

Study of pesticide residues in food

Pesticide Data Program (2015) by The United States Department of Agriculture

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**OBJECTIVE OF STUDY**

In the past, few people identified risks associated with foods as a factor in selection. However, increasing concerns of Americans about health are affecting food choices. Many people are eating less to avoid the risk of obesity, reducing sodium to lower the risk of high blood pressure, and reducing cholesterol to lower the risks of heart disease.

Recently, increased attention has been focused on chemical residues in food. The presence of minute residues of pesticides in food has caused some people to ask, “Is our food supply safe?”

Current evidence strongly indicates that our food is safe. Food and Drug Administration (FDA) officials recently stated that “pesticide residues occurring in foods in the U.S. pose a very minor if not negligible risk to public health.” However, public perceptions of risks from pesticides differ markedly from this official viewpoint. They also differ from actual risks attributable to these products. A 1982 study compared the causes of accidental deaths, as reported to insurance companies, with the risks as perceived by college students, women voters, and business people. College students ranked pesticides as more dangerous than motorcycle riding; women voters ranked pesticides as more dangerous than hunting; and business people felt they were more dangerous than commercial aviation. The actual rankings of these in relation to all causes of accidental deaths were as follows: motorcycles (6th), hunting (14th), commercial aviation (19th), and pesticides (28th).

**ABOUT THE DATASET**

This dataset contains information on pesticide residues in food. The U.S. Department of Agriculture (USDA) Agricultural Marketing Service (AMS) conducts the Pesticide Data Program (PDP) every year to help assure consumers that the food they feed themselves and their families is safe. Ultimately, if EPA determines a pesticide is not safe for human consumption, it is removed from the market.

The PDP tests a wide variety of domestic and imported foods, with a strong focus on foods that are consumed by infants and children. EPA relies on PDP data to conduct dietary risk assessments and to ensure that any pesticide residues in foods remain at safe levels. USDA uses the data to better understand the relationship of pesticide residues to agricultural practices and to enhance USDA’s Integrated Pest Management objectives. USDA also works with U.S. growers to improve agricultural practices.

**INTERESTING INSIGHTS THAT CAN BE DERIVED**

* What are the most common types of pesticides tested in this study?
* Do certain states tend to use one particular pesticide type over another?
* Does pesticide type correspond more with crop type or location (state)?
* Are any produce types found to have higher pesticide levels than assumed safe by EPA standards?
* By combining databases from several years of PDP tests, can you see any trends in pesticide use?

**Dataset**: <https://www.kaggle.com/usdeptofag/pesticide-data-program-2015>