



CATI

Center for Advanced Technology and Innovation

Ag Chemical Leaching Inhibition with Polymers

Description: Researchers at International Specialty Products, a global chemical company located in Wayne, NJ developed leaching inhibition technology based on an expressed need by the agricultural industry to reduce leaching of specific actives, especially through more porous soil areas of the country.

Patent Listing:

1. **US Patent No. 5,229,354**, Issued 07/20/93, "Leaching Inhibition of Crop Treating Chemicals with Nitrogen Containing Polymers"
2. **US Patent No. 5,229,355**, Issued 07/20/93, "Leaching Inhibition of Crop Treating Chemicals with Polymers"
3. **US Patent No. 5,231,070**, Issued 07/27/93, "Leaching Inhibition of Crop Treating Chemicals with Lactam Containing Polymers"
4. **US Patent No. 5,283,228**, Issued 02/01/94, "Leaching Inhibition of Crop Treating Chemicals with Amino Containing Polymers"

Market Potential: It is the herbicide product category that accounts for most leaching to underground water within the agricultural industry. Total global herbicide sales are \$15.9 billion, with 16 percent of those sales involving leachable herbicides, resulting in an estimated \$2.5 billion leaching herbicide sales market. CATI is still in the process of reviewing other market segments with their relative sales potential.

Benefits:

- Testing showed a significantly lower rate of pesticide movement in the soil by 20-50%.
- Recognizing the EPA concerns (especially on products containing Atrazine), leaching inhibition technology could save millions of dollars in research and development and testing, as well as the lengthy time process of introducing new products into the Ag pesticide markets.

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- Extends the life of current products on the market, while offering an environmental friendly alternative.

Applications:

- Agricultural Market for Producers and Herbicide and Pesticide Formulations
- Consumer Market for Producer of Lawn Care Products
- Environmental Groundwater Remediation Firms

Development Stage: Development steps include further polymer testing, dose level and effectiveness in lab for active soils. A proper deliver system and registration of active/concentration is required.

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