

Impacts of Cover Crops on Water Quantity in the Soil

Cover crops can offer farmers various benefits: reducing soil erosion, boosting soil health, and improving water usage and quality. When managed accordingly, cover crops can also allow for more water to be retained in the soil profile, increasing availability for the following crop.

WATER INFILTRATION

Cover crops can increase water in the profile primarily by increasing infiltration, due to a cover crop's ability to improve the soil structure and add organic matter. This increases soil aggregate, improves stability and overall soil porosity, and builds water storage capacity.

Different cover crop varieties provide different benefits to the soil, including varying infiltration improvement levels. For example:

- A cover crop such as rye, with a high biomass and massive root structure, can increase infiltration for other crops by up to 462%.
- Other legume cover crops can increase infiltration further, up to 528%. Even having some sort of residue on the soil can ensure infiltration is high for your cash crop.

GROWTH HABIT

The growth habit of cover crops also affects the water quantity. While cover crops are growing, they take water to do so. However, when terminated, the cover crop protects the soil from wind and sunlight to ensure that water remains in the soil while also allowing for more infiltration to capture every rain event.

KEY CONSIDERATIONS

Cover crops are an annual decision, dependent on factors such as rainfall or water availability for establishment, regional soil types, and desired benefits. Working with AgSpire's Technical Advisors can help achieve the desired results from your cover crops.

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