

**CITY OF SEBASTOPOL
CITY COUNCIL
STAFF REPORT**

Meeting Date: May 17, 2016
To: Honorable Mayor and Honorable City Councilmembers
From: Mayor Gurney
Subject: Request from Citizens for Healthy Farms and Families for endorsement of ordinance (Sonoma County Transgenic Contamination Ordinance which would prohibit the propagation, cultivation, raising, and growing of genetically engineered organisms in Sonoma County
Recommendation : That the Mayor and City Council Discuss and Act upon the Request
Funding: Currently Budgeted: _____ Yes _____ No XX N/A
Net General Fund Cost:
Amount: N/A

INTRODUCTION: This item is to request that the City Council discuss and act upon the request from Citizens for Healthy Farms and Families for endorsement of ordinance (Sonoma County Transgenic Contamination Ordinance) which would prohibit the propagation, cultivation, raising, and growing of genetically engineered organisms in Sonoma County.

BACKGROUND:

Karen Hudson, Campaign Coordinator for Citizens for Healthy Farms and Families requested the City Council endorse an ordinance (Sonoma County Transgenic Contamination Ordinance) which would prohibit the propagation, cultivation, raising, and growing of genetically engineered organisms in Sonoma County.

DISCUSSION:

Citizens for Healthy Farms and Families have gathered 24,072 signatures to put the Sonoma County Transgenic Contamination Ordinance on the ballot and needed 14,358 valid signatures. They have had 85.6 % validity and had 20,605 valid signatures for this ballot measure.

Citizens for Healthy Farms and Families met in the County Supervisors Chambers on April 26th when the Registrar of Voters' gave the Supervisors the above information. The County's choices are as follows:

1. Vote it into law
2. Place it on the Nov. 2016 ballot
3. Call for a study

The Sonoma County Board of Supervisors chose to conduct a 30 day fiscal impact study, which will be run by the University of California Cooperative Extension (U.C.C.E.)

The University will present the study at the Sonoma County Board of Supervisors Meeting of May 24th where the Board of Supervisors will be asked to revisit choices 1 & 2 above.

City staff does not have the expertise on staff to speak to the findings contained in the proposed ordinance.

RECOMMENDATION: Staff recommends that the Mayor and Council discuss and act upon the request from Citizens for Healthy Farms and Families for endorsement of ordinance (Sonoma County Transgenic Contamination Ordinance) which would prohibit the propagation, cultivation, raising, and growing of genetically engineered organisms in Sonoma County.

Attachment:

Information Submitted from Citizens for Healthy Farms and Families

THE PEOPLE OF THE COUNTY OF SONOMA ORDAIN AS FOLLOWS:

Section 1 – Title

This ordinance shall be known as the Sonoma County Transgenic Contamination Prevention Ordinance.

Section 2 – Purpose

The purposes of this chapter are (1) to protect Sonoma County’s native plants, trees, and animals from transgenic contamination from genetically engineered (“GE”) organisms; (2) to defend and promote the economic integrity of organic and other markets that are harmed by transgenic contamination by GE organisms; and (3) to preserve the right of Sonoma County residents to grow the plants and crops of their choice and to be free from transgenic contamination from GE organisms. This chapter shall be liberally construed to fulfill these purposes.

Section 3 – Findings

- (a) The rapid, long-term, and unregulated growth of commercial agricultural entities engaged in the cultivation and development of GE organisms threatens the stability and growth of Sonoma County’s agricultural economy, the health of its citizens, and its environment.
- (b) Sonoma County residents have the right to decide that the risks associated with cultivating genetically engineered crops are unacceptable and to take action to prohibit such crops.
- (c) Agriculture is a vital component of Sonoma County’s economy. Sonoma’s agricultural economy relies on maintaining its reputation for high quality organic and conventional crops. According to the Sonoma County Agricultural Commissioners’ (SCAC) Office, as of January 1, 2014, there were approximately 260 individual organic registrants in Sonoma County encompassing more than 20,000 acres. The SCAC 2013 Crop Report stated that there were approximately 40 individual registrants for organic dairy operations with approximately 6,846 head of cattle, and about 52 individual organic wine grape registrants. According to the SCAC Crop Report for 2013, there was a total of approximately 64,073.3 acres of registered wine grapes in Sonoma County. The SCAC Crop Report for 2013 also recorded 13 organic individual meat registrants, raising about 956,071 head, and approximately 20,224 acres of organic pasture/rangeland. The SCAC 2013 Crop Report states that traditional livestock and poultry production was valued at approximately \$65,103,100. Preserving the identity, quality, and reliability of Sonoma’s non-GMO conventional and organic agricultural products, and exports is therefore critical to its economic well-being.
- (d) Transgenic contamination can and does occur as a result of cross-pollination, comingling of conventional and GE seeds, accidental transfer by animals, weather, and other mechanisms. Transgenic contamination results in GE crops growing where they are not intended.
- (e) The contamination of both conventional and organic agricultural products with GE material can have a myriad of significant impacts. Organic and many foreign markets prohibit GE crops, and even a single event of transgenic contamination, can and has resulted in significant economic harm when the contaminated crops are rejected by buyers. Farmers and other parties who lose markets, through no fault of their own, as a result of transgenic contamination may not find adequate legal recourse. Further, contamination causes the loss of the fundamental right to choose, for the farmer and the public, to sow crops that are not engineered.

- (f) Currently, no mechanisms exist to guarantee that transgenic contamination will not occur.
- (g) The rapid development and introduction of GE crops, combined with inadequate regulatory oversight at the state and federal levels, have left the citizens of Sonoma County with significant concerns regarding the long-term safety of GE crops. The U.S. Food and Drug Administration does not require or conduct safety studies of genetically engineered foods. Instead, any safety consultations are voluntary, and genetically engineered food developers may decide what information to provide to the agency. Market approval of genetically engineered food is based on industry research alone. There have been no long-term or epidemiological studies in the U.S. that examine the safety of human consumption of genetically engineered foods.
- (h) Manipulating genes in plants and animals via genetic engineering and inserting them into organisms is an imprecise process and often causes unintended consequences. Mixing plant, animal, bacterial, and viral genes through genetic engineering in combinations that cannot occur in nature may produce results that lead to adverse health or environmental consequences.
- (i) Independent scientists are limited from conducting safety and risk-assessment research of genetically engineered materials due to industry restrictions on research of those materials.
- (j) The cultivation of GE crops can have serious effects on the environment. For example, in 2014, 94 percent of all soy grown in the U.S. was engineered to be herbicide resistant. In fact, the vast majority of GE crops are designed to withstand herbicides, and therefore promote indiscriminate herbicide use. As a result, GE herbicide-resistant crops have caused 527 million pounds of additional herbicides to be applied to the nation's farmland over the 16 year period from 1996-2011. These toxic herbicides damage the vitality and quality of our soil, harm wildlife, contaminate our drinking water, and pose health risks to consumers and farm workers.
- (k) Increased use of herbicides in GE agriculture has resulted in the rapid development and proliferation of previously unknown herbicide-tolerant superweeds. These superweeds threaten to overtake the habitat of native flora and fauna in uncultivated lands and force farmers to use increasingly toxic and expensive herbicides to remove them from cultivated lands.
- (l) Insect-resistant GE crops pose a high risk of fostering rapid evolution of pests resistant to organic pesticides, to the detriment of organic farmers, and they also facilitate agriculturally and environmentally harmful monocultures, such as growing corn continuously on the same field year after year.
- (m) The impacts of the direct introduction into Sonoma County of genetically engineered organisms such as trees or fishes, or contamination by them, would be unknowable in advance. However, such introduction or contamination would have the potential to seriously imperil local ecosystems, to threaten traditional ways of life in our rural county, and to undermine critical local industries including forestry, fisheries, and tourism. Many countries and regions around the world have prohibited or strictly regulated their cultivation, use and/or importation. In the absence of such appropriate, effective regulation in California or the broader United States, many local governments in our region have acted to restrict or prohibit the growing of genetically engineered organisms within their borders. Such local governments include the Counties of Mendocino, Marin, Trinity, Humboldt and Santa Cruz.
- (n) For these reasons, the People of Sonoma County find that the propagation, cultivation, raising or growing of genetically engineered organisms in the County is not consistent with proper and accepted agricultural customs and standards of Sonoma County. Furthermore, because the risk of transgenic contamination increases the longer a genetically engineered organism remains in an uncontrolled environment, the People find that the contamination risk caused by the propagation,

cultivation, raising or growing of genetically engineered organisms shall be remedied as set forth below.

Section 4 – Definitions

- (a) “Commissioner” means the Sonoma County Agricultural Commissioner.
- (b) “Genetically engineered” means produced from an organism or organisms in which the genetic material has been changed through the application of:
 - 1) In vitro nucleic acid techniques which include, but are not limited to, recombinant deoxyribonucleic acid (DNA) or ribonucleic acid (RNA), direct injection of nucleic acid into cells or organelles, encapsulation, gene deletion, and doubling; or
 - 2) Methods of fusing cells beyond the taxonomic family that overcome natural physiological, reproductive, or recombination barriers, and that are not techniques used in traditional breeding and selection such as conjugation, transduction, and hybridization.
- (c) “Organism” means any biological entity capable of replication, reproduction or transferring of genetic material, exclusive of human beings and human fetuses.
- (d) “Genetically engineered organism” means an organism, or the offspring of an organism, the DNA of which has been altered or amended through genetic engineering. Such organisms are also sometimes referred to as “genetically modified organisms” or “GMOs.” For the purposes of this definition, an animal, which has not itself been genetically engineered, regardless of whether such animal has been fed or injected with any food or drug that has been produced through means of genetic engineering, shall not be considered genetically engineered.

Section 5 – Prohibitions

It is unlawful for any person, partnership, corporation, firm or entity of any kind to propagate, cultivate, raise or grow genetically engineered organisms in the County. Any act in violation of this provision is subject to the enforcement measures outlined in Section 8.

Section 6 – Exemptions

- (a) Nothing in this Ordinance shall make it unlawful for:
 - 1) any person or other legal entity in the County to purchase, sell, or distribute genetically engineered human food or animal feed;
 - 2) any licensed health care practitioner to provide any diagnosis, care or treatment to any human patient or animal; or
 - 3) any research institutions, laboratories or manufacturing facilities in the County to conduct research involving genetically engineered organisms whose reproduction in the environment can be physically contained. Such research activities must be conducted under secure, enclosed indoor laboratory conditions, with utmost precautions to prevent release of genetically engineered organisms into the outside environment.

Section 7 – Effective Date and Transitional Period

- (a) This Ordinance shall take effect immediately upon approval by the Board of Supervisors or voters of Sonoma County, except as set forth here and below.

- (b) Any person or other legal entity that is already propagating, cultivating, raising or growing genetically engineered organisms in the County on, or before, the date this Ordinance is approved by the Board of Supervisors or voters of Sonoma County shall be permitted to maintain such organisms until the end of their natural agronomic growth cycle. Any person or other legal entity in possession of genetically engineered seed purchased before the date this Ordinance is approved may cultivate those seeds in the growing cycle immediately following the enactment of this Ordinance. At the conclusion of that time period, any person or other legal entity who has continued propagating, cultivating, raising or growing genetically engineered organisms in the County during this transitional period shall be required to destroy and safely dispose of, or remove completely and permanently from the County, any remaining genetically engineered organisms.
- (c) None of the provisions of this Ordinance shall be construed to permit any person or other legal entity that is not currently in possession of genetically engineered seed or already propagating, cultivating, raising or growing genetically engineered organisms in the County to begin to do so after this Ordinance is approved by the Board of Supervisors or voters of Sonoma County.
- (d) Other than Section 7(a) above, none of the provisions of the Ordinance shall be construed to permit any person or other legal entity who is already propagating, cultivating, raising or growing genetically engineered organisms in the County to propagate, cultivate, raise or grow any genetically engineered organisms not already living and established in the County, or otherwise to begin any new activity prohibited by Section (5) of this Ordinance, after it takes effect.

Section 8 – Regulations

If necessary, the Commissioner may enact and enforce regulations to implement this chapter, but it may not create any new exemption not listed in this chapter.

Section 9 – Enforcement

- (a) The Commissioner shall create and provide for a procedure for any person to report any known or suspected violation of this Ordinance. The procedure shall include the creation of a reporting form to document the nature and location of the reported violation, the basis for the report, and contact information for the reporting party.
- (b) The Commissioner may bring an action in a court of competent jurisdiction to enjoin any person or entity from violating this chapter.
- (c) The Commissioner shall assess a civil monetary penalty against any person or entity violating this chapter, in the amount of:
 - 1) One hundred dollars for a first violation;
 - 2) Five hundred dollars for a second violation; or
 - 3) One thousand dollars for a third or subsequent violation.

In assessing penalties, each day of violation must be considered a separate violation.

- (d) The Commissioner may also assess to the violator of this Ordinance any costs of enforcing the provisions of this Ordinance.
- (e) The Commissioner shall submit an annual report to the Board containing a brief description of all complaints received and enforcement actions taken under this Ordinance, if any, along with any other relevant information or analysis the Commissioner may choose, at his or her discretion, to include. A copy of such report shall be posted on the County Department of Agriculture's official website.

Section 10 – Severability

The provisions of this Ordinance are severable. If any provision of this Ordinance or its application is held invalid, that invalidity shall not affect other provisions or applications that can be given effect without the invalid provision or application.

Latest Research on GM Crop Yields

The yields of all major GM crop varieties in cultivation are lower than, or at best, equivalent to, yields from non-GM varieties.

GM crops as a whole

- First generation genetic modifications address production conditions (insect and weed control), and are in no way intended to increase the intrinsic yield capacity of the plant. An April 2006 report from the United States Department of Agriculture (USDA) states that “currently available GM crops do not increase the yield potential of a hybrid variety. [...] In fact, yield may even decrease if the varieties used to carry the herbicide tolerant or insect-resistant genes are not the highest yielding cultivars”. (Fernandez-Cornejo, J. and Caswell, 2006)
- The United Nations Food and Agriculture Organization’s 2004 report on agricultural biotechnology acknowledges that GM crops can have reduced yields (FAO, 2004). This is not surprising given that first-generation genetic modifications address production conditions (insect and weed control), and are not intended to increase the intrinsic yield capacity of the plant.
- A 2003 report published in Science stated that “in the United States and Argentina, average yield effects [of GM crops] are negligible and in some cases even slightly negative”. (Qaim and Zilberman, 2003). This was despite the authors being strong supporters of GM crops.
- Yields of both GM and conventional varieties vary - sometimes greatly - depending on growing conditions, such as degree of infestation with insects or weeds, weather, region of production, etc. (European Commission, 2000)

Roundup Ready (RR) GM soya

- Studies from 1999 - 2007 consistently show RR GM soya to yield 4 – 12% lower than conventional varieties.
- A 2007 study by Kansas State University agronomist Dr. Barney Gordon suggests that Roundup Ready soya continues to suffer from a yield drag: RR soya yielded 9% less than a close conventional relative.
- A carefully controlled study by University of Nebraska agronomists found that RR soya varieties yielded 6% less than their closest conventional relatives, and 11% less than high yielding conventional lines (Elmore et al, 2001). This 6% ‘yield drag’ was attributed to genetic modification, and corresponds to a substantial loss in production of 202 kg/ha.
- In 1998 several universities carried out a study demonstrating that, on average, RR soy varieties were 4% lower in yield than conventional varieties (Oplinger et al., 1999). These results clearly refuted Monsanto’s claim to the contrary (Gianessi, 2000).
- Yields of GM soybeans are especially low under drought conditions. Due to pleiotropic effects (stems splitting under high temperatures and water stress), GM soybeans suffer 25% higher losses than conventional soybeans(Altieri and Pengue, 2005)
- 5 studies between 2001 -2007 show that glyphosate applied to Roundup Ready soybeans inhibits the uptake of important nutrients essential to plant health and performance. The resultant mineral deficiencies have been implicated in various problems, from increased disease susceptibility to inhibition of photosynthesis. Thus, the same factors implicated in the GM soya yield drag may also be responsible for increased susceptibility to disease. (Motavalli, et al., 2004; Neumann et al., 2006; King, et al.,2001; Bernards,M.L, 2005; Gordon, B., 2007).
- The yield drag of RR soya is reflected in flat overall soybean yields from 1995 to 2003, the very years in which GM soya adoption went from nil to 81% of U.S. soybean acreage. By one estimate, stagnating soybean yields in the U.S. cost soybean farmers \$1.28 billion in lost revenues from1995 to 2003 (Ron Eliason, 2004).

- More recent evidence shows that the kilogram per hectare ratio of soybean has been in decline since 2002, leading to the conclusion that RR soy does not have an impact on yield (ABIOVE, 2006a).

Bt Maize

- Only maize shows a persistent trend of yield increase into the biotech era, but even here the rate of increase is no greater after than before biotech varieties were introduced.
- A rigorous, independent study conducted in the U.S. under controlled conditions demonstrated that Bt maize yields anywhere from 12% less to the same as near-isoline (highly similar) conventional varieties (Ma & Subedi, 2005).

Bt Cotton

- Despite claims of increased yield, Bt cotton has had no significant impact in real terms.
- Average cotton yields have increased 5-fold since 1930, and staged an impressive surge from 1980 to the early 1990s. Cotton yields then went flat, and continued to stagnate during the seven years of GM cotton's rise to dominance. The steep yield and production increases in 2004 and 2005 were chiefly attributable to excellent weather conditions (Meyer et al., 2007).
- Bt cotton, introduced to Australia in 1996, has not offered a boost to the cotton sector, and since its adoption has not provided improvements in either yield, or quality (ISAAA, 2006b).
- Cotton South Africa show constant yield levels before and after adoption of Bt cotton (Witt et al 2005, cited in FoEI Who Benefits 2007), in contradiction to ISAAA claims that Bt has brought about a 24% yield increase in the region.
- Outbreaks of the secondary pests that are not killed by the Bt insecticide have rendered Bt cotton ineffective in China (Connor, S., July 27, 2006), and are also becoming a problem in North Carolina (Caldwell, D. 2002) and Georgia (Hollis, P.L., 2006).
- An article in Nature Biotechnology notes that the poor performance of Bt cotton varieties used in India (which were developed for the short U.S. growing season) is linked to the loss of their insecticidal properties late in India's longer growing season, and because Bt cotton insecticide is not expressed in 25% of the cotton bolls of India's preferred hybrid cotton varieties (Jayaraman, K.S., 2005)

Exposed: the great GM crops myth

Major new study shows that modified soya produces 10 per cent less food than its conventional equivalent

By Geoffrey Lean, Environment Editor

Sunday, 20 April 2008

Genetic modification actually cuts the productivity of crops, an authoritative new study shows, undermining repeated claims that a switch to the controversial technology is needed to solve the growing world food crisis. The study – carried out over the past three years at the University of Kansas in the US grain belt – has found that GM soya produces about 10% less food than its conventional equivalent, contradicting assertions by advocates of the technology that it increases yields.

Professor Barney Gordon, of the university's department of agronomy, said he started the research – reported in the journal *Better Crops* – because many farmers who had changed over to the GM crop had "noticed that yields are not as high as expected even under optimal conditions". He added: "People were asking the question 'how come I don't get as high a yield as I used to?'"

He grew a Monsanto GM soybean and an almost identical conventional variety in the same field. The modified crop produced only 70 bushels of grain per acre, compared with 77 bushels from the non-GM one.

The GM crop – engineered to resist Monsanto's own weedkiller, Roundup – recovered only when he added extra manganese, leading to suggestions that the modification hindered the crop's take-up of the essential element from the soil. Even with the addition it brought the GM soya's yield to equal that of the conventional one, rather than surpassing it.

The new study confirms earlier research at the University of Nebraska, which found that another Monsanto GM soya produced 6% less than its closest conventional relative, and 11% less than the best non-GM soya available.

The Nebraska study suggested that two factors are at work. First, it takes time to modify a plant and, while this is being done, better conventional ones are being developed. This is acknowledged even by the fervently pro-GM US Department of Agriculture, which has admitted that the time lag could lead to a "decrease" in yields. But the fact that GM crops did worse than their near-identical non-GM counterparts suggest that a second factor is also at work, and that the very process of modification depresses productivity. The new Kansas study both confirms this and suggests how it is happening.

A similar situation seems to have happened with GM cotton in the US, where the total US crop declined even as GM technology took over.

Monsanto said yesterday that it was surprised by the extent of the decline found by the Kansas study, but not by the fact that the yields had dropped. It said that the soya had not been engineered to increase yields, and that it was now developing one that would.

Critics doubt whether the company will achieve this, saying that it requires more complex modification. And Lester Brown, president of the Earth Policy Institute in Washington – and who was one of the first to predict the current food crisis – said that the physiology of plants was now reaching the limits of the productivity that could be achieved.

A former champion crop grower himself, he drew the comparison with human runners. Since Roger Bannister ran the first four-minute mile more than 50 years ago, the best time has improved only modestly. "Despite all the advances in training, no one contemplates a three-minute mile."

Last week the biggest study of its kind ever conducted – the International Assessment of Agricultural Science and Technology for Development – concluded that GM was not the answer to world hunger.

Professor Bob Watson, the director of the study and chief scientist at the Department for Environment, Food and Rural Affairs, when asked if GM could solve world hunger, said: "The simple answer is no."


driftwatch

Watch Out for: Pesticide Drift and Organic Production

Elizabeth Maynard, Purdue Horticulture and Landscape Architecture

Bryan Overstreet, Purdue Extension-Jasper County

Jim Riddle, University of Minnesota Southwest Research and Outreach Center

Before an agricultural product can be sold as “organic” in the United States, the producer must follow specific production standards established by the National Organic Program (CFR Title 7 Part 205 — www.ams.usda.gov/nop), and the producer’s operation must be certified by a USDA-accredited agency. And while farms making less than \$5,000 in annual sales of organic products do not need to be certified, they must follow and keep records to prove compliance with the same USDA standards as certified operations. In 2011, there were more than 17,500 certified organic farms and processing facilities in the United States, managing more than 4 million acres organically.

The requirements for organic certification are time-consuming and expensive. And if a neighbor applies a pesticide that drifts onto an organic field, the economic losses can be high — not to mention the loss of goodwill. This publication describes the consequences of pesticide drift onto organic farms, and steps that pesticide applicators and organic producers can take to reduce the risk of damage from drift.

Organic Production Standards

Organic production standards prohibit the use of most synthetic pesticides; exceptions are itemized in the National List of Allowed and Prohibited Substances (CFR Title 7 Part 205.601-604). The standards require that farmers document the steps they take to reduce the likelihood of a pesticide drifting onto their organic crops, poultry, and livestock. These steps can include physical measures (such as using buffer strips and barriers), cultural practices (such as timing of operations), and social methods (such as signs indicating the farm is organic or one-on-one communication with surrounding neighbors and commercial pesticide applicators).

These measures can’t protect a farm completely. In many cases, people applying pesticides may not know that an organic farm is present. It might be the right-of-way industry, aerial applicators from other counties, or others who just are unaware of the presence of organic livestock or crops.



The Consequences of Drift

When a pesticide drifts onto an organic farm, there could be a variety of consequences. For starters, it may mean that the product may not be sold and labeled as organic. If the unapproved pesticide residues on a product are “too high” the product may not be sold, labeled, or represented as organically produced, possibly resulting in large economic losses for the producer.

The National Organic Program defines residues as “too high” when they are greater than 5 percent of the EPA’s tolerance for the pesticide. If the EPA has not established a tolerance for a pesticide on the product, then “too high” is defined as residues greater than 5 percent of unavoidable residual environmental contamination. This means that samples of the organic product would have to be analyzed for the pesticide and the resulting value compared to the federally established standards.

This will take not only money, but also time. When organic crops are ready to be harvested, the time required may lead to spoilage in the field; the inability of the producer to meet their contracts with local restaurants, grocery stores, or other buyers; or may prevent delivery of the product to those who prepurchase products from the farm.



If pesticides drift onto soil, it is possible that crops or pasture grown on that land, along with any poultry or livestock eating those crops or pasture, could not be certified as organic for three years. If pesticides contaminate water used in crop or livestock production, it is possible that it may be prohibited for use in organic production until tests show residues at acceptable limits. If a particular field or production area is repeatedly subject to contamination by drift, it is possible that it would be deemed noncertifiable until the producer could provide evidence showing that the risk of contamination had been substantially reduced.

Monetary losses for the organic farmer could be significant or inconsequential, depending on the particular situation. One thing is for sure: it will be aggravating to have to deal with the problem. If the product were sold as nonorganic, the farmer may receive a price several times lower than what it would

have been for an organic product, or may receive about the same price, depending on the market. Farmers may choose not to sell the product at all because it does not meet their own standards for quality, meaning loss of income from those acres. If the production area is so contaminated that it can’t be used for organic production for a period of years, the loss could be multiplied over several seasons. If contamination is severe, the cost to remediate the problem may be significant.

In addition to these direct monetary losses, organic farmers may lose market share and customers if they cannot provide the products their customers expect. Temporary loss of customers could influence market opportunities in future years. In most of these instances, a long and protracted argument with insurance companies can ensue with pricing the loss. In some instances, drift onto organic farming operations can only be settled in court.

Preventing Problems

With so much at stake, organic farmers should take whatever steps are necessary to protect their crops and livelihoods from inadvertent pesticide drift. One of the more important steps is to register your organic farm with Driftwatch (www.Driftwatch.org). It’s a free service that helps link organic farms with the pesticide application businesses and growers. When you register the location of your farm, an automatic notice will be sent to the commercial applicators in your area who have requested to receive such notices. Other applicators can also check the website to find the location of organic farms and other sensitive areas.

It’s important that pesticide applicators do their part by learning where organic farms are, adjusting applications in and around those areas, and doing whatever is necessary to ensure that the areas producing organic crops, poultry, and



Steps Applicators Can Take to Reduce Drift Risk

There are a number of things pesticide applicators can do before and during applications to reduce the risk of pesticide drift onto organic farms.

Before Application

Before any application, applicators should locate organic farms by:

- Asking clients or neighbors if nearby farms are organic, and if so, exactly which adjoining fields are in organic production.
- Calling their state department of agriculture or a local organic certifying agency for a list of certified organic growers in the area.
- Checking the Driftwatch website.

Day of Application

On the day of application, applicators should:

- Review client farm maps to accurately locate the crop to be treated and any adjoining organic fields.
- Get up-to-date, accurate weather reports and pay specific attention to wind direction and wind gusts.

During Application

While applying pesticides, applicators should:

- Constantly monitor wind direction. Applicators should not apply pesticides when the wind is blowing toward the organic crop. Remember, even a little drift may lead to serious issues with selling and labelling something as organic.
- Track wind direction and speed in the event you are asked to document what you did that day.

livestock are protected from pesticides. It is important that you periodically check the Driftwatch website to see if anyone has registered their organic sites, beehives, vegetables, fruit, or other sensitive areas. This is an important first step in reducing off-site pesticide drift onto an organic farm. But it is only the first of many important steps that you will take when making pesticide applications around organic farms.

The bottom line is that it takes very little effort for organic producers and applicators to prevent pesticide drift problems. Organic and conventional agricultural production can coexist if practitioners respect one another's attempts to make a living. With better lines of communication and a little effort at common sense, pesticide drift can become a nonissue.

Driftwatch is an online registry that helps pesticide applicators, specialty crop growers, and stewards of at-risk habitats communicate more effectively to protect pesticide-sensitive areas. To see other publications in the Driftwatch series, visit the Purdue Extension Education Store, www.the-education-store.com, or www.Driftwatch.org.

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PURDUE AGRICULTURE

New 3/12

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Jan. 13, 2014 Food Democracy Now Supreme Court Denies Family Farmers the Right to Self-Defense From Monsanto Lawsuits

The U.S. Supreme Court today issued a decision in the landmark federal lawsuit, *Organic Seed Growers and Trade Association (OSGATA) et al v. Monsanto*. Farmers were denied the right to argue their case in court and gain protection from potential abuse by the agrochemical and genetic engineering giant, **Monsanto**. Additionally, the high court decision dashes the hopes of family farmers who sought the opportunity to prove in court Monsanto's genetically engineered seed patents are invalid.

“While the Supreme Court’s decision to not give organic and other non-GMO farmers the right to seek preemptive protection from Monsanto’s patents at this time is disappointing, it should not be misinterpreted as meaning that Monsanto has the right to bring such suits,” said Daniel Ravicher, executive director of the **Public Patent Foundation** and lead counsel to the plaintiffs in *OSGATA et al v. Monsanto*.

“Indeed, in light of the Court of Appeals decision, Monsanto may not sue any contaminated farmer for patent infringement if the level of contamination is less than one percent,” Ravicher explained. “For farmers contaminated by more than one percent, perhaps a day will come to address whether Monsanto’s patents may be asserted against them. We are confident that if the courts ever hear such a case, they will rule for the non-GMO farmers.”

Farmers had sought Court protection under the Declaratory Judgment Act that should they become the innocent victims of contamination by Monsanto's patented gene-splice technology they could not perversely be sued for patent infringement.

"The Supreme Court failed to grasp the extreme predicament family farmers find themselves in," said Maine organic seed farmer Jim Gerritsen, president of lead plaintiff [OSGATA](#). "The Court of Appeals agreed our case had merit. However, the safeguards they ordered are insufficient to protect our farms and our families."

"This high court which gave corporations the ability to patent life forms in 1980, and under *Citizens United* in 2010 gave corporations the power to buy their way to election victories, has now in 2014 denied farmers the basic right of protecting themselves from the notorious patent bully Monsanto," said Gerritsen.

The historic lawsuit was filed in 2011 in Federal District Court in Manhattan. The large plaintiff group numbers 83 individual American and Canadian family farmers, independent seed companies and agricultural organizations whose combined memberships total more than one million citizens, including many non-GMO farmers and over 25 percent of North America's certified organic farmers.

"The Appellate Court decision could leave Canadian farmers out in the cold because their protection may not extend to Canada at all," said Saskatchewan organic grain farmer Arnold Taylor, a member of plaintiff member [Canadian Organic Growers](#). "Like many Canadian farmers, we sell crop into the U.S. and can therefore be liable to claims of patent infringement by Monsanto."

In a [complicated ruling issued in June 2013](#) by the U.S. Court of Appeals for the Federal Circuit in Washington, D.C., American farmers were handed a partial victory when the three justices

agreed with the farmers' assertion that contamination by Monsanto was inevitable. The justices ordered Monsanto not to sue American farmers whose fields were contaminated with trace amounts of patented material, which the Court defined as 1 percent.

In a related situation, Canadian soybean farmer Stephen Webster of Ontario experienced just how abusively Monsanto treats innocent contamination victims. Through no fault of his own Webster, who farms with his elderly father, had his 2012 identify-preserved non-GMO soybean crop contaminated by Monsanto's patented genetically engineered seed. Their soybeans were ruined for export to specialty markets in Japan.

"First Monsanto claimed we had too many bees and that we were at fault for the contaminated crop," said Webster. "Then they threatened to run up \$100,000 in legal bills that we would have to pay." Tragically, Webster's story is the norm in farm country, with Monsanto using its extreme economic power to silence family farmers even before they can legally defend themselves.

Notably, none of the plaintiffs are customers of Monsanto. None have signed licensing agreements with Monsanto. The plaintiffs do not want Monsanto's seed and they do not want Monsanto's gene-spliced technology and have sought legal protection from significant economic harm to their businesses and way of life.

"We have a fourth generation farm," said organic dairy farmer and plaintiff Rose Marie Burroughs of California Cloverleaf Farms.

"Monsanto cannot be trusted. Their refusal to provide a binding legal covenant not to sue our fellow farmers would make anyone wonder, what are their real motives? GMO contamination levels can easily rise above one percent and then we would have zero protection from a costly and burdensome lawsuit."

Significant contamination events, including Starlink corn and LibertyLink rice, have already cost farmers and the food companies nearly \$2 billion dollars. In the past year alone, the discovery of [Monsanto's illegal GMO wheat in an Oregon farmer's field](#) and [GMO alfalfa in Washington state](#) sent foreign markets, where GMOs are not wanted, reeling. In both instances farmers' economic livelihoods were put at risk as buyers in foreign markets refused to buy the GMO contaminated crops.

"If Monsanto can patent seeds for financial gain, they should be forced to pay for contaminating a farmer's field, not be allowed to sue them," said Dave Murphy, founder and executive director of Food Democracy Now! "Once again, America's farmers have been denied justice, while Monsanto's reign of intimidation is allowed to continue in rural America."

"Monsanto has effectively gotten away with stealing the world's seed heritage and abusing farmers for the flawed nature of their patented seed technology," said Murphy. "This is an outrage of historic proportions and will not stand."

Mary Gourley

From: Karen H. <gmofreesonomacounty@gmail.com>
Sent: Wednesday, May 04, 2016 9:20 PM
To: Mary Gourley
Subject: Fiscal Impact report from Marin

Hi Mary,

I called the Ag. Commissioners in the other counties with GMO growing prohibitions to inquire about Fiscal Impact.

Juan Hildago, the Ag. Commissioner from Santa Cruz said they have not had any Fiscal Impact, but no one there grows crops that have been genetically engineered.

Below is the response from the Marin Deputy Commissioner.

Parnay, Stefan <SParnay@marincounty.org>

to me

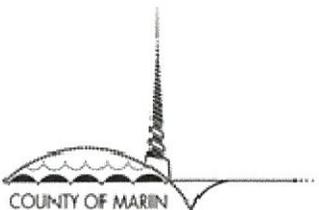
Hi Karen,

Here is our response to your request regarding the fiscal impact, if any, of our GMO Ordinance in Marin County.

The Marin County Department of Agriculture annually reviews our GMO program to ensure no GMO commodities are being grown within the county. This is done through communications with the agricultural industry and various partner organizations. To date there has been no fiscal impact to the department.

Sincerely,

Stefan



Stefan Parnay

DEPUTY COMMISSIONER / DIRECTOR

County of Marin

Department of Agriculture, Weights and Measures

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Karen Hudson

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[707-795-7859](tel:7077957859)

Help us Prevent GMO Contamination in Sonoma County. Protect our Local Farms, Pastures, Dairies, Livestock, Vineyards, Native Plants, Wildlife and Families.

If you are a Sonoma County resident, business owner, or organization leader, 18 years or older, please endorse our ordinance at the website below, and help us join Marin, Mendocino, Trinity, Humboldt and Santa Cruz in prohibiting the cultivation, propagation, raising, and growing of genetically engineered organisms in our county.

www.GMOFreeSonomaCounty.com

"Our Lives Begin to End the Day We Become Silent About Things That Matter."

Martin Luther King Jr.