Food Processing By-Products Ordinance & Regulations

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Stanislaus County Food Processing By-Product Program

- Yesterday:

  A cooperative association to track by-product use, and to control nuisances (flies, odors, and vectors).

- Tomorrow:

  A more formal program, part of the County Code, to track by-product use, control nuisances, and...protect the surface and groundwater of the State of California.

Regional Water Quality Control Board and the Tentative Resolution

- √ Workplan
- √ Literature Review
- √ Technical Review
- √ Manual of Best Practices
- _ County Ordinance

Proposed Ordinance and Regulations

- Developed in collaboration with:
  - Food Processing Site Use Committee;
  - Food Processors;
  - Dr. Sajeemas (Mint) Pasakdee, CSU, Fresno
  - Dr. Horacio Ferriz, CSU, Stanislaus
  - Nat Dellavalle, CPAg/SS, Dellavalle Laboratory, Inc.

Proposed Chapter 9.88
Food Processing By-Products

- Definitions
- Permit required to land apply, direct feed, dehydrate, or compost by-products
- One-year term for permits
- Research project fee ($0.10 per ton)
- Performance bonds and insurance
- Conditions for suspension or repeal of permit and appeal process

Regulations

- Part of Ordinance by reference
- Definitions
- Application contents
- Plan of Operation contents
- Specific conditions for the land application, direct feeding, dehydration, and composting of by-products

Protection of Surface and Groundwater

- Permit holders are prohibited from using fruit or vegetable by-products that, because of processing, contain high concentrations of salts or other constituents that are agriculturally or environmentally deleterious.

Protection of Surface and Groundwater (cont.)

- Land application of food processing rinse water, saline waste streams such as boiler blow-down, and ion exchange reject are prohibited.

Protection of Surface and Groundwater (cont.)

- Crops shall be grown on the land application areas. Crops shall be selected based on nutrient uptake capacity and water needs.
- By-products applied to land shall be at agronomic rates.

Protection of Surface and Groundwater (cont.)

- By-products shall be analyzed for moisture, total nitrogen, organic carbon, sodium, chloride, potassium, calcium, magnesium, phosphorous, pH, and total solids versus volatile solids.

Protection of Surface and Groundwater (cont.)

- Soil samples from fields where by-products have been applied shall be analyzed for cation exchange capacity, total nitrogen, nitrate and ammonium nitrogen, phosphorous, potassium, magnesium, calcium, sodium, chloride, soluble salts, pH, total organic carbon, and ESP (exchange sodium percentage).

Protection of Surface and Groundwater (cont.)

- Applications of by-products to land should not create saturated soil conditions that could be degrading of underlying groundwater by overloading the shallow soil profile and cause organic carbon, nitrates, other salts and metals to percolate below the evaporative root zone.

Protection of Surface and Groundwater (cont.)

- Land application of by-product to any sub-area or irrigation check not having a fully functional tail water/runoff control system is prohibited.

Protection of Surface and Groundwater (cont.)

- Site personnel are required to be familiar with the proper use and function of all on-site water control structures which can allow discharge. All valves that can allow discharge must be in operational and in good repair.

Protection of Surface and Groundwater (cont.)

- By-product receiving pads shall be of concrete or asphalt, free of cracks or openings that would allow by-products or liquid to drain or leach into the soil.

Over-regulation?

- Ordinance & Regulations apply only to sites using food processing by-products!
- Some sites may have individual or general Waste Discharge Requirements as well because of the potential magnitude of leachate and storm water impacts.

Research Project Update

- Initial phase complete.
- Scope of Work being developed for the second phase, to address data gaps identified during the Literature and Technical reviews; and, develop responses to questions and concerns likely to arise from the CVRWQCB's review of the submitted documents.

Questions?