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Management Strategies for Hormonally Active Agrochemicals





CONFLICT OF INTERESTS

A minimum application of chemicals is indispensable for the protection of plants and animals in high return-oriented agriculture. However, the use of plant protection products also carries the potential of serious hazards for humans and the environment. Of particular concern here are chemicals that can disturb an organism's hormone system. The question of which precautionary measures are appropriate for dealing with such substances remains disputed. The interest in their use and the demand for protection pose a fundamental conflict of interests and a purely legal approach to the problem quickly confronts its limits. Thus, the starting point for this research project is: What strategies for the management of hormonally active agrochemicals can fully realise the entire spectrum of handling options?



FOCUS ON ENDOCRINE DISRUPTION

In the European Union, more than 200,000 tons of plant protection products are deployed each year – roughly 30,000 thereof solely in Germany. Part of this enters the food chain and the water cycle either via the soil and air or through the plant itself. Which of today's over 300 approved active agents can disrupt an organism's endocrine system is often a matter of dispute. There are still no conclusive, generally accepted, ecotoxicological test procedures. However, the potential hazards are considerable. For example, recent research results confirm the suspicion that there is a relationship between the increased occurrence of hormonally active chemicals in the environment and the observed rise in specific disruptions of the reproductive, nervous and immune systems in humans and animals.



LIMITS TO KNOWLEDGE

We still lack a sound scientific basis for assessing the risks to our food and drinking water supplies, ecosystems and human health. For example, organisms are exposed to a whole cocktail of chemicals in their environments. According to the current state of knowledge, it is considered probable that negative effects – such as disturbance of the hormone system – are cumulative here. It remains unclear how such combined effects can be taken into consideration in the risk assessment of agrochemicals. Due to this uncertain scientific basis, an evaluation of the higher legal interest in cases of doubt is always dependent on the needs, interests and values of the different stakeholders. Rigid bodies of rules cannot adequately resolve this constantly changing, conflict-laden situation.



PRECAUTION BY COOPERATION

Cooperative strategies can decisively strengthen precaution in dealing with hormonally active agrochemicals. Prerequisite for the success of such an approach is that each of the societal groups involved is provided with its own options for action. In *start₂* these are determined by investigating the areas "Development of Active Agents", "Handling of Agrochemicals", and "Technical Emissions Management". To ensure the practical relevance of the results, farmers are consulted about their experience in the operational handling of agrochemicals and with the current statutory regulations. In addition, an expert dialogue will be initiated between representatives of agricultural practice, consultancy and administration, the chemicals industry, water management bodies, environmental and consumer associations and the Administration.