

A BILL PLACING A MORATORIUM ON THE CULTIVATION OF GENETICALLY ENGINEERED ORGANISMS

Chapter 20.39 of the Maui County Code 19__ (20__ Edition, as amended) is amended by adding a new article to be appropriately designated and to read as follows:

“Article __ Moratorium on the Cultivation of Genetically Engineered Organisms.”

SECTION 1: Summary Statement

The Hawaii Constitution states that the Public Trust Resources (including but not limited to the land, water, and air) shall be conserved and protected for current and future generations.

The Genetically Engineered (GE) Operations and Practices occurring in Maui County (also known as GMO) are different than GE food production farming and therefore pose different circumstances, risks, and concerns. In Maui County, GE Operations and Practices include the cultivation of GE seed crops, experimental GE test crops, and extensive pesticide use including the testing of experimental Pesticides and their combinations in what is effectively an outdoor laboratory.

The citizens of Maui County have serious concerns as to whether GE Operations and Practices and associated use and testing of Pesticides, occurring in Maui County are causing irreparable harm to the people, Environment, and Public Trust Resources.

Therefore, the citizens of Maui County call for a suspension of all GE Operations and Practices within the County through a Temporary Moratorium Initiative until an Environmental Public Health Impact Statement analysis of the impacts stemming from GE Operations and Practices and their associated Pesticide use is provided and reviewed by County Council.

SECTION 2: Findings

Cultural Heritage & Environmental Protection

1. The rapid and unregulated growth of commercial agricultural entities engaged in the cultivation and development of GE Organisms threatens the stability and growth of Maui County’s agricultural economy, the health of its citizens, and its environment. Moreover, the lands of Maui County and the water surrounding it have cultural and spiritual significance to the indigenous people of Hawaii. This cultural and spiritual heritage will suffer irreparable harm if the natural environment of Maui County is contaminated by GE Operations and Practices.
2. Maui County residents have a right to decide if the risks associated with the GE Operations and Practices are unacceptable and to take action to suspend such Operations and Practices.
3. GE Organisms are not a part of the natural environment of Maui County and instead exist in the County as a possible invasive species. Protection from the possible threat of damage and/or potentially irreversible alteration of the environment and cultural heritage from the threat of invasive GE Organisms is supported by the Hawaiian Public Trust Doctrine, the Hawaii State Constitution, and other State and County environmental laws.
4. The genetic engineering of plants and animals often causes unintended consequences. Manipulating genes via genetic engineering and inserting them into organisms is an imprecise process. The results are not always predictable or controllable. Mixing plant, animal, bacterial, and viral genes through genetic engineering in combinations that are not selected for in nature may produce results that lead to adverse health or environmental consequences and threaten Maui County’s cultural heritage, Environment and Public Trust Resources.

Pesticide Concerns

5. GE Operations and Practices can have serious effects on the environment. For example, in 2013, 93 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. 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.

6. Increased use of herbicides in GE Operations and Practices has resulted in the rapid development and proliferation of previously unknown herbicide-tolerant superweeds. The proliferation of these superweeds threatens to overtake the habitat of native flora and fauna in uncultivated lands and forces farmers to use increasingly toxic and expensive herbicides to remove them from cultivated lands.

7. GE Operations and Practices and associated pesticide use pose a high risk of fostering rapid evolution of pests known as superbugs that become resistant to organic pesticides, to the detriment of conventional and organic farmers who are forced to use increasingly larger volumes and/or stronger pesticides to manage these new pests.

8. In some GE Operations and Practices, multiple Pesticides are applied at the same time or applied in close time proximity to each other ("pesticide cocktails"). This practice is often being used on test crops in a trial and error manner to test and develop new Pesticide resistant Crops. In this process it is possible that new and unknown chemicals are created. Although individual Pesticides have been tested and regulated for their use in isolation, there has not been adequate testing and/or regulations concerning the various chemical combinations that occur during GE Operations and Practices, and few if any of which have been tested in either short term or long term animal or human studies.

Regulatory Concerns

9. Inadequate regulatory oversight at the county, state, and federal levels leave the citizens of Maui County with significant concerns regarding the immediate safety and long term effects of GE Operations and Practices threatening the integrity of Maui County's cultural heritage, agricultural economy, tourism economy, and the health of its visitors, citizens, and the environment.

10. The rapid development and introduction of GE Organisms, combined with inadequate regulatory oversight at the state and federal levels, have left the citizens of Maui County with significant concerns regarding the long-term safety of GE Operations and Practices. The Hawaii Department of Agriculture does not have an adequate regulatory structure in place to monitor GE Operations and Practices or to aid in the understanding of the impacts of these Operations and Practices on Maui's economy, environment, cultural heritage, or public health. The direct, indirect, and cumulative impacts on Maui County regarding the long-term intensive GE Operations and Practices and associated pesticide uses have not been properly or independently evaluated.

Economic Considerations

11. Agriculture is a important component of Maui's agricultural economy. Organic agriculture is a rapidly expanding sector of Maui's agricultural economy.

12. Maui County's local economy is also dependent on the success of its tourism industry, which makes up the County's largest employment sector. The protection of Maui's land and waters is crucial to the continuing success of Maui's tourism industry.

13. Maui's agricultural economy relies on maintaining its reputation for high quality organic and conventional crops. Preserving the identity, quality, and reliability of Maui's agricultural products and exports is critical to its economic well-being.

Transgenic Contamination

14. The contamination of agricultural products with GE Organisms can have a myriad of significant impacts. Organic and many foreign markets prohibit GE products and even a single event of Transgenic Contamination can and has resulted in significant economic harm when the contaminated crops are rejected by buyers.

15. Transgenic contamination can and does occur as a result of cross-pollination, co-mingling of conventional and GE seeds, accidental transfer by animals or weather events, and other mechanisms. Transgenic contamination results in GE crops growing where they are not intended. For example, since the introduction of GE papaya in Hawaii County (Big Island), more than 50% of the non-GE papaya crops on the Big Island have been cross-contaminated by GE papaya.

16. Transgenic contamination prevents farmers and the public from having the fundamental right to choose whether or not to grow crops that are free from GE. Farmers and other parties who lose non-GE standing and markets through no fault of their own as a result of transgenic contamination have no adequate legal recourse.

17. Currently, no mechanisms exist to ensure that transgenic contamination will not occur.

18. There are no known or proven scientific methodologies or procedures to recall GE Organisms or remediate/decontaminate the Environment from any damages once GE Organisms are released into the Environment and contamination has occurred.

Risk of Harm to Soil Resources

19. GE Operations and Practices in Maui County primarily involve seed crops and test crops that include aggressive and repeated use of pesticides before planting and during the growing cycle of these crops. Such Operations and Practices present risks and significant harm to soil resources. Some of Maui County's soil microbes are harmed by the application of pesticides used in GE Operations and Practices.

Risk of Harm to Water Resources

20. Areas of Maui's groundwater are already significantly contaminated with Pesticides, including DBCP and TCP, from former conventional pineapple growing operations. GE Operations and Practices in Maui County involve unprecedented use of Pesticides which greatly exacerbate an already existing problem.

21. Many field sites are left fallow for significant periods of time while repeated Pesticide applications are applied. Pesticide laden water runoff from is exacerbated by repeated Pesticide treatments to fallow sites, presenting short and long term risks of significant harm to ground and surface water, beaches, and reefs.

Risk of Harm to Air Resources

22. Pesticide drift and fugitive dust from GE Operations and Practices present short and long term risks of significant harm especially to air resources, farm workers, and to persons living downwind from GE Operations and Practices.

SECTION 3: Rights and Authority

1. County Authority

The Hawaii Revised Statutes, Section 46-1.5(13) states: "Each county shall have the power to enact ordinances deemed necessary to protect health, life, and property, and to preserve the order and security of the county and its inhabitants on any subject or matter not inconsistent with, or tending to defeat, the intent of any state statute where the statute does not disclose an express or implied intent that the statute shall be exclusive or uniform throughout the State." We, the people of Maui County, hereby assert that we have a legitimate local purpose to enact this initiative on the county level to protect health, life and property within Maui County. Furthermore, the State Constitution expressly grants political subdivisions the right to uphold the Public Trust Doctrine under Hawaii State Constitution, Article XI, Section 1 and all persons standing to enforce such rights Environmental Rights under The Hawaii State Constitution, Article XI, Section 9.

2. Environmental Rights

The Hawaii State Constitution, Article XI, Section 9 "Environmental Rights," states: "Each person has the right to a clean and healthful environment, as defined by laws relating to environmental quality, including control of pollution and conservation, protection and enhancement of natural resources. Any person may enforce this right against any party, public or private, through appropriate legal proceedings, subject to reasonable limitations and regulation as provided by law."

3. Public Trust Doctrine

Hawai'i State Constitution, Article XI, Section 1 "Conservation and Development of Resources" states:

"For the benefit of present and future generations, the State and its political subdivisions shall conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air, minerals, energy sources, and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State. All public natural resources are held in trust by the State for the benefit of the people."

4. Precautionary Principle

In *Maine vs. Taylor*, 477 U.S. 131 (1986), the Supreme Court held that the Commerce Clause of the US Constitution did not preempt states and localities from "protect(ing) the health and safety of its citizens and the integrity of its natural resources." That Supreme Court precedent also articulated a concept that has come to be known as the "Precautionary Principle," stating that (the state in question) was not required "to sit idly by and wait until potentially irreversible environmental damage has occurred or until the scientific community agrees on what [environmental risks] are or are not dangerous before it acts to avoid such consequences." *Maine vs. Taylor*, 477 U.S. 131 (1986). Given the authority set forth in Section 2, above, the people of Maui County demand that the Precautionary Principle be applied in the form of a prohibition of all the propagation, cultivation, raising, or growing of GE Organisms in the County.

5. Rights Conferred By This Ordinance

We, the people of Maui County hereby proclaim that the our residents, visitors, Public Trust Resources, and the Environment must be protected from the potentially hazardous health effects, contamination, loss of diversity, environmental and other potentially harmful impacts from the GE Operations and Practices that have not met the standards set forth in this Ordinance. Therefore, we are hereby exercising our right to utilize the County initiative process to impose a moratorium on the propagation, cultivation, raising, or growing of GE Organisms in Maui County in order to protect, our residents, visitors, and the environment, and to call for a detailed environmental impact study of the harms associated with GE Operations and Practices.

SECTION 4: Purpose

The purposes of this Article are:

1. to protect Maui County's Environment and Public Trust Resources from transgenic contamination by GE Operations and Practices;
2. to defend and promote the economic integrity of organic and non GE markets that are harmed by transgenic contamination by GE Operations and Practices ;
3. to protect Maui County from hazardous aspects of GE Operations and Practices , including but not limited to

increased Pesticide use;

4. to preserve the right of Maui County residents to reject GE Operations and Practices based on health-related, moral, or other concerns; and
5. to preserve Maui County's Environment and Public Trust Resources (with its unique and vulnerable ecosystems), while promoting the cultural heritage of the indigenous peoples of Maui and indigenous agricultural Operations and Practices.

This Article shall be liberally construed to fulfill those purposes.

Section 5: Temporary Moratorium.

1. It is unlawful for any person or entity to knowingly propagate, cultivate, raise, grow or test Genetically Engineered Organisms within the County of Maui until such time that the terms of the "Moratorium Amendment or Repeal" (Section 6, below) have been met.
2. Subsection (1) of this section does NOT apply to:
 - (a) the propagation, cultivation, raising, growing or testing of GE Organisms that are in mid-growth cycle when this chapter is enacted;
 - (b) GE Organisms that have been incorporated into any food or medicine in any manner already prepared for sale for human or animal consumption;
 - (c) any licensed health practitioner who provides diagnosis, care, or treatment to any human patient using products containing GE Organisms; and
 - (d) any fully accredited college or university that engages in non-commercial scientific research, medical research, or education using GE Organisms, provided that such activities are conducted under enclosed indoor laboratory conditions, with the utmost precautionary measures to prevent accidental release of GE Organisms into the outside environment.

Section 6: Moratorium Amendment or Repeal

1. The temporary moratorium provided in Section 6 shall remain in effect until amended or repealed by the Maui County Council as described in subsection 2 of this Section, or as is otherwise authorized by law.
2. The County Council may consider proposed amendments to, or repeal of, the Temporary Moratorium provided in Section 6 for any specific GE Operation or Practice if an Environmental and Public Health Impacts Study (EPHIS) described in Section 7 has been completed for such GE Operation or Practice. The passage of any proposed amendment or repeal of the Temporary Moratorium for any such GE Operation or Practice under this Section shall require: (1) County Council and citizens review of the EPHIS as detailed in Section 8.2.a; (2) a public hearing; (3) the affirmative vote of at least two-thirds (2/3) of the council membership; (4) a determination by the County Council that passage of the amendment or repeal pertaining to such GE Operation or Practice does not result in significant harm and will result in significant benefits to the health of present and future generations of Maui citizens, significantly supports the conservation and protection of Maui's natural beauty and all natural resources, including but not limited to land, water, air, minerals, and energy sources, as required under the Public Trust Doctrine embodied in the Hawai'i State Constitution, Article XI, Section 1, and the Environment.

Section 7: Environmental and Public Health Impacts Study (EPHIS).

1. Person or entities affected by and seeking release from the Temporary Moratorium in Maui County must provide Maui County the funding necessary to complete an Environmental and Public Health Impacts Study (EPHIS) as described in Section 2 and 3, below;
2. The County of Maui shall conduct an Environmental and Public Health Impacts Study (EPHIS) through a two-phase community-based process to address key environmental and public health questions related to large-scale commercial agricultural entities that engage in GE Operations and Practices and associated Pesticide use.

First Phase:

3. Within ninety (90) days of any person or entity providing Maui County the funding necessary to complete the EPHIS, there shall be a Joint Fact Finding Group (JFFG) chosen and convened by the Maui County Council of scientists and health experts free of GE industry ties and facilitated by an independent and non-biased professional consultant to determine the scope and design of the EPHIS. In determining the scope and design of the EPHIS, the JFFG shall provide notice to the citizens of Maui County and allow a thirty (30) day period for public input. The final scope and design and all results and all raw data of all studies shall be published on the County's website. The EPHIS must include, but shall not be limited to, research and analysis evaluating the extent to which:
 - (a) Transgenic Contamination from GE Organisms to non-GE organisms may occur;
 - (b) GE Organisms released into the environment may effectively be recalled from the environment;
 - (c) Pesticides associated with GE Operations and Practices used both as single Pesticide and as Pesticide combinations may contaminate the groundwater, surface water, oceans and reefs;

- (d) Pesticide laden air and dust from GE Operations and Practices may be harmful to the people and Environment;
- (e) Pesticide combinations associated with GE Operations and Practices resulting from two or more Pesticides are applied at the same time or within their period of active life (“Pesticide Cocktails”) have or have not been tested for safety and the extent to which they may be harmful to the people and Environment;
- (f) Horizontal Gene Transfer from GE Organisms between organisms of different species may occur; and
- (g) there is any correlation between birth defects and the proximity to extensive GE Operations and Practices occurring in Maui County and Kauai County.

Second Phase:

4. In the second part of the process, the EPHIS shall be conducted by a non-biased professional consultant independent of GE industry ties with oversight by the JFFG and shall be completed within eighteen (18) months after publication of the final scope and design of the EPHIS described in Part (a). The EPHIS shall allow a ninety (90) day public comment period including four (4) public hearings, including one on the island of Molokai. Any relevant information, data, comments or public concerns shall be addressed in the EPHIS. The EPHIS may make recommendations that include, but are not limited to, possible actions the County may take in order to address any significant effects on the Environment, Public Trust Resources, and public health. The final results and all raw data of all studies shall be published on the County’s website.

Section 8: Regulations

If necessary, the Department of Environmental Management or other appropriate County Department may enact and enforce regulations to implement this chapter, but it may not create any new exemption not listed in this chapter.

Section 9: Right of Action for Violations—Attorneys’ Fees

1. The Department of Environmental Management may bring an action in a court of competent jurisdiction to enjoin any person or entity from violating this chapter.

Civil Penalties

2. The Department of Environmental Management may assess a civil monetary penalty against any person or entity violating this chapter in the amount of:

- (a) \$10,000.00 dollars for a first violation;
- (b) \$25,000.00 dollars for a second violation; or
- (c) \$50,000.00 dollars for a third or subsequent violation.

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

Criminal Recourse

3. In addition to any fines described above, any person or entity, whether as principal, agent, employee, or otherwise, violating or causing or permitting the violation of any of the provisions of this initiative, shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not more than two-thousand dollars (\$2,000.00), or imprisoned not more than one (1) year, or both, for each offense. The continuance of any violation after conviction shall be deemed a new criminal offense for each day that the violation or violations continue.

Failure to Comply with Injunction

4. In addition to all other remedies, upon the failure, neglect, or refusal of any noncompliant person or corporation to remove Genetically Engineered Organisms after sixty (60) days of receipt of notice of noncompliance, the Director of Environmental Management (and Director’s agents, representatives, and assistants, sub-contractors) are authorized to enter the property and remove GE Organisms at the violator’s expense.

5. Any injured citizen of Maui County may, after giving notice of the alleged violation to the Maui Department of Environmental Management and the alleged violator and subsequently waiting at least sixty days, bring an action to enjoin violation of this chapter in any court of competent jurisdiction.

6. In a citizen suit action, the court may award to a prevailing plaintiff reasonable costs and attorneys’ fees incurred in investigating and prosecuting an action to enforce this chapter. Such an award may not include monetary damages, but only fee and cost recovery

Section 10: Severability

Every provision in this chapter and every application of the provisions in this chapter are severable from each other. If any application of any provision in this chapter to any person or group of persons or circumstances is found by a court to be invalid, the remainder of this chapter and the application of its provisions to all other persons and circumstances may not be affected. Furthermore, if any part or application of this initiative is held invalid or unenforceable, the remainder of this initiative shall be construed to have the broadest interpretation allowed by law which would render it valid and enforceable (in the spirit and in alignment with the intent of this initiative) and the remainder of the initiative’s application to other situations or persons shall not be affected. All constitutionally valid applications of this chapter shall be severed

from any applications that a court finds to be invalid, leaving the valid applications in force, because it is the County's intent and priority that the valid applications be allowed to stand alone. Even if a reviewing court finds a provision of this chapter invalid in a large or substantial fraction of relevant cases, the remaining valid applications shall be severed and allowed to remain in force. If any part or application of this chapter is held invalid, the remainder or its application to other situations or persons will not be affected.

Section 11: Definitions

"Crop" includes test crops, seed crops and farming crops.

"Environment" means all Public Trust Resources and all non-GE life forms, the ecosystems that support them, and the interrelationships between them.

"GE Operation(s) and/or Practice(s)" means both intended and unintended product(s) and process(es) of any kind that is commonly associated with the creation, propagation, cultivation, raising or growing of GE Organisms (including but not limited to seed crops, test crops, or farming crops), and includes but is not limited to Pesticide application, transgenic contamination, and contamination of land and water resources.

"Genetically Engineered" or **"GE"** (also commonly referred to as **"Genetically Modified"**, **"GM"**, **"Genetically Modified Organism"**, or **"GMO"**) means produced from an organism or organisms in which the genetic material has been changed through the application of:

- (a) 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
- (b) 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.

For purposes of this definition: **"In vitro nucleic acid techniques"** include, but are not limited to, recombinant DNA or RNA techniques that use vector systems; techniques involving the direct introduction into the organisms of hereditary materials prepared outside the organisms such as biolistics, microinjection, macro-injection, chemoporation, electroporation, microencapsulation, and liposome fusion.

"Organism": means any biological entity capable of replication, reproduction, or transferal of genetic material.

"Person" includes natural persons, partnerships, joint ventures, societies, associations, clubs, trustees, trusts, corporations, and all other entities, and all officers, agents, employees, and any other representatives thereof, in any capacity, acting either for oneself, one's heirs, or for any other person under personal appointment pursuant to law.

"Pesticide" is an umbrella term, including but not limited to:

- (a) any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or
- (b) any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant, and
- (c) any nitrogen stabilizer which has been declared a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act or Hawaii's Pesticide Laws, and
- (d) any herbicide.

"Public Trust Resources" as referred to in Hawai'i State Constitution, Article XI, Section 1 **"Conservation and Development of Resources"** means: **"Hawaii's natural beauty and all natural resources, including land, water, air, minerals, [and] energy sources."**

"Transgenic Contamination" refers to the unintended comingling of GE crops with non-GE crops.