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TESTIMONY BEFORE THE JOINT COMMITTEE ON AGRICULTURE,
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Neither for Nor Against LD 558

LD 558 Resolve, Directing the Department of Agriculture, Conservation and Forestry To Study Alternative Cropping Systems for Farmers Affected by Perfluoroalkyl and Polyfluoroalkyl Substances Contamination

March 25, 2021

Senator Dill, Representative O'Neil, and members of the Committee, I am Nancy McBrady, and I am Director of the Bureau of Agriculture, Food and Rural Resources in the Department of Agriculture, Conservation and Forestry. I am here today to speak in Neither for Nor Against LD 558, "*Resolve, Directing the Department of Agriculture, Conservation and Forestry To Study Alternative Cropping Systems for Farmers Affected by Perfluoroalkyl and Polyfluoroalkyl Substances Contamination.*"

The discovery of PFAS contamination in Maine has highlighted the critical need for research on the impacts, environmental and agronomic fate, and future remediation of PFAS in agricultural settings. Although PFAS research is being conducted worldwide, it is still in its infancy, particularly regarding agriculture. The Department appreciates Representative Pluecker's efforts to direct state research toward projects that will ideally identify viable farming alternatives for PFAS-impacted farms and farmers in Maine.

LD 558 suggests a wide range of studies for the Department to undertake, ranging from greenhouse studies to looking at pH and salinity of water, to ruminant grazing on dual-use solar energy projects on contaminated sites. We don't disagree that a variety of research projects is needed and will ultimately help farmers determine if alternative cropping systems could work on their lands. However, our Department, as well as the Maine Department of Environmental Protection (DEP) and the Maine Centers for Disease Control and Prevention (Maine CDC), who are our critical research partners, are limited in our ability to quickly manage and execute numerous research studies, and also don't have readily available sources of funding on hand to carry out additional research.

We recommend that the intent of the Resolve would be best met if the Department and its agency and research partners be requested to craft a robust research study plan that covers research topic

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areas, study needs, possible roles of state agencies and research collaborators to conduct the work, proposed timeframes, proposed budget and target sources of funding. The Department would submit the report for the 130th, 2nd session that allows the Committee to report out legislation. Meanwhile, our current research efforts will continue.

Overview of Research to Date:

Over the past two years, data collection and assessment has been undertaken to enhance the Maine CDC's models used to derive soil screening levels that DEP is using and how farmers are using the data to make decisions about potential future crops on site. Getting more data helps Maine CDC to derive plant uptake factors, helping ascertain the level at which certain crops may contain PFOS or other types of PFAS. To date, these efforts have focused specifically on the transfer of PFOS from soil to hay/grass and from soil to corn silage. The interim results have allowed us to advise farms which fields can still be used for farming and farming for hay, corn silage, earlage, or grain, and which to be avoided entirely. This important research lays the foundation for helping, potentially, secure farm viability, and is otherwise threatened by PFAS contamination.

- DEP/CDC's soil and grass studies to date have found plant transfer factors for PFOS for soil to grass that are 4 to 5-fold higher than two other published field studies. CDC does not yet have a clear explanation for why they are seeing higher plant transfer factors, but one hypothesis is that this is a result of the grass being a cut crop where the roots have been established for years. Further, 2020 was a very dry year, and climate conditions may have an impact.
- DEP/CDC has obtained 10 co-located soil and corn silage samples from two fields, which provided plant transfer factors for PFOS for soil to corn silage that are in the general range of the one published report found to date. They also have samples of data for corn kernels which were non-detect for PFOS despite high soil levels, consistent with one published study. This is encouraging data, but CDC needs to look more closely at the data for other PFAS.

Research Proposal

There is no doubt that more research must be done to assist farmers facing PFAS contamination. Given our two years of experience to date on the ground with farmers, we believe it is imperative to focus on alternative cropping system research. To that end, it is anticipated that our research proposal would build upon the soil, grass, and corn studies conducted to date. However, because of the important linkage between feed crops and livestock operations (dairy, beef, etc.), we would recommend looking at other types of grains and grasses. At the work session, various agency representatives would be happy to go into greater detail about these potential research areas. Further, DEP would likely pursue additional modeling work to assess leaching to groundwater impacts from PFAS.

LD 558 also requested DACF focus on dual-use solar siting. We would be happy to assess potential solar studies for our research plan, but do want to note that DACF is currently working with the Governor's Energy Office to determine the best path for making developers aware of these potential locations and focusing opportunities for solar development at these farms.

Our research study planning effort could also assess the value in pursuing greenhouse-related studies and other areas of interest.

Summary

In sum, LD 558 identifies and prioritizes the urgent need to pursue PFAS agricultural research for the benefit of PFAS-impacted farms. We believe LD 558 would be most effective if it allows the DACF, along with its sister agencies, to fully design a robust research study plan that will provide a roadmap for critically important research studies to assist farmers in Maine for years to come.

Thank you for your time. I would be happy to answer your questions. Members of DEP and CDC will also be available to answer questions at the work session.