

HF3751 - 0 - Pesticide and Fertilizer Coatings; Biodegradable

Chief Author: **Rick Hansen**
 Committee: **Agriculture Finance and Policy**
 Date Completed: **3/7/2022 4:06:25 PM**
 Agency: **Agriculture Dept**

State Fiscal Impact	Yes	No
Expenditures	X	
Fee/Departmental Earnings	X	
Tax Revenue		X
Information Technology	X	
Local Fiscal Impact		X

This table shows direct impact to state government only. Local government impact, if any, is discussed in the narrative. Reductions shown in the parentheses.

State Cost (Savings)	Biennium			Biennium		
	Dollars in Thousands	FY2021	FY2022	FY2023	FY2024	FY2025
General Fund	-	-	371	358	358	
Total	-	-	371	358	358	
Biennial Total			371			716

Full Time Equivalent Positions (FTE)	Biennium			Biennium	
	FY2021	FY2022	FY2023	FY2024	FY2025
General Fund	-	-	2.5	2.5	2.5
Total	-	-	2.5	2.5	2.5

LBO Analyst's Comment

I have reviewed this fiscal note for reasonableness of content and consistency with the LBO's Uniform Standards and Procedures.

LBO Signature: Jim Carlson **Date:** 3/7/2022 4:06:24 PM
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State Cost (Savings) Calculation Details

This table shows direct impact to state government only. Local government impact, if any, is discussed in the narrative. Reductions are shown in parentheses.

*Transfers In/Out and Absorbed Costs are only displayed when reported.

State Cost (Savings) = 1-2		Biennium			Biennium	
Dollars in Thousands		FY2021	FY2022	FY2023	FY2024	FY2025
General Fund	-	-	-	371	358	358
Total		-	-	371	358	358
Biennial Total					371	716
1 - Expenditures, Absorbed Costs*, Transfers Out*						
General Fund	-	-	-	371	358	358
Total		-	-	371	358	358
Biennial Total					371	716
2 - Revenues, Transfers In*						
General Fund	-	-	-	-	-	-
Total		-	-	-	-	-
Biennial Total					-	-

Bill Description

Minnesota Statutes 2020, section 18B.07, is amended by adding a subdivision to read: Subd. 9. Certain pesticide coatings prohibited. A person may not sell, offer for sale, or apply a pesticide coated with plastic or another material that is not readily biodegradable.

Minnesota Statutes 2020, section 18C.201, is amended by adding a subdivision to read: Subd. 8. Certain fertilizer coatings prohibited. A person may not sell, offer for sale, or apply a fertilizer coated with plastic or another material that is not readily biodegradable.

Assumptions

Pesticides contain active ingredients and inert ingredients. Active ingredients are the chemicals that control the target pest while inert ingredients are included in the pesticide but do not act directly to control the pest. A plastic (polyurethane, polyurea), starch or other materials coating on a pesticide would fall under the definition of inert ingredients (www.epa.gov/pesticide-registration/inert-ingredients-regulation). FIFRA requires that the "total percentage of all inert ingredients" in a pesticide must be listed on the pesticide product label. However, there is no statutory or regulatory requirement to disclose all inert ingredient information. Since coatings fall under the definition of inert ingredients, we do not know the composition or properties of the coatings. Additionally, there is not a standard category of products in which plastics or other not readily biodegradable materials could be expected to be found. Both dry and liquid formulations of herbicides, insecticides, fungicides, disinfectants, etc. may be coated with some material to protect the active ingredient from breakdown by sunlight, increase handler safety, or to reduce odor.

An example of a type of pesticide formulation which may contain polyurethane or polyurea plastic coatings are microencapsulated products or granule products. Currently, 48 microencapsulated products are registered for use in MN. However, we do not know how many of them are coated with plastics or other not readily biodegradable materials. Product labels of these products do not list the composition of coatings or other inert ingredients. The Material Safety Data Sheets (MSDS) for most of these products do not list the composition of the coatings, however some might list them as additional ingredients. The information listed in the MSDS is limited and is not adequate to determine if the product is plastic or "readily biodegradable". Likewise, there may be products used for treating seed which may be coated with plastics and other not readily biodegradable materials. However, we are unable to quantify the number of seed treatment products which may be coated with plastics and other not readily biodegradable materials. It is not clear what the chemical composition of a material would be to meet the definition of a plastic under the bill or what timeframe is considered "readily biodegradable". The coating materials and coating processes vary among manufacturers and are likely to have unique chemistries and to be considered proprietary information by the company.

Fertilizers are coated with polymers to allow release of nutrients in a timely and targeted way to plants. Fertilizer registrants are required to disclose the analysis of nutrients which are meant to serve as plant food and the sources from which the ingredients in the product are derived. Some information about composition of coatings might be listed on the product Material MSDS; however, the information is limited and product manufacturers are not required to disclose this information. The information would not be adequate to determine if the product is plastic or "readily biodegradable". The coating materials and coating processes vary among manufacturers and may be considered proprietary information by the company. The European Union Commission proposed rules to restrict some intentionally added microplastics in products, including polymers used in fertilizers. To the best of our knowledge, fertilizer companies have not been able to find a consistent substitute that is considered more readily biodegradable and still have the ability to consistently release fertilizer over time.

Given the information gaps noted above it is not possible to develop a list of pesticide or fertilizer products that would be restricted as a result of this bill. Further, the process for evaluating the composition and degradability of these coatings may be highly technical and require additional testing and additional MDA staff resources.

This bill may impact the revenues generated from pesticide registration fees and the sales fee. However, it is not possible to quantify the potential fiscal impact of this bill on the revenue generated from pesticide registration fees and sales fee.

We do not anticipate large impact on the fertilizer revenues because alternative fertilizer products would be used, and the overall amount of fertilizer used in the state would not change significantly. Fertilizer revenue is based on the amount (tonnage) sold and we do not anticipate the amount of fertilizer used, or the related revenue, would be impacted by this bill.

The bill will require changes to MN statute 18B for requiring registrants to disclose information about the inert ingredients in pesticide products. This change may impact the pesticide registration and the enforcement programs.

The bill will require staff time to make changes to all pesticide and fertilizer registration forms to require all registrants to disclose if their products contain any coatings with not readily biodegradable materials. Additional staff time for research and to correspond with companies that produce these products may also be required.

The bill will require changes to the Departments Licensing Information System to identify pesticide and fertilizer products coated with plastics and other not readily biodegradable materials.

Currently there is no standard, criteria, or guidance to determine biodegradability of coated materials, the bill will require standardized analytical methods for analyzing not readily biodegradable coating materials in pesticide and fertilizer products for enforcement purposes. Without a clear definition of plastic and what timeframe is considered readily biodegradable it is not possible to estimate what equipment, analytes, analytical methods would be required.

The bill will require registration and enforcement staff time to develop and implement the enforcement criteria.

The bill may increase cost and potentially change patterns of pesticide use because microencapsulated/granule pesticide formulations have certain advantages over the conventional formulations. For example, microencapsulated formulations are easy to mix, handle, and apply and can provide increased safety to applicators. They also provide prolonged effectiveness, resulting in fewer applications over time. For example, certain coated fertilizer products are specifically designed to slowly release nitrogen making it available to a growing crop and to minimize the amount that could be lost to the environment. Currently the use of a coated nitrogen fertilizer is a best management practice to reduce the impact of nitrogen on Minnesota water resources through timed release of the nitrogen. Other benefits of microencapsulated formulations include reduced odor and volatility. These could result in increased environmental degradation and increased health risk to pesticide applicators. These increased impacts to environmental resources and to pesticide applicators would have some costs to society. However, it would require a detailed study to try to assess these costs in a meaningful manner.

MNIT costs associated with this bill include tracking of coating details in LIS and eRenewal systems. The total cost is \$12,800:

- LIS MNIT staff: 100 hours * \$80/hr = \$8000
- eRenewal MNIT staff: 60 hours * \$80/hr = \$4800

Expenditure and/or Revenue Formula

The Department assumes the use and sale of pesticide and fertilizer products coated with plastic or another material that is not readily biodegradable will be prohibited effective January 1, 2023 (start of the pesticide registration year).

To implement the bill, the registration program will require 1 FTE to review the pesticide and fertilizer registration submittal to ensure that no pesticides or fertilizers coated with plastics and other not readily biodegradable coatings are registered in the state. This FTE will also be needed to research and review the current science of coating technology including coating materials, processes, formulations, and biodegradability.

Compliance assistance inspections/outreach will need to be conducted to ensure the awareness by retailers and end-users that the use and sale of pesticides and fertilizers coated with plastic or another material that is not readily biodegradable is prohibited in the State of Minnesota. On-going sales inspections will continue to be conducted with retailers and end-users as part of MDA's routine inspections, this will ensure the sale and use of pesticides and fertilizers coated with plastic or another material that is not readily biodegradable is prohibited in the State. The Inspection and Enforcement program will need 1 FTE and 0.5 FTE to carry out these activities.

Expenditure (Actual Dollars)	Fund	Amount	FY 2022	FY 2023	FY 2024	FY 2025
Salary & Fringe:	1000		FTE	FTE	FTE	FTE
Agricultural Consultants		131,443	0.00	2.50	2.50	2.50
		FTE	0.00	2.50	2.50	2.50
		Subtotal	0	328,608	328,608	328,608
Information Technology:	1000					
IT enterprise costs-laptop, phone, network			0	9,066	9,066	9,066
IT project/application costs			0	12,800	0	0
		Subtotal	0	21,866	9,066	9,066
Other Operating Costs:	1000					
Travel			0	18,250	18,250	18,250
Supplies			0	2,500	2,500	2,500
		Subtotal	0	20,750	20,750	20,750
Expenditure		Total	0	371,224	358,424	358,424

Long-Term Fiscal Considerations

Local Fiscal Impact

References/Sources

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