

Crop Nutrient application Timing and Eligibility

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Framing the discussion:

The Chesapeake Assessment Scenario Tool (CAST) simulates nutrient applications onto Agricultural lands.

A large blue downward-pointing arrow connects the first box to the second box.

A **specific file** within this tool restricts the time in which applications can occur as well as the source of nutrients.

A large blue downward-pointing arrow connects the second box to the third box.

Some of the state inputs to this file have created unrealistic nutrient applications

What is in this *specific file*?

Timing

- Defines when nutrients can be applied to a crop

Eligibility

- Defines what type of nutrient can be applied to a crop
 - Organic nutrients
 - Inorganic nutrients

What is the issue?

- Timing and eligibility requirements can artificially impose an unrealistic application of manure nutrients.

Applications

- Changes where applications go

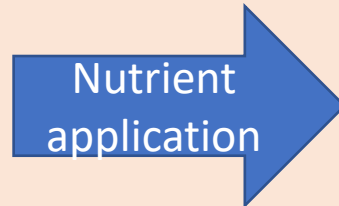
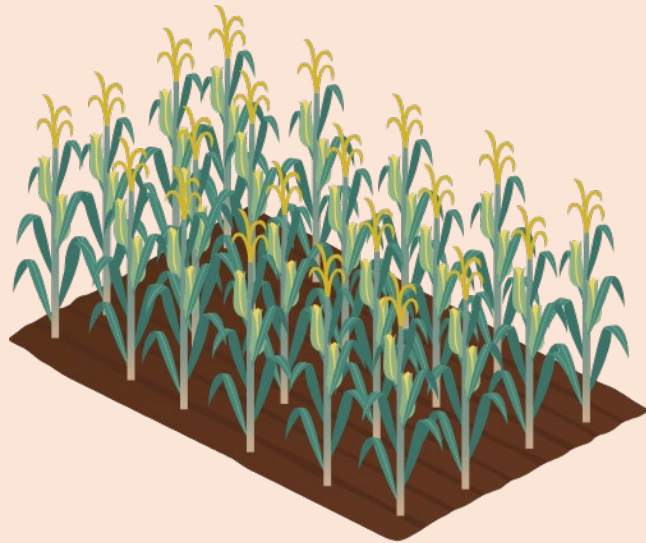
CAST averaging

- Timing and eligibility are quickly aggregated

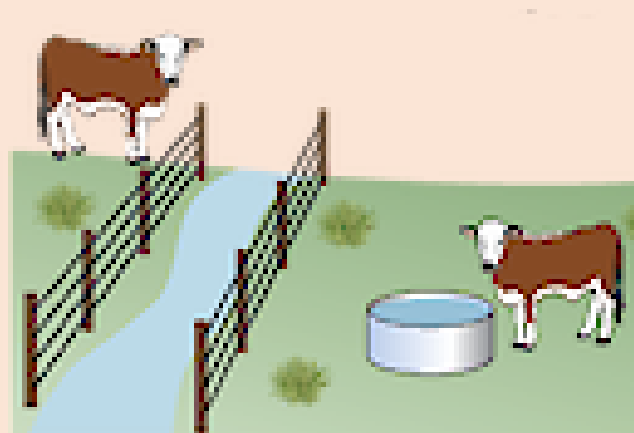
CAST Nutrient application process

- Nutrients are generally first applied from organic sources then inorganic sources

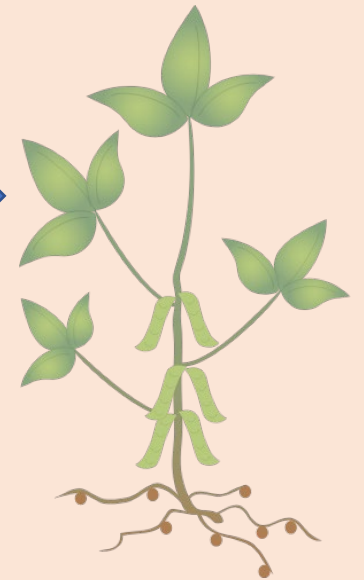
Grains and specialty crops



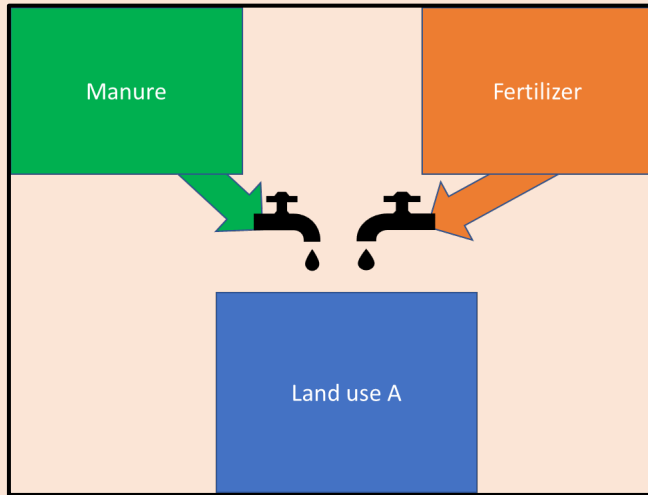
Non Legume hay/pasture



Legume Hay/Row crops

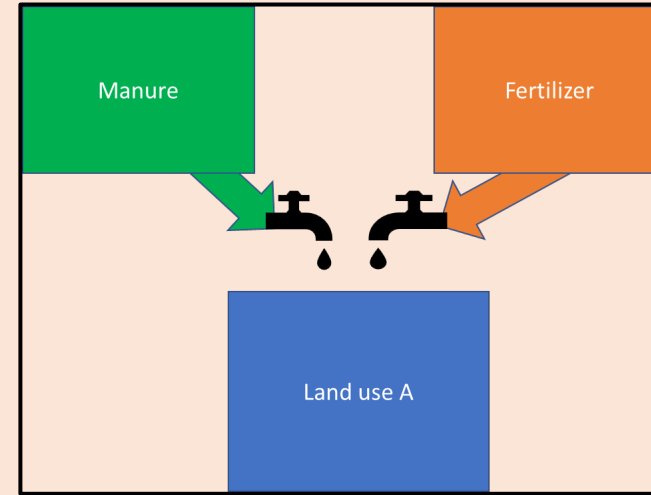


An important caveat:

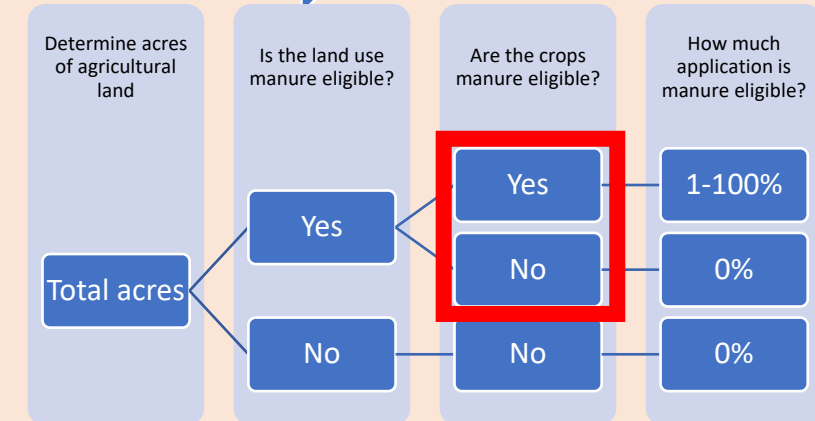
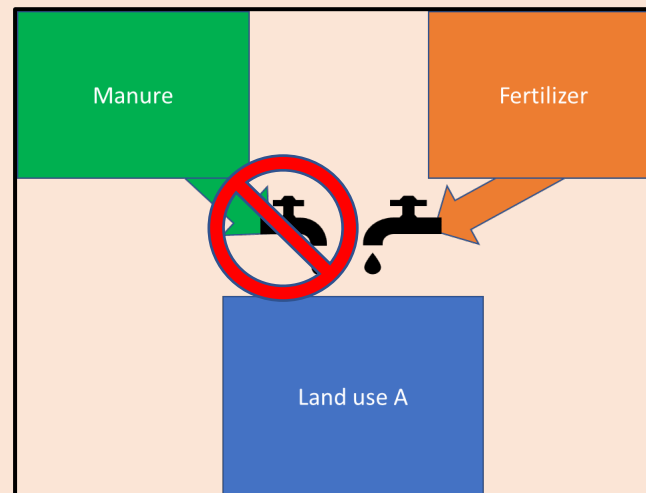


-30 days before planting

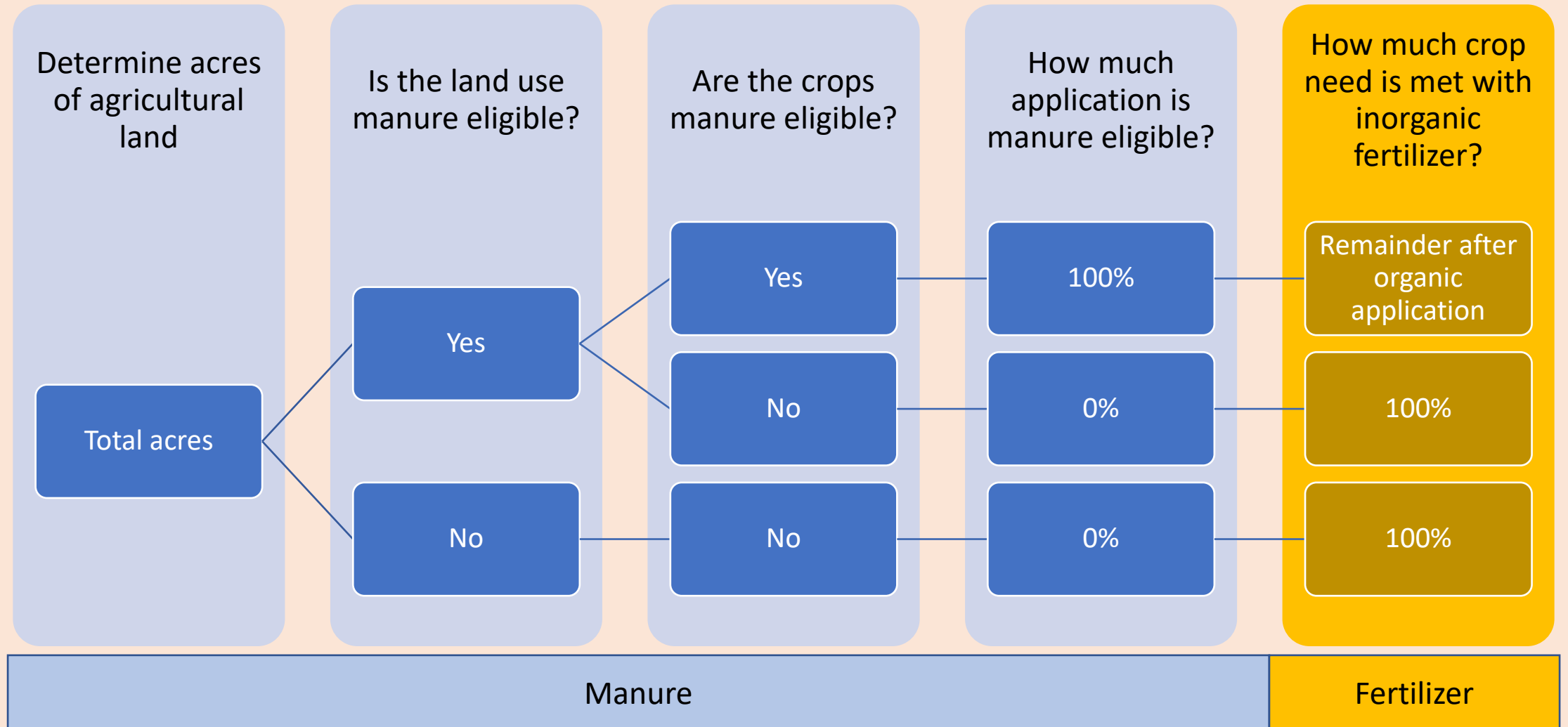
Planting



60 days after planting



Nutrient eligibility visualized:



Summary

Currently CAST has a file in place which restricts the source and timing of nutrients to simulate real world applications.

These restrictions in some jurisdictions have lead to an unrealistic distribution of nutrients in the agricultural sector.

Questions?