Environmental Health Response to E. coli 0157:H7

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Topics

- E. coli 0157:H7 Facts
- Developing Collaborative Efforts
- Environmental Health Response to potential sources of E. coli 0157:H7
- Summary, what we know and don’t know!
E. coli 0157:H7
Facts:

Source: Center for Disease Control (CDC) & Prevention website

- “E. coli O157:H7 is one of hundreds of strains of the bacterium *Escherichia coli*.”

- “The organism can be found on most cattle farms, and it is commonly found in petting zoos and can live in the intestines of healthy cattle, deer, goats, and sheep.”
E. coli 0157:H7

Facts continued

- “Escherichia coli O157:H7 infection often causes severe bloody diarrhea and abdominal cramps. Sometimes the infection causes non-bloody diarrhea or no symptoms. Usually little or no fever is present, and the illness resolves in 5 to 10 days.”

- “diagnosed by detecting the bacterium in the stool”

- “Most people recover without antibiotics or other specific treatment within 5 to 10 days.”

- “A small proportion of persons with hemolytic uremic syndrome (HUS) have immediate complications with lifelong implications,"

Source: Center for Disease Control & Prevention website
“Cattle are the principal source of *E. coli* O157 infection; they carry *E. coli* O157 in their intestines.”

“Cattle manure is an important source of *E. coli* O157. Manure can contaminate the environment, including streams that flow through produce fields and are used for irrigation, pesticide application, or washing. Collaborative efforts are needed to decrease environmental contamination and improve the safety of produce.”

Source: Center for Disease Control & Prevention website
How can we develop collaborative efforts?

Environmental Health (EH) has identified several areas of concentration based on CDC, FDA and CA DHS investigations. Preliminary information implicates or suspects at one time or another that the following:

- Cattle manure
- Feral pigs
- Wild geese
- Floodwater, stormwater, illicit waste discharges
- Failing septic systems,
- Farm worker field sanitation practices, Field Toilets
- Composting operations
EH Response

Cattle manure/Composting operations:

- EH Regulates Compost facilities
- Enhanced compost inspections especially those Within 100’ of any waterway or drainage system.
- Increased frequency of inspections and sample analysis.
- Ensure all water drainage remains on site.
- Discouraging small farm compost operations or creating voluntary compliance to current regulations or introduce an ordinance to regulate these sites. Unknown quantity of small compost operations in Monterey County.
What measures need to be taken or can be taken to control wild animals?

- Feral pigs & Deer?
- Fencing?
- Canadian Geese?
EH Response

Septic Systems

- EH will continue enforcement of existing Onsite Waste Water programs per the Mo. Co. Code. The EH Division is the regulatory agency for disposal of domestic waste of less than 2500 gallons per day by the Regional Water Quality Control Board (RWQCB).

- The installation of all septic systems must be no less than 100 feet from surface water and water wells.

- EH Division staff conducting any mandated inspection on farm land or private property will ensure that no violations are observed that would lead to possible surface water contamination or contamination of produce.
EH Response

Field Toilet Inspection Program

EH is currently implementing a field toilet registration and inspection program focusing on hand washing facilities & the availability & proximity of field toilets to all farm workers in all agricultural settings. This includes providing potable water from an approved source.
EH Response

Field Toilet Inspection Program

- EH has been and will continue to work with farm labor contractors and farm managers on the new program requirements and implementation is planned by 7-1-07. Proposed legislation will be incorporated to EH inspection program. Efforts are in place to establish a program that is accepted in the tri county area.
EH Response

Sewage or waste water releases & emergency response procedures

- Environmental Health Division, in conjunction with the Department Of Health Services, will ensure that any and all produce impacted by sewage or wastewater releases of any kind will be removed from harvesting to protect public health.
1. Report the spill to EH, 754-7391
2. Stop or contain the release and contain the spill area
3. Secure the area
Ensure everyone wears PPE

Prevent Cross Contamination

Disk the crops per DHS directive.
The Environmental Health Division will work closely with the Monterey Regional Storm Water Permit Management Group in its storm water management plan to include Best Management Practices for stormwater discharges.

- The Monterey Regional Storm Water Management Program will help to eliminate or reduce impacts from wastewater discharges into creeks from cities and communities in the Salinas Valley.
EH Response

- EH will continue to monitor creeks and drainage systems to visually inspect for illegal disposal of Solid Waste, animal carcasses, animal fecal matter and illegal discharges of waste water. Next survey in April 2007.

- EH will contact all violators of Mo. Co. Codes to eliminate potential impacts on the agricultural community.

- EH will enhance it’s Illegal Dumping Prevention Program by encouraging participation of agriculture in the elimination of illegal dumping along or within drainage systems in Monterey County.
Environmental Impacts of littering and illegal dumping!

Monterey County Clean Up Day, April 19, 2008 to promote anti litter program and public/industry/agricultural participation in Adopt-a-Highway & Adopt-a-Road programs as well as the illegal dumping voucher program.
Summary

- We know E. coli 0157:H7 originates from animal intestines.
- We don’t know how E. coli 0157:H7 gets from animal intestines to produce fields.
- We know what agricultural/residential/industrial practices we need to focus on.
- We know we have to work collaboratively to address these and other emerging concerns.
- We know that failure may be devastating to the agricultural industry.
- Working together we can reestablish consumer confidence in agricultural practices.
Questions?

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