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**A BILL FOR AN ACT**

RELATING TO FERTILIZER

**BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:**

SECTION 1. The legislature finds that fertilizer nitrates pose a significant threat to marine life decline and human health worldwide. Scientists from around the world agree that the primary causes of coral decline are related to global warming, fertilizer runoff, sewage, and overfishing. Research in 2007 led by a Stanford University professor on Kauai implicated that fertilizer is an important external source of nitrogen to coastal water. Excess nitrogen is an acute threat in Hawaiian coastal waters where corals are being degraded at alarming rates compared to historical data. The legislature brought attention to this issue during the regular session of 2017, and the legislature is committed to enacting the seventeen United Nations sustainable development goals as a priority for the regular session of 2018. This fertilizer runoff also recharges water supplies throughout the state used for drinking water and food production, containing nitrates which pose a risk to human health.

Research shows that reducing fertilizer runoff can dramatically improve the health of coral populations and water quality in Hawaii's coastal regions. Reducing fertilizer runoff can decrease the

nutrients available to invasive marine flora and algae. If nutrient levels remain too high, the invasive population can cause a decline in oxygen necessary for a healthy ecosystem and can outcompete populations of marine species that are crucial to coastal ecosystem health.

Ingestion of nitrate contaminated drinking water is also a main type of human exposure to nitrogen fertilizers. Adverse health effects of ingestion include, but are not limited to, thyroid cancer, hypertension, testicular cancer, stomach cancer, neural tube defects, diabetes, and blue baby syndrome.

Quick-release fertilizers, also referred to as soluble or readily available fertilizers, provide plants with rapid access to nitrogen, but can easily enter runoff or leach as they rapidly dissolve. In contrast, slow-release fertilizers, also referred to as insoluble or controlled-release fertilizers, release nitrogen at a rate more consistent with plants' needs and are more resistant to excess leaching and runoff.

The State must balance its need to protect Hawaiian coastal waters, coral reefs, and human health with the interest of fertilizer use. Therefore, any action taken to regulate fertilizer use must be done in a manner that does not jeopardize the nutrient needs for plant growth in all climate regions of Hawaii and provide access and instructions for use of approved fertilizers.

The legislature further finds that there are reasonable substitutes to quick-release fertilizer as well as best management practices (BMP) that can be implemented. The legislature acknowledges the currently limited availability of slow-release products within consumer facilities for residential use and that the integration of such products into stores may be delayed due to product turnover rates.

The legislature finds that given a reasonable time frame for calibration of fertilizer BMPs to Hawaii, it is possible for fertilizer distributors to provide products in a manner that will adhere to the regulations of the sale, composition, packaging, labeling, retail and wholesale distribution, and formulation, including nutrient content level and release rates, of fertilizer.

SECTION 2. Section 342E-1, Hawaii Revised Statutes, is amended to read as follows:

"§342E-1 Definitions. As used in this chapter, unless the context clearly requires otherwise:

"Department" means the department of health.

"Director" means the director of health.

"Fertilizer distributor" means any commercial entity which sells, offers to sell, or distributors for sale fertilizers within the borders of the state of Hawaii.

"Non-agricultural fertilizer applicator" means any entity who performs the application of a fertilizer or who has day-to-day control of the application (i.e., they are authorized to direct workers to carry out those activities), on land not designated as agricultural lands as defined in HS 46-4 - County zoning, that result in a discharge to State waters.

"Nonpoint source pollution" means water pollution that does not originate from a point source.

"Person" means any individual, partnership, firm, association, public or private corporation, federal agency, the State or a county, trust, estate, or any other legal entity.

"Point source pollution" means pollution from any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture.

"Pollution" means water pollution.

"Program" means the nonpoint source pollution management and control program established within the department pursuant to this chapter.

"Quick-release" refers to a fertilizer that contains nitrogen in forms such as nitrate-N, Ammoniacal-N, Urea-N, and/or water

soluble nitrogen. This term is used interchangeably with "soluble" or "readily available".

"Slow-release" refers to a fertilizer containing nitrogen in a form that delays its availability for plant uptake and use after application or that contains a mechanism to intentionally extend its availability to the plant. Examples of slow-release nitrogen sources include: sulfur coated urea (SCU), urea-formaldehyde, ureaform, polymer coated urea (PCU), and biosolids. This term is used interchangeably with "controlled" and "insoluble."

"State waters" means all waters, fresh, brackish, or salt, around and within the State including, but not limited to, coastal waters, wetlands, streams, rivers, drainage ditches, ponds, reservoirs, canals, groundwaters, and lakes; provided that drainage ditches, canals, ponds, wetlands, and reservoirs required as a part of a water pollution control system or an irrigation system are excluded.

"Wet season" refers to November 1 through March 31, which is the approximate annual time frame during which Hawaii experiences heightened frequency and intensity of precipitation events."

SECTION 3. Chapter 342E, Hawaii Revised Statutes, is amended by adding a new section to be appropriately designated and to read as follows:

§342E-2 Fertilizer restrictions. (a) As effective by January 1, 2025, no distributor shall sell, offer to sell, or distribute for sale fertilizers to be used on non-agricultural lands that contain greater than 50% total nitrogen by weight in quick-release form. In addition, at the aforementioned effective date, no applicator shall apply any slow-release fertilizer during the wet season, aside from the exempt cases. Distributors are also responsible for providing information on fertilizer best management practices and approved rates of application on each product. The following restrictions shall apply:

- (1) Non-agricultural fertilizer applicators cannot use, or administer the use of, fertilizers with nitrogen content composed of greater than 50% quick-release forms at any time of year;
- (2) Non-agricultural fertilizer applicators cannot use, or administer the use of, fertilizers, regardless of their nitrogen content, during the wet season;
- (3) The maximum application rate on non-agricultural lands for fertilizers with nitrogen content composed of less than 50% quick-release forms outside of the wet season is:
  - (A) Set at one pound per 1000 square feet;
  - (B) Shall be updated every 5 years after the effective date of this bill to account for new science and fertilizer products;

(5) Fertilizer labels, either reprinted and distributed by the fertilizer distributor if not on the original packaging, must include guaranteed analysis of nutrients, total nitrogen composition, and percentage of slow-release nitrogen.

(4) Fertilizer distributors must distribute information on Hawaii fertilizer BMPs with all fertilizers sold.

(b) Non-agricultural fertilizer applicators are exempt from §342E-2 in the following cases:

(1) The use of seeds, potting mix, or other substrate materials that are sold or distributed with fertilizers incorporated. The pre-mixed fertilizer does not need to adhere to regulations, but all additional fertilizers applications must comply; and

(2) New construction projects that involve landscaping. The initial application of fertilizers for these projects do not need to adhere to regulations, but all following fertilizer applications must comply.

SECTION 4. This Act does not affect rights and duties that matured, penalties that were incurred, and proceedings that were begun before its effective date.

SECTION 5. New statutory material is underscored.

SECTION 6. This Act shall take effect upon its approval.

INTRODUCED BY: \_\_\_\_\_

**Report Title:**

Relating to Fertilizer

**Description:**

This bill addresses the human and environmental risks of excess nitrate use on non-agricultural lands in Hawaii, and introduces regulation of fertilizer types available for sale as well as the application methods of approved fertilizer.