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Economic Analysis of Drainage Water Recycling: Environmental Defense Fund Report Analyzes Opportunities for Supporting Farm Resilience/Water Quality

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The Environmental Defense Fund ("EDF") published a report titled:

Economic Analysis of Drainage Water Recycling: Environmental Defense Fund Report Analyzes Opportunities for Supporting Farm Resilience/Water Quality ("Report").

This Report evaluates drainage water recycling as a strategy to strengthen farm resilience by assessing its costs, benefits, and funding pathways.

Drainage water is stated to capture and store the drained water and repurpose it for irrigation, supporting consistent crop production. Such systems can be designed within a variety of drainage methods (surface, subsurface or both) and irrigation systems (such as center pivots and microirrigation).

The stated concern is the increasing situations in which famers must navigate:

...volatile and extreme weather patterns that can directly threaten agricultural productivity and profitability.

The Report also notes, by way of introduction:

- Because of complexity and scale, effective drainage water recycling implementation requires collaboration among farmers, landowners, and drainage districts to ensure these systems are practical and sustainable.
- Support from planners and public agencies is also important for successful implementation, aiding with site selection, technical resources, and possible public funding opportunities.

Key questions involving drainage water recycling include:

- Cost.
- Financial risk.
- Return on investment.

The Report states that it evaluates:

...drainage water recycling as a farm resiliency strategy and aims to provide cost and benefit data to inform effective funding models for implementation.

Note it only focuses on systems where drainage already exists (i.e., upgrading existing infrastructure to improve drainage capacity) due to the environmental risks associated with installing new tile drainage on previously undrained land.

Components of the Report include:

- Drainage water recycling overview
- Analysis scope and structure
- Costs of implementing drainage water recycling
- Benefits of drainage water recycling
- Drainage water recycling investment analysis
- Case study
- Conclusions
- Acknowledgments
- Data sources
- References

A copy of the Report can be found <u>here</u>.