Finally, the NOP recently circulated a statement requesting that the public refrain from communicating with individual Board members outside of the circumscribed public participation process established for biannual meetings. CFS believes that stifling communication between the public and the NOSB between meetings is not in the best interest of the Board and that it does not serve its mission to develop sound and informed public policies on organic food and agriculture. Instead, we support a process of open public engagement whereby all sectors of the organic community have access to Committee members, rather than a selected few. This ensures the consideration of a wide range of ideas, experiences, and opinions to assist in the development of the most informed policies possible.

Thank you for your consideration of the aforementioned remarks.

Respectfully submitted,



Lisa J. Bunin, Ph.D.

Organic Policy Coordinator

**Appendix 1: Letter to National Organic Standards Board, September 2011**



## National Organic Coalition

3540 Route 52, Pine Bush, New York 12566  
[Liana@NationalOrganicCoalition.org](mailto:Liana@NationalOrganicCoalition.org) 845-744-2304

### NOC MEMBERS

Beyond Pesticides

Center for Food Safety

Equal Exchange

Food & Water Watch

Maine Organic Farmers and Gardeners Association

Midwest Organic and Sustainable Education Services

National Cooperative Grocers Association

Northeast Organic Dairy Producers Alliance

Northeast Organic Farming Association - Interstate Council

Organic Seed Alliance

Organically Grown Company

Rural Advancement Foundation International -USA

Union of Concerned Scientists

September 28, 2011

National Organic Standards Board  
USDA National Organic Program  
1400 Independence Ave. SW  
Room 2646 – South Stop 0268  
Washington, DC 20250

Via Email: [Lorraine.Coke@ams.usda.gov](mailto:Lorraine.Coke@ams.usda.gov)  
and NOSB members

Dear Members of the National Organic Standards Board:

At the last NOSB meeting in Seattle, the Board received over ninety comments in writing and in public testimony by people expressing their concern about the potential contamination of organic by genetically engineered organisms (GE). Again, at the NOP Listening Session in Washington, DC, on September 20<sup>th</sup>, many public commenters addressed this topic as well as the need for the NOP to be more proactive in preventing contamination from GE organisms. These comments demonstrate the public's belief that the NOSB and the National Organic Program (NOP) need to do more to ensure that GE-contaminated organic ingredients do not make their way into the certified organic foods.

The National Organic Coalition (NOC) commends NOSB member, Jennifer Taylor, for taking the initiative to draft a "Sense of the Board Statement on Genetically Engineered Crops,"<sup>1</sup> as the Board's response to significant public comment on the issue. As we understand it, the purpose of a "Sense of the Board Statement" is to relay to the Secretary of Agriculture an issue(s) of overwhelming concern to the organic community that the public asked to be considered by the Board's at its bi-annual public meeting. Indeed, as a Federal Advisory Committee and statutory Board constituted under OFPA, one of the NOSB's significant and appropriate roles is to report directly to the Secretary and to give advice regarding all matters relating to organic farming and food production. As stated in the law:

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<sup>1</sup> "Sense of the Board Statement on Genetically Engineered Crops," (April 2010). National Organic Standards Board Meeting.

The Secretary shall establish a National Organic Standards Board (in accordance with the Federal Advisory Committee Act (5 U.S.C. app. 2 et seq.) (hereafter referred to in this section as the "Board") to assist in the development of standards for substances to be used in organic production and to advise the Secretary on any other aspects of the implementation of this chapter. (OFPA)

The "Sense of the Board" statement is neither a policy document nor intended to outline solutions to the problem, but it is intended to be sent to the Secretary in a timely manner.

NOC remains hopeful that the NOSB will submit a "Sense of the Board Statement on Genetically Engineered Crops," to the Secretary, prior to its next Board meeting in November. We believe that the statement presented on the last day of the meeting accurately reflects public sentiment about the need for USDA and the NOP to collaborate in the development and institution of GE contamination prevention measures. NOC further believes that it is both desirable and appropriate for the NOSB to acknowledge on behalf of the organic community that:

USDA's actions on genetically engineered crops have been insufficient to protect the organic industry. Organic agriculture continues to be at risk of contamination by genetically engineered crops... [The NOSB] "urge[s] the Secretary of Agriculture to take immediate and aggressive action to prevent GE contamination of organic."<sup>2</sup>

Although we understand this statement is a small first step to take, we believe that the adoption of a strong policy of shared responsibility between the USDA and NOP is the only way to prevent GE contamination and to preserve all agriculture markets for U.S. farmers -- organic, non-GE conventional, and GE.

Regarding the exact wording of the statement, although "zero tolerance" of GE is a goal desired by many in the organic community, the issue requires a much wider public policy debate, which extends well beyond the scope of the current "Sense of the Board Statement on Genetically Engineered Crops." Therefore, NOC supports striking the "zero tolerance" language from the last sentence of the statement and retaining the rest of the language verbatim, as written below.

In conclusion, NOC urges the NOSB to immediately adopt the "Sense of the Board Statement on Genetically Engineered Crops" and send it to Secretary Vilsack. This will go a long way in reassuring the public that the NOSB is responsive to its critical issues of concern and that the NOSB and NOP will not turn a blind eye on GE contamination of organic. We have attached our suggested amended version of the text.

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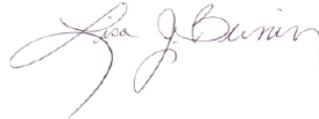
<sup>2</sup> Ibid.

Thank you for your consideration of this important issue that threatens organic integrity. We would certainly welcome further conversation on GE contamination of organic, but such a dialogue is not needed prior to sending the statement to the Secretary.

Sincerely,



Liana Hoodes  
Executive Director  
National Organic Coalition



Lisa J. Bunin, Ph.D.  
Organic Policy Coordinator  
Center for Food Safety

National Organic Standards Board<sup>3</sup>

Sense of the Board Statement on Genetically Engineered  
Crops

The significant number of unsolicited public comments at the April 2011 NOSB meeting have illustrated the extreme concern the impact that continued approvals by USDA of new genetically engineered crops has had on our community of organic farmers, consumers, and handlers.

The NOSB, speaking for the organic community, believe that the USDA's actions on genetically engineered crops have been insufficient to protect the organic industry. Organic agriculture continues to be at risk of contamination by genetically engineered crops.

This threat is a critical issue for organic agriculture producers and consumers of their products.

We urge the Secretary of Agriculture to take immediate and aggressive action to prevent GE contamination of organic+

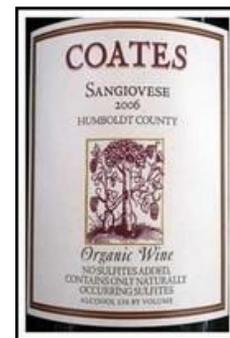
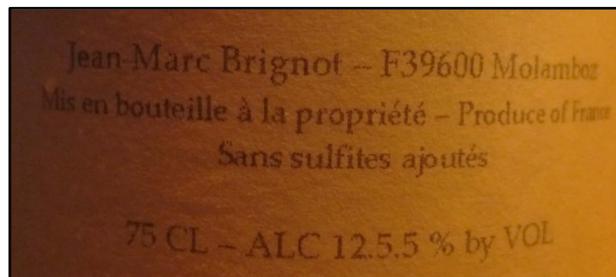
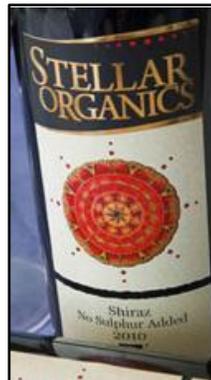
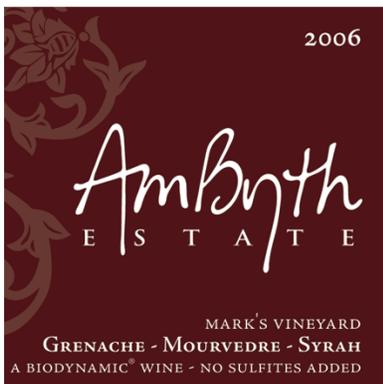
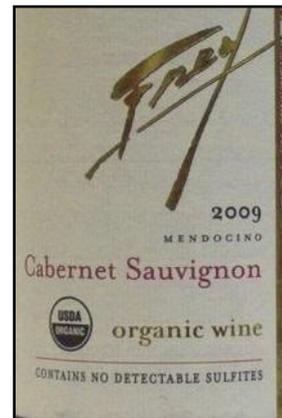
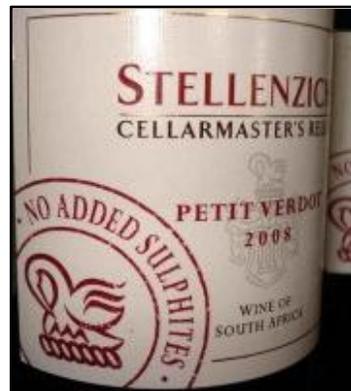
~~We urge the Secretary of Agriculture to urge zero tolerance to GE contamination of organic agriculture.~~

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<sup>3</sup> Presented at NOSB meeting, April 29, 2011.

Appendix 2:

Label Samples: Organic No-Sulfites Added Wines





About EcoVine

**Shop EcoVine Wines & Wine Club Selections**

- [European Wine Samplers](#)
- [View All Organic Wine Clubs](#)
- [Organically Grown Wine Clubs](#)
- [Sulfite Free Organic Wine Club](#)
- [Trial Wine Club Memberships](#)
- [Wine Club Gifts](#)
- [Organic Wine Club Gifts with No Sulfites Added](#)
- [Organically Grown Wines](#)
- [Sulfite Free NSA Organic Wines](#)
- [Biodynamic Wines](#)
- [Vegan Organic Wines](#)
- [View All Organic Wines](#)
- [Wine Accessories](#)
- [Organic Resveratrol](#)

**Shop by Price**

- [\\$0.00 - \\$53.00](#)
- [\\$53.00 - \\$96.00](#)
- [\\$96.00 - \\$140.00](#)
- [\\$140.00 - \\$183.00](#)
- [\\$183.00 - \\$226.00](#)

**Shop by Varietal**

- [Variety Packs](#)
- [Cabernet Sauvignon](#)
- [Red Blends](#)
- [Pinot Noir](#)
- [Reserveage Organics](#)
- [Sampler](#)
- [Zinfandel](#)
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[Home](#) Sulfite Free NSA Organic Wines

**Sulfite Free NSA Organic Wines**

Sort by: [Featured Items](#) [Advanced S](#)

*100% certified organic sulfite-free "NSA" wines*



*EcoVine Wine Club members enter your personalized membership code to receive your discount. AN ADULT SIGNATURE IS REQUIRED FOR ALL WINE DELIVERIES BY FEDERAL AND STATE LAW*

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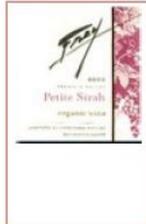
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[Add To Cart](#)
- No Sulfites Added Fre Organic. Petite Syrah **\$14.00**  
[Add To Cart](#)
- No Sulfites Added Coi 2007 Cabernet Sauvign **\$32.95**  
[Add To Cart](#)
- No Sulfites Added Coi 2009 Carignane **\$22.95**  
[Add To Cart](#)
- No Sulfites Added Piz 2009 Organic. Italian B **\$14.95**  
[Add To Cart](#)



**Euro-Trio Organic**  
No Sulfites Added  
Red Wine 3 Bottle  
Sampler  
**\$43.85**  
 Compare  
[Add To Cart](#)



**Italian-Trio Organic**  
No Sulfite Added  
Red Wine 3 Bottle  
Sampler  
**\$44.95**  
 Compare  
[Add To Cart](#)



**No Sulfites Added Frey 2007**  
Biodynamic Petite Syrah  
**\$16.95**



**No Sulfites Added Frey 2010 Organic**  
Sauvignon Blanc  
**\$11.95**



**Sulfite Free Organic Cabernet Sampler**  
No Sulfites Added  
TWO BOTTLES  
**\$35.00**  
 Compare  
[Add To Cart](#)



**Sulfite Free Organic Cabernet Sampler**  
No Sulfites Added  
THREE BOTTLES  
**\$49.00**  
 Compare  
[Add To Cart](#)



**Sulfite Free Organic Pinot Noir Sampler**  
No Sulfites Added  
TWO BOTTLES  
**\$49.00**  
 Compare  
[Add To Cart](#)



**Sulfite Free Organic Pinot Noir Sampler**  
No Sulfites Added  
FOUR BOTTLES  
**\$95.00**  
 Compare  
[Add To Cart](#)



**Sulfite Free Organic NSA Wine Collection**  
THREE BOTTLES  
Cellar Selection  
**\$59.00**  
 Compare  
[Add To Cart](#)



**Sulfite Free Organic NSA Wine Collection**  
FOUR BOTTLES  
Cellar Selection  
**\$78.50**  
 Compare  
[Add To Cart](#)

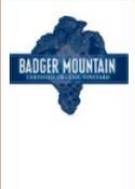
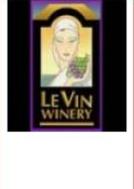
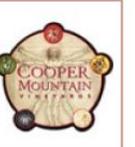
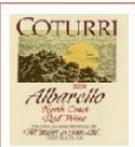
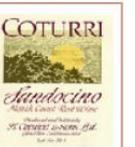
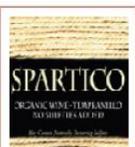
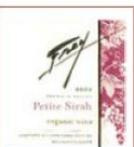


**Sulfite Free Organic NSA Wine Collection**  
- SIX BOTTLES-  
Cellar Selection  
**\$114.95**  
 Compare  
[Add to Cart](#)



**Sulfite Free Organic NSA Wine Collection**  
TWELVE BOTTLES  
Cellar Selection  
**\$225.95**  
 Compare  
[Add To Cart](#)

Sulfite-Free "NSA" Organic Wine

 <p>No Sulfites Added Pizzolato 2009 Organic Cabernet Sauvignon</p> <p><b>\$14.95</b> <input type="checkbox"/> Compare <a href="#">Add To Cart</a></p>	 <p>No Sulfites Added Pizzolato 2009 Organic Italian Blend</p> <p><b>\$14.95</b> <input type="checkbox"/> Compare <a href="#">Add To Cart</a></p>	 <p>No Sulfites Added Pizzolato 2009 Organic Merlot</p> <p><b>\$14.95</b> <input type="checkbox"/> Compare <a href="#">Add To Cart</a></p>	 <p>No Sulfites Added Amity 2008 Organic Pinot Noir</p> <p><b>\$19.95</b> <input type="checkbox"/> Compare <a href="#">Add To Cart</a></p>
 <p>No Sulfites Added Badger Mountain 2010 Organic Chardonnay</p> <p><b>\$11.95</b> <input type="checkbox"/> Compare <a href="#">Add To Cart</a></p>	 <p>No Sulfites Added LeVin Winery 2007 Cabernet Franc</p> <p><b>\$28.00</b> <input type="checkbox"/> Compare <a href="#">Add To Cart</a></p>	 <p>No Sulfites Added Badger Mountain 2008 Organic Cabernet Sauvignon</p> <p><b>\$14.95</b> <input type="checkbox"/> Compare <a href="#">Add To Cart</a></p>	 <p>No Sulfites Added Badger Mountain 2009 Organic Merlot</p> <p><b>\$14.95</b> <input type="checkbox"/> Compare <a href="#">Add To Cart</a></p>
 <p>No Sulfites Added Badger Mountain 2007 Organic Syrah</p> <p><b>\$14.95</b> <input type="checkbox"/> Compare <a href="#">Add To Cart</a></p>	 <p>No Sulfites Added Badger Mountain 2010 Organic Riesling</p> <p><b>\$11.95</b> <input type="checkbox"/> Compare <a href="#">Add To Cart</a></p>	 <p>No Sulfites Added Casa Barranca 2008 Arts and Crafts Red</p> <p><b>\$22.95</b> <input type="checkbox"/> Compare <a href="#">Add To Cart</a></p>	 <p>No Sulfites Added Cooper Mtn 2009 LIFE Pinot Noir</p> <p><b>\$29.95</b> <input type="checkbox"/> Compare <a href="#">Add To Cart</a></p>
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 <p>No Sulfites Added Spartico Organic 2009 Tempranillo NSA</p> <p><b>\$13.95</b> <input type="checkbox"/> Compare <a href="#">Add To Cart</a></p>	 <p>No Sulfites Added Frey 2009 Organic Petite Syrah</p> <p><b>\$14.00</b> <input type="checkbox"/> Compare <a href="#">Add To Cart</a></p>	 <p>No Sulfites Added Frey 2008 Biodynamic Pinot Noir</p> <p><b>\$24.95</b> <input type="checkbox"/> Compare <a href="#">Add To Cart</a></p>	 <p>No Sulfites Added Frey Organic Natural Red</p> <p><b>\$9.95</b> <input type="checkbox"/> Compare <a href="#">Add To Cart</a></p>

**Appendix 3:**

**Escapes from Fish Farms  
By Year, Country, Species & Number of Escapes  
1996 — 2011**

<b>Year</b>	<b>Country</b>	<b>Species</b>	<b># of Escapes</b>
2011	Canada/United States	Salmon	Unreported escaped fish being found in Canada and Maine rivers. <sup>i</sup>
2010	Canada	Salmon	13,000 <sup>ii</sup>
2010	Canada	Salmon	138,000 <sup>iii</sup>
2010	Canada	Atlantic Salmon	33,000; <sup>iv</sup> fish found in Maine rivers
2010	Scotland	Salmon	100,000 <sup>v</sup> ; hole in the net.
2010	Norway	Salmon	70,000 <sup>vi</sup>
2009	Canada	Salmon	40,000 <sup>vii</sup>
2009	Scotland	Salmon	37,000 <sup>viii</sup>
2009	Scotland	Atlantic Salmon	132,051 <sup>ix</sup>
2009	Scotland	Rainbow Trout	8,591 <sup>x</sup>
2009	British Columbia	Atlantic Salmon	40,000; <sup>xi</sup> holes found in net
Dec. 2008- Jan. 2009	Chile	Salmon & Trout	More than 700,000 <sup>xii</sup> ; bad weather, multiple farms
2008	Canada	Atlantic Salmon	29,616 <sup>xiii</sup>
2008	Scotland	Salmon	58,641 <sup>xiv</sup> ; 8 instances
2007	United States	Yellowtail	1,500 <sup>xv</sup> ; Cage left open
2007	Norway	Salmon	290,000 <sup>xvi</sup>
2007	Scotland	Salmon and Trout	More than 200,000 <sup>xvii</sup>
2007	British Columbia	Atlantic, Chinook & Coho salmon	19,168; <sup>xviii</sup> 28 instances
2007	Chile	Salmon	12 million; <sup>xix</sup> occurred during Earthquake
2007	World	Salmon	Estimated 3 million; <sup>xx</sup> annual figure
2006	Norway	Salmon	921,000 <sup>xxi</sup> *
2004	Chile	Salmon	1 million <sup>xxii</sup>
2000	United States	Atlantic Salmon	More than 100,000 <sup>xxiii</sup> ; snow storm
2001-2009	Norway	Rainbow Trout	980,000 (110,000 per year) <sup>xxiv</sup>
2001-2009	Norway	Atlantic Cod	1.05 million (175,000 per year) <sup>xxv</sup>
2001-2009	Norway	Atlantic Salmon	3.93 million (436,000 per year) <sup>xxvi</sup>
1997	United States	Atlantic Salmon	300,000 <sup>xxvii</sup>
1996	United States	Atlantic Salmon	100,000 <sup>xxviii</sup>

\* Peak year for Norway fish escapes, the annual number of escapes has declined since then.  
(Compiled by the Center for Food Safety, October 2011)

## Implications of Escapes

Escapes of farmed fish from open ocean aquaculture facilities, salmon in particular, represent a significant environmental and food security threat, especially given the fragility of wild salmon stocks across the U.S. Detrimental impacts on wild, native fish populations include the following:

- Studies have clearly shown that escaped farm salmon breed with wild populations to the detriment of the wild stocks and that diseases and parasites are passed from farm to wild salmon. Increased production of farmed salmon leads to greater escapes, which leads to a reduction. In some cases, it causes a more than 50 percent reduction in native species.
  - Ford, Jennifer S., and Ransom A. Myers. 2008. A Global Assessment of Salmon Aquaculture Impacts on Wild Salmonids. *Plos Biology* 6, no. 2 (February 12). <http://www.plosbiology.org/article/info%3Adoi%2F10.1371%2Fjournal.pbio.0060033> (accessed November 2, 2011).
- Recurrent sea lice infestations of wild juvenile pink salmon caused by salmon farms have reduced wild pink salmon populations and may result in their rapid local extinction. “It was observed that the mortality of pink salmon due to sea lice was more than 80 percent and surpasses previous fishing mortality. The findings suggest that salmon farms can induce parasite outbreaks that degrade the capacity of the coastal ecosystem to support populations of wild salmon.”
  - Citation: Krkošk, Martin, Jennifer S. Ford, Alexandra Morton, Subhash Lele, Ransom A. Myers, and Mark A. Lewis. 2007. "Declining Wild Salmon Populations in Relation to Parasites from Farm Salmon." *Science* 318, no. 5857: 1772-1775. Academic Search Premier, (accessed November 3, 2011).
- The productivity of native juvenile salmon was reduced by more than 30 percent in the presence of farm and hybrid juveniles. A 2003 study found that the lifetime success of hybrids was only 27 to 89 percent as high as that of their wild relatives. Seventy percent of the embryos in the second generation died. “These results provide strong evidence of how interbreeding might drive vulnerable salmon populations to extinction.”
  - R. Naylor, Kjetil Hindar, Ian A. Fleming, Rebecca Goldberg, Susan Williams, John Volpe, Fred Whoriskey, Josh Eagle, Dennis Kelso, and Marc Mangel. 2005. *Fugitive Salmon: Assessing the Risks of Escaped Fish from Net Pen Aquaculture*. *Bioscience* 55, no. 5 (May). [http://foodsecurity.stanford.edu/publications/fugitive\\_salmon\\_assessing\\_the\\_risks\\_of\\_escaped\\_fish\\_from\\_netpen\\_aquaculture/](http://foodsecurity.stanford.edu/publications/fugitive_salmon_assessing_the_risks_of_escaped_fish_from_netpen_aquaculture/)

- Threats to wild salmon populations are long-lasting and so severe that some researchers have concluded that: “escaped farmed salmon are sufficiently prevalent in eastern North American rivers to pose a potentially serious risk to the persistence of wild salmon populations, especially in those rivers that are adjacent to existing aquaculture sites.”
  - Morris, R.J., Dylan J. Fraser, Anthony J. Heggelin, Frederick G. Whoriskey, Jonathan W. Carr, Shane F. O’Neil, and Jeffrey A. Hutchings. 2008. Prevalence and recurrence of escaped farmed Atlantic salmon (*Salmo salar*) in eastern North American rivers. *Can. J. Fish. Aquat. Sci.* 65 (September): pp 430.

## Endnotes

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<sup>i</sup> Ferguson, Muriel. 2011. “Farmed Salmon Enter Wild Salmon Rivers in NB and Maine.” NBEN. <http://www.nben.ca/en/collaborative-action/news-from-groups/item/190-farmed-salmon-enter-wild-salmon-rivers-in-nb-and-maine>. (accessed November 8, 2011).

<sup>ii</sup> French, Edward. 2011. “Farmed salmon in rivers lead to call for closed containment.” *The Quoddy Times*. <http://quoddytides.com/salmon9-23-11.html> (accessed November 7, 2011).

<sup>iii</sup> French, Edward. 2011. “Farmed salmon in rivers lead to call for closed containment.” *The Quoddy Times*. <http://quoddytides.com/salmon9-23-11.html> (accessed November 7, 2011).

<sup>iv</sup> Atlantic Salmon Federation. “33,000 Farmed Atlantic Salmon Escape.” <http://www.asf.ca/news.php?id=617>. (Accessed November 3, 2011).

<sup>v</sup> “100,000 Salmon Escape.” 2010. <http://www.thefishsite.com/fishnews/11892/100000-salmon-escape>. (accessed November 7, 2010).

<sup>vi</sup> Grindheim, Joar. “Costly salmon escape.” *IntraFish Media*, October 15, 2010.

<sup>vii</sup> “40,000 salmon escape B.C. farm.” 2010. *CBC News*. <http://www.cbc.ca/news/canada/british-columbia/story/2009/10/23/bc-salmon-farm-escape.html>. (accessed November 7, 2011).

<sup>viii</sup> “Fish fears after sea farm escape.” 2009. *BBC*. <http://www.asf.ca/news.php?id=447>. (accessed November 8, 2011).

<sup>ix</sup> Walker, AJ. 2010. *Scottish Fish Farm Production Survey: 2009 report*. Scottish Government. pp 2 <http://www.scotland.gov.uk/Resource/Doc/295194/0106192.pdf> (accessed October 13, 2011).

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- <sup>xii</sup> Witte, Benjamin. "Thousands of salmon and trout escape in southern Chile." *The Patagonia Times*, January 19, 2009. [http://chip.cl/~patagoni/index.php?option=com\\_content&view=article&id=726:thousands-of-salmon-and-trout-escape-in-southern-chile&catid=43:salmon-news&Itemid=102](http://chip.cl/~patagoni/index.php?option=com_content&view=article&id=726:thousands-of-salmon-and-trout-escape-in-southern-chile&catid=43:salmon-news&Itemid=102) (accessed November 2, 2011).
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- <sup>xiv</sup> Big Drop in Salmon Escapes in 2008: The FishSite Latest News. The FishSite.com. <http://www.thefishsite.com/fishnews/8986/big-drop-in-salmon-escapes-in-2008> (accessed October 13, 2011).
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- <sup>xvi</sup> Criscione, Valeria. 2004. Tough Tactics Against Sea Lice and Fish Escapes. Official Norwegian Trade Portal. [http://www.nortrade.com/index?cmd=show\\_article&id=593](http://www.nortrade.com/index?cmd=show_article&id=593) (accessed October 13, 2011).
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