Coffee County Pesticides
July 1, 2009

On April 13, 2009, Coffee County Health Department staff contacted CHP with concerns about a possible cancer cluster and the potential for exposure to high levels of pesticides. In Coffee County, food and non-food crops such as grapes, cotton, wheat, soy, and tobacco are grown. The staff member is concerned about the potential for exposure to pesticides, specifically chemicals applied to grape crops, and about the risk for endocrine disruption and cancer.

To address these concerns, CHP conducted a review of available regulatory, public health, and general information on chemicals used in farming grapes. Pesticides are regulated by the U.S. Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), and the Georgia Department of Agriculture (GDA). Pesticide chemicals are used, sold, and distributed under the Federal Insecticide, Fungicide, and Rodentacide Act (FIFRA), the Federal Food, Drug, and Cosmetic Act (FFDCA), and Food Quality Protection Act (FQPA). FIFRA was passed in 1972, and requires that any pesticide product be registered prior to manufacture, sale, or distribution. FIFRA also requires that pesticides not pose a human dietary risk from residues that result from uses inconsistent with labeling standards under the FFDCA of 1938. Under FIFRA, pesticides are categorized as restricted or general use, and pesticide labels indicate uses that are lawful for that pesticide. EPA further regulates food crop pesticides under the Food Quality Protection Act (FQPA) of 1996, which amended FIFRA and FFDCA to set stricter safety standards for new and old pesticides, and to make uniform requirements for processed and unprocessed foods. Those who apply pesticides are required to be certified by GDA.

Agricultural activities have been regulated in Georgia since the development of the GDA in 1874. Historically, chemical pesticides were applied more heavily, until many were banned in the 1970s under FIFRA. Since then, chemical pesticide use has decreased and many safer, more species-specific chemicals are used.

Pesticides used for food crops are more heavily regulated and have different criteria/standards than those used for non-food crops. In addition to applicable FIFRA laws, FFDCA provides laws about maximum residue levels for pesticides used on food crops known as “tolerances”. Both FIFRA and FFDCA were amended in the last 15 years to establish additional restrictions on pesticides and their use.

All these federal laws must consider human and animal health, environmental quality, social and economic factors. Federal and state laws and regulatory activities ensure that pesticide application minimizes effects on wildlife.

I spoke with the GDA Commercial Pesticide Section which provided me with information about pesticide regulation and use on grape crops in Georgia. Grape growing in Georgia is used primarily for food crops, specifically for wine production. Pesticides, specifically herbicides, when used, are applied between grape rows and not directly on the fruits themselves. GDA also indicated that during growing season, fungicides are applied to grape plants for maintenance. Among the herbicides used for grape plants is Round Up®, which is registered and approved for use in the home as well as on farm crops; however herbicides are not always applied during each growing season. Different chemicals have different environmental fates and transports, effects on wildlife, and potential effects on humans, all of which are minimized by GDA through the application of federal laws.

More information about pesticides, pesticide regulation, and pesticide use in Georgia can be obtained from the Commercial Pesticide Section of GDA, the University of Georgia Cooperative Extension county office, and the National Pesticide Information Center. Residents are referred to the University of Georgia Cooperative Extension to address any questions they may have about sampling for pesticides, and are encouraged to fax us results if they choose to conduct any sampling.

Endocrine disruptors are substances that act like hormones in the endocrine system and disrupt the physiologic function of estrogenic hormones. Studies have linked endocrine disruptors to adverse health effects in animals, giving rise to concerns that low-level exposure might cause similar effects in humans. However, there is a large gap between high exposures seen in some laboratory experiment versus the relatively low levels found in the environment. The dosage

objection might be overcome if low concentrations of different endocrine disruptors are synergistic. All people are exposed to chemicals with estrogenic effects in their everyday life, because endocrine disrupting chemicals are found in low doses in thousands of products. Endocrine disruptors include Dioxins, PCBs, PAHs, furans, phenols and several pesticides, most prominent being insecticides like endosulfan and DDT and its derivatives. None of these chemicals are used on grape or other crops in Coffee County.

To address concerns about a possible cancer cluster in his community, we requested cancer data analyses from the Georgia Comprehensive Cancer Registry (GCCR). GCCR analyzed cancer data for Georgia, Coffee and Irwin Counties, and for Zip Code 31798. In summary, there are no cancer types that are found for the county or zip code that have significantly higher rates or numbers of cases than found across the state. Additionally, the top cancer sites found for Zip Code 31798 and Coffee County are the most common types of cancers.

According to the American Cancer Society and other sources, one out of three Americans now living will eventually develop cancer. Cancer is the second leading cause of death in the United States following heart disease. Given the frequency of cancer diagnosis among all Americans, it is not surprising to know that many people in a neighborhood or workplace have a cancer diagnosis.

Public Health Recommendations: There are no recommendations.