

PLANT PROTECTION IN POST-SOVIET KAZAKHSTAN: THE LOSS OF AN ECOLOGICAL PERSPECTIVE

PhD student Kazbek Toleubayev

How is plant protection — the way farmers control pests, diseases, and weeds — shaped by politics, economics, and society. It focuses on Kazakhstan and compares two periods: the Soviet era (before 1991) and the period after Kazakhstan became independent.

The study shows that plant protection does not exist on its own. It is influenced by the broader political and economic system of a country. When those systems change, farming practices change too.

During the Soviet period, Kazakhstan used an approach called Integrated Pest Management (IPM). This method focused on ecological and sustainable solutions. Scientists and farmers worked together to control pests in ways that protected the environment. Chemicals were used, but they were only one part of a broader strategy that included biological control, monitoring, and prevention.

After 1991, this approach changed dramatically. Pest control became heavily focused on pesticides. Instead of using a mix of ecological methods, chemical spraying became the main solution.

This shift is surprising because, globally, many countries have been moving toward more sustainable farming. So why did Kazakhstan move in the opposite direction?

The thesis argues that several major changes caused this shift:

- The agricultural system was reorganized after independence.
- State-run pest control services were dismantled.
- Research institutions and farmer advisory services were weakened.
- Pesticide companies strongly promoted their products.

As a result, the way people thought about pest control changed. Sustainable practices that had been important during the Soviet period were gradually abandoned.

In conclusion, Kazakhstan needs to rethink the role of government in plant protection. Without stronger public policy and support systems, harmful pests will continue to threaten food security. At the same time, excessive and careless pesticide use can damage human health and the environment.

The main message of the study is simple: plant protection is not just about killing pests. It is deeply connected to political decisions, economic structures, and social organization. If Kazakhstan wants a more sustainable agricultural future, the government must play an active role

in supporting research, education, and environmentally friendly pest control methods. This would benefit farmers, consumers, and society as a whole.