From:	Lloyd Knight
To:	Denise Lauerman
Cc:	Dr. Scott Leibsle
Subject:	FW: Reservoir tillage in Idaho P Index
Date:	Wednesday, May 24, 2023 3:04:01 PM
Attachments:	Impact Reservoir Tillage Runoff Quality Quantity.pdf image001.png

Denise -

Please post the email and the attachment as a comment from Dave Bjorneberg for the Dairy By-Product Rule…

Thanks.

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From: Dr. Scott Leibsle <Scott.Leibsle@ISDA.IDAHO.GOV>
Sent: Wednesday, May 24, 2023 8:46 AM
To: Lloyd Knight <Lloyd.Knight@ISDA.IDAHO.GOV>
Subject: FW: Reservoir tillage in Idaho P Index

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State Veterinarian/Administrator – Animal Industries
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From: Bjorneberg, Dave - REE-ARS <dave.bjorneberg@usda.gov>
Sent: Tuesday, May 23, 2023 4:58 PM
To: Dr. Scott Leibsle <Scott.Leibsle@ISDA.IDAHO.GOV>
Cc: Mitchell Vermeer <Mitchell.Vermeer@ISDA.IDAHO.GOV>
Subject: Reservoir tillage in Idaho P Index

Scott,
I probably will not be at the meeting tomorrow. Here are some comments that you can share with the group.

Reservoir tillage was not included in the initial Idaho Phosphorus Index because there was no peer-reviewed literature documenting impacts on water quality. Research shows that reservoir tillage reduces runoff, however, these studies only measured runoff from small plots within a field. These runoff values indicate how much water is flowing from a small area within a field, but not how much leaves the field. It is difficult to translate these results into a reduction in risk of phosphorus loss from a field.

I have since found one study from Alabama that included water quality (publication attached). They measured runoff for 15 rainfall events and two irrigations over two years. Reservoir tillage significantly decreased runoff but did not significantly change sediment or phosphorus concentrations or loads (Tables 1 and 3).

If stakeholders feel strongly that reservoir tillage should be included as a best management practice, I think the most appropriate method is to reduce the Soil Surface Runoff Index – Sprinkler or Non-irrigated since reservoir tillage primarily impacts runoff. The value from Table 5 could be reduced one level (e.g. High to Medium) if reservoir tillage is used. This would add another level of complexity to the index because all other practices are applied to the overall Site Transport Value.

Let me know how the group wants to proceed. We can help draft language if the index needs to be revised.

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