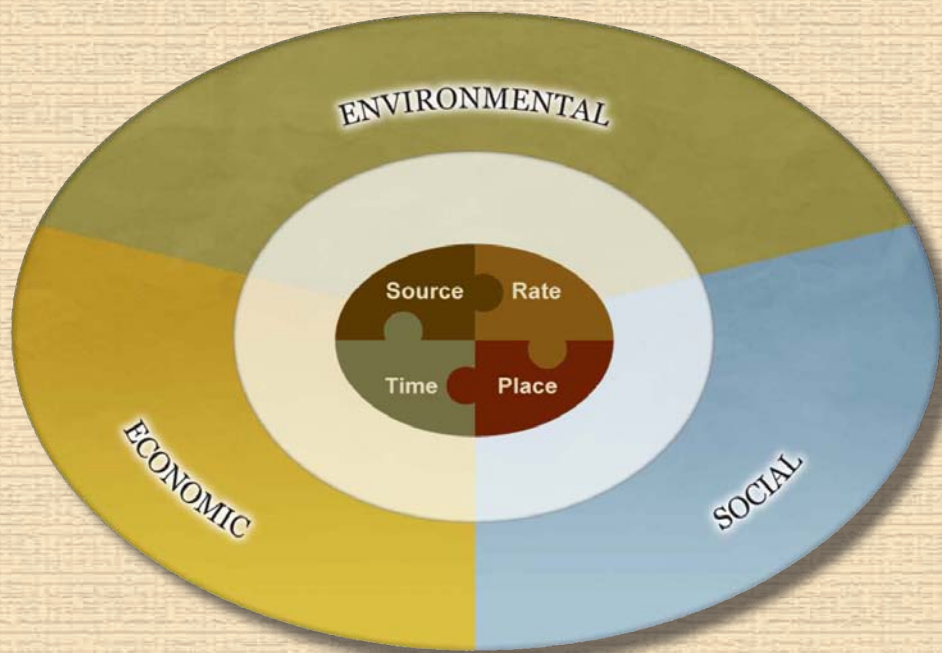


4R nutrient stewardship

The 4R nutrient stewardship concept means applying the right nutrient source at the right rate at the right time in the right place to produce the economic, social, and environmental outcomes desired by all stakeholders in the agricultural ecosystem.



Visit your local NRCS field office for more details,
or go online to www.ia.nrcs.usda.gov.

4R

nutrient stewardship

Right Source
Right Rate
Right Time
Right Place



United States Department of Agriculture
Natural Resources Conservation Service

Helping People Help the Land
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The 4Rs of nutrient stewardship

Right SOURCE



what it means

Determine the nitrogen, phosphorus, potassium and other nutrient needs based on crop requirements and soil properties. Select the right nutrient source considering cost, availability, method of delivery, and environmental risk.

Right RATE



what it means

Match application rates with crop requirements. Use soil testing, crop history, in-season testing, crop nutrient budgets and adaptive management to determine application rates. Use the corn nitrogen rate calculator to determine nitrogen needs.

Right TIME



what it means

Synchronize nutrient availability with crop demand and reduced environmental risk. Apply nitrogen in the spring, and consider a split application.

Right PLACE



what it means

Place and keep nutrients where the crop can get to them, where nutrients are least likely to leave the field, and efficiency is maximized. Crops, cropping systems, fertilizer source, and soil properties dictate the most appropriate method.