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THE USE OF PESTICIDES AND THE HAZARDS CAUSED BY PESTICIDE RESIDUES

Pesticides are used to prevent diseases and insect pests on crops, garden plants and cash crops, so as to ensure crop yield and improve economic benefits and commercial value. However, the irrational use of pesticides will cause harm to the environment, pollute the soil, water and air, and then directly or indirectly cause harm to human health. At present, only 10%-20% of pesticides are effectively used, while the remaining 5%-30% enter the atmosphere through volatilization and 40%-60% penetrate into soil and groundwater. The residues of pesticides and their harmful degradation products in grains, fruits, water, oil and other related products will cause serious harm to the health and safety of animals, especially people, who depend on them for food. According to statistics, there are about 4 million cases of pesticide poisoning every year in all countries in the world, and 7.5% of them die from poisoning. In China, nearly 1 million cases of pesticide poisoning are reported every year, with a mortality rate of about 10%.

There are two main ways of pesticide poisoning in daily life. One is that it enters the human body through biological enrichment in the food chain. Additionally, the living environment is polluted by pesticides. Among them, pesticide poisoning caused by pesticides entering human body through the function of food chain is the most common pesticide poisoning phenomenon, which is not easy to detect and avoid.

In recent years, due to the excessive pesticide residues caused by many problems, has attracted widespread attention, the specific harm in the following aspects: the damage of ecological balance, the hazards to human health, the influence on agricultural development and the influence on agricultural and sideline products export trade. Firstly, in the process of agricultural production, most of the pesticides used mainly enter the surrounding environment through various ways, including direct application, seed dressing, spraying and water flow into the ecological environment, resulting in serious pollution of soil, atmosphere and water.

It's easy for pests and bacteria in the environment to develop drug resistance, and even cause the destruction of the ecological balance and the loss of harmony in nature, resulting in a vicious circle. Secondly, Pesticide sprayed on crops or weeds, pesticide residues can enter the human body through the respiratory tract, digestive tract, skin and other ways, causing different degrees of harm to the human body. Additionally, under the condition of market economy, the pesticide residues in a certain extent, affected the development of agriculture in China, especially the unreasonable use of pesticides, and even caused by the abuse of crop seed looks like the bud is weak, the poor, such problems as low germination rate, poor quality and late mature, and the planting of crops diseases and insect pests increased, low quality, large production, even lose. Last but not least, in view of the problem of pesticide residues, governments around the world have formulated and introduced the corresponding pesticide use norms and laws and regulations, to ensure the correct and moderate use of pesticides, and limit the pesticide residues in agricultural products. However, the development level of productive forces and national conditions of different countries are different, and the provisions of pesticide residue limit vary greatly, which hinders the trade of agricultural products in various countries in the world to a certain extent, and also causes great economic losses.

With the progress of society, people pay more attention to health and safety than ever before. The non-standard management and use of pesticides seriously threaten the safety of video and agricultural ecological environment, and potentially threaten the health of human beings. Therefore, the study of rapid, efficient, convenient and practical pesticide residue analysis method has great theoretical and practical significance for the protection of ecological environment and the implementation of food safety strategy.