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Explain It: Precipitation Use Efficiency

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precipitation use efficiency

pri-ˌsi-pə-'tā-shən 'yüz i-'fi-shən-sē

Charles Rice, university distinguished professor of agronomy in the College of Agriculture, is leading a large U.S. Department of Agriculture collaborative study to increase water efficiency and soil health. Rice explains, in fewer than 100 words, what precipitation use efficiency is and how it relates to farmland in the southern Great Plains.

Precipitation use efficiency involves designing cropping systems to use precipitation effectively. The first strategy prevents runoff. Increasing soil health with better soil structure helps intense rainfalls infiltrate the soil rather than run off the field and not be captured by the crop. The second strategy reduces surface evaporation. Keeping residue on the soil surface through no-till reduces wasteful evaporation. The third strategy eliminates nonproductive uptake of soil water by eliminating weeds. Continuous no-till cropping keeps the soil covered, reduces weeds and increases infiltration. Thus, precipitation is used for growing crops for forage or grain rather than for nonproductive uses.

See page 28 to learn more about the USDA project and other water research at Kansas State University.