

2015 CCA NORTH AMERICAN BOARD MEETING

EXAMS AND PROCEDURES

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CCA Exams and Procedures

- What are we going to talk about today?
 - Review Goals and Objectives for the CCA Exam program.
 - Update on past year.
 - Procedures/options as we move forward.
 - Update on computer-based testing.
 - Motion from the Exam and Procedures Committee.
- Proposal for regions; 4Rs Exam.

CCA Exams: Goals and Objectives

- Consistency and Standardization across all exams.
- Compliance with Accepted Standards for credentialing exams.
- Operate and Maintain an Exam Program that is Legally Defensible.

CCA Exams - Update

- ICCA Exam
- 29 Local Board Exams
- 1 Specialty Exam currently (4Rs)
 - Sustainability – coming Feb. 2016
 - IPM – in committee
 - Mexico Exam

Other:

India – suspended

Soil Science (U.S and Australia) – 3 exams

Boards that have had some working contact with me (this doesn't mean that they are all up to date):

- AR/LA/MS
- California/Arizona
- CA Manure Management
- Kansas
- Michigan
- Mid-Atlantic
- Minnesota
- North Carolina
- Northeast Region
- Oklahoma
- Ontario
- Prairie Provinces
- Rocky Mountain Region
- Southeast Region
- Tri-State
- Wisconsin

Boards that I have not talked to yet (or nothing significant has been done with that Board if I have):

- Atlantic Provinces
- Colorado
- Iowa
- Kentucky
- Missouri
- Nebraska
- New Mexico
- North Dakota
- Northwest Region
- Pennsylvania
- South Dakota
- Texas

CCA Exams - Update

- ICCA is meant to be the “base” exam. Tests fundamental concepts, knowledge and application of agronomy.
- Local board exams should test more specific knowledge of a state/province or region.
- Working towards standards and consistency across all exams.
 - 100 questions on Local Board Exams
 - 4 Sections (NM, SW, PM, CM)

Performance Objectives

- POs are free to download from the CCA website for all exams.
- Major sections are divided into competency areas, with objectives within each competency area.
- This structure is important to understand with respect to the exam software – Authorize.
- Each exam question must be linked to one (and only one) PO.

Working together

- Start from the current status of the exam.
- This is a partnership and we will be working together with everyone to update procedures within and across programs.
- First step is to assess where the program is and move forward from there.
- Have worked with:
 - EPC
 - 16 Local Boards
 - Mexico
 - Specialty Exams

Workflow for Exams

- Update Performance Objectives
- Perform a Job Task Analysis (JTA)
- Determine exam partitioning from JTA
- Update exam
- Perform an Angoff analysis to set a cut score
- Work with and learn item statistics

- Training in Authorize – throughout process
- Note: Authorize is becoming Authorwise
 - Will be web based, which will make using the software much easier - no more Active X issues!

Legally Defensible Exams

- Use the Angoff analysis to set a cut score for the updated exam.
- We will lead this process, supported by our psychometrician.
- Completed every 4-5 years.
- Equating statistics used in-between.
- Learn to use item statistics to make decisions.

Procedures/Options as we move forward

- Major Local Exam Committee Functions
 - PO process.
 - Exam development and writing.
 - Provide an exam and supporting documentation in the correct format each year.
 - Finalize exam administration working with the staff to
 - review the item analysis.
 - approve or set cut scores.
 - Other duties as needed.
 - Example: Angoff analysis

Issues observed and Options Available

- Issue - Lack of resources
 - Exam committees
 - Consistency
- Options
 - Fee based option to have staff maintain exams.
 - Local Board and Exam Committee still involved.
 - Staff facilitates everything getting done.

Fee Structure

- ≤ 30 exams given per year
 - Flat fee of \$500 per year
- > 30 exams given per year
 - Fee of \$17/exam
- Billed after the August exam administration.
- Start after the Local Board has been brought up to standards.

Update on Computer-based Testing

- Working on details with our psychometrician.
- Building a test driver for Authorwise that will allow us to export exams for administration.
- There will be several options available.
 - Checking the costs associated with each option.
- There will be a transition period.
- Those exams up to date will be available for this option first.
- More to come.

Questions?



Contact me at any time
with questions:

dgibas@sciencesocieties.org

BUSINESS FROM THE EPC:

Motion made, seconded and passed:

Once either or both of the ICCA and Local Board Exam are taken and passed, the length of time a person must wait prior to retesting is 3 years.

16 members on the EPC

12 voted YES

4 did not respond

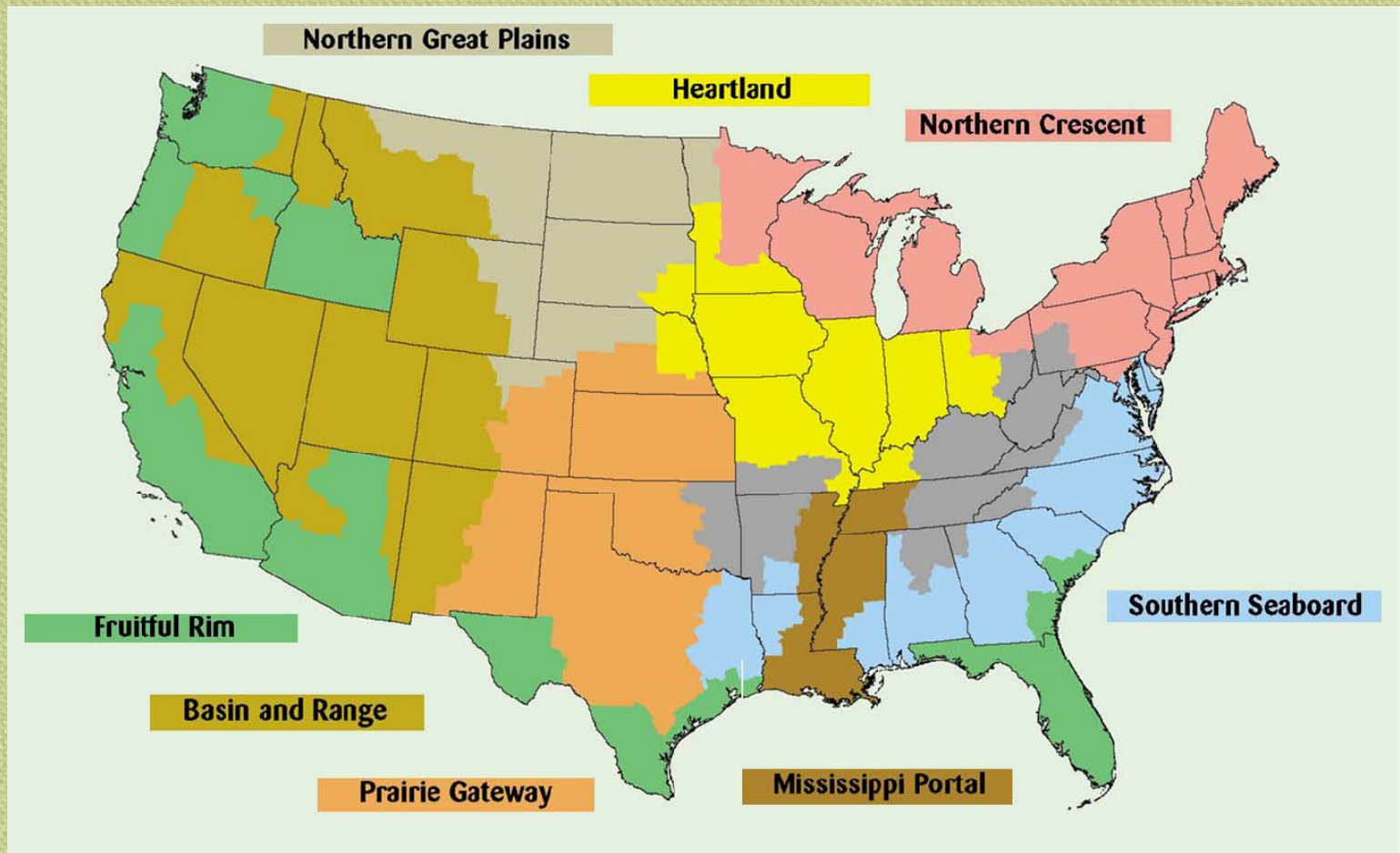


PROPOSAL FOR THE 4RS NUTRIENT
MANAGEMENT SPECIALTY EXAM

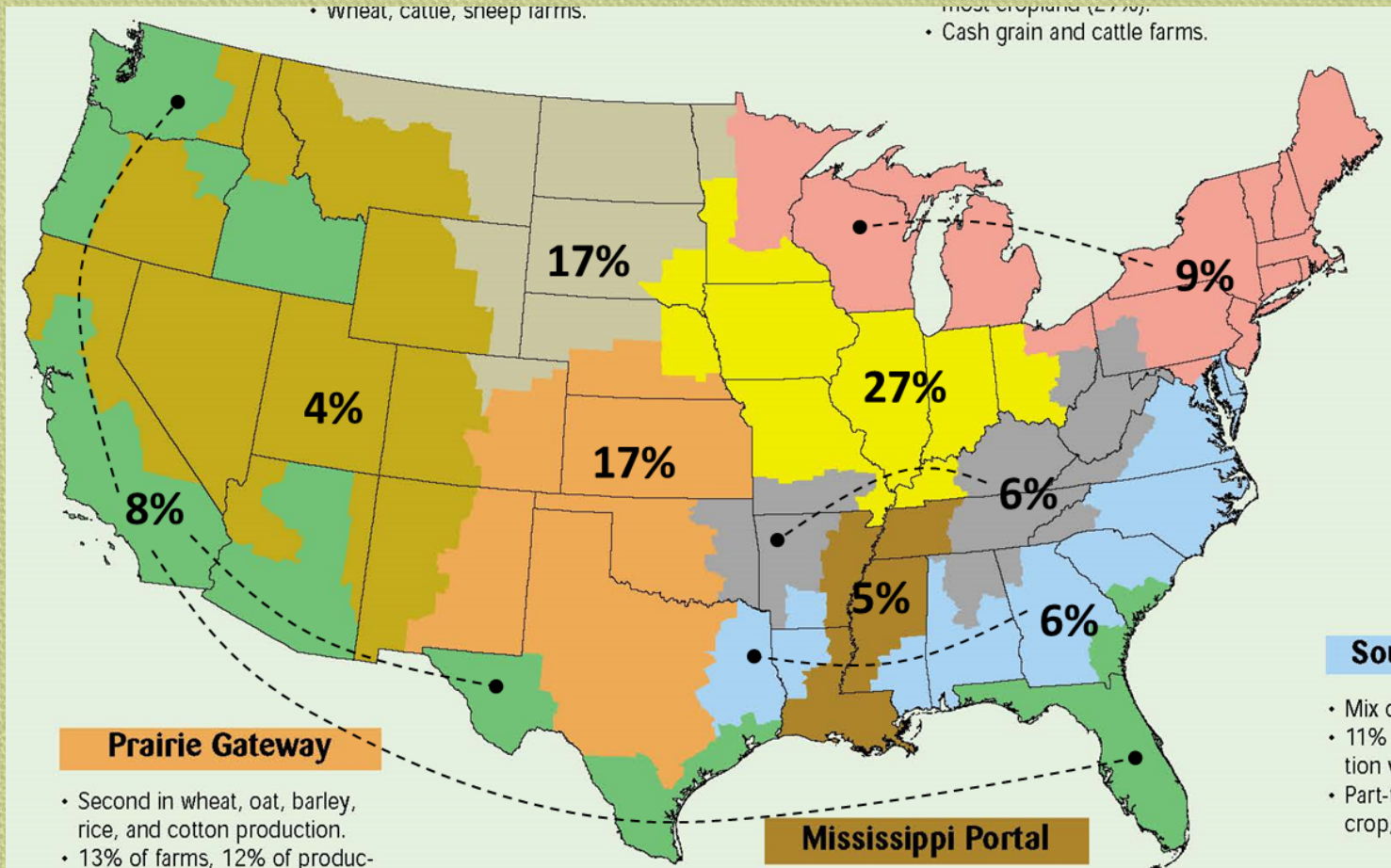
4RS NUTRIENT MANAGEMENT SPECIALTY EXAM

- ▶ First exam administration in August 2015.
- ▶ 63 CCAs took the exam; 51% passed.
- ▶ Was offered to a limited area:
 - ▶ Michigan, Indiana, Illinois, Iowa, Minnesota and Wisconsin.
- ▶ The exam is scenario based with 50 questions.
- ▶ Issue with geography.
- ▶ Need to consider regionalizing the exam.

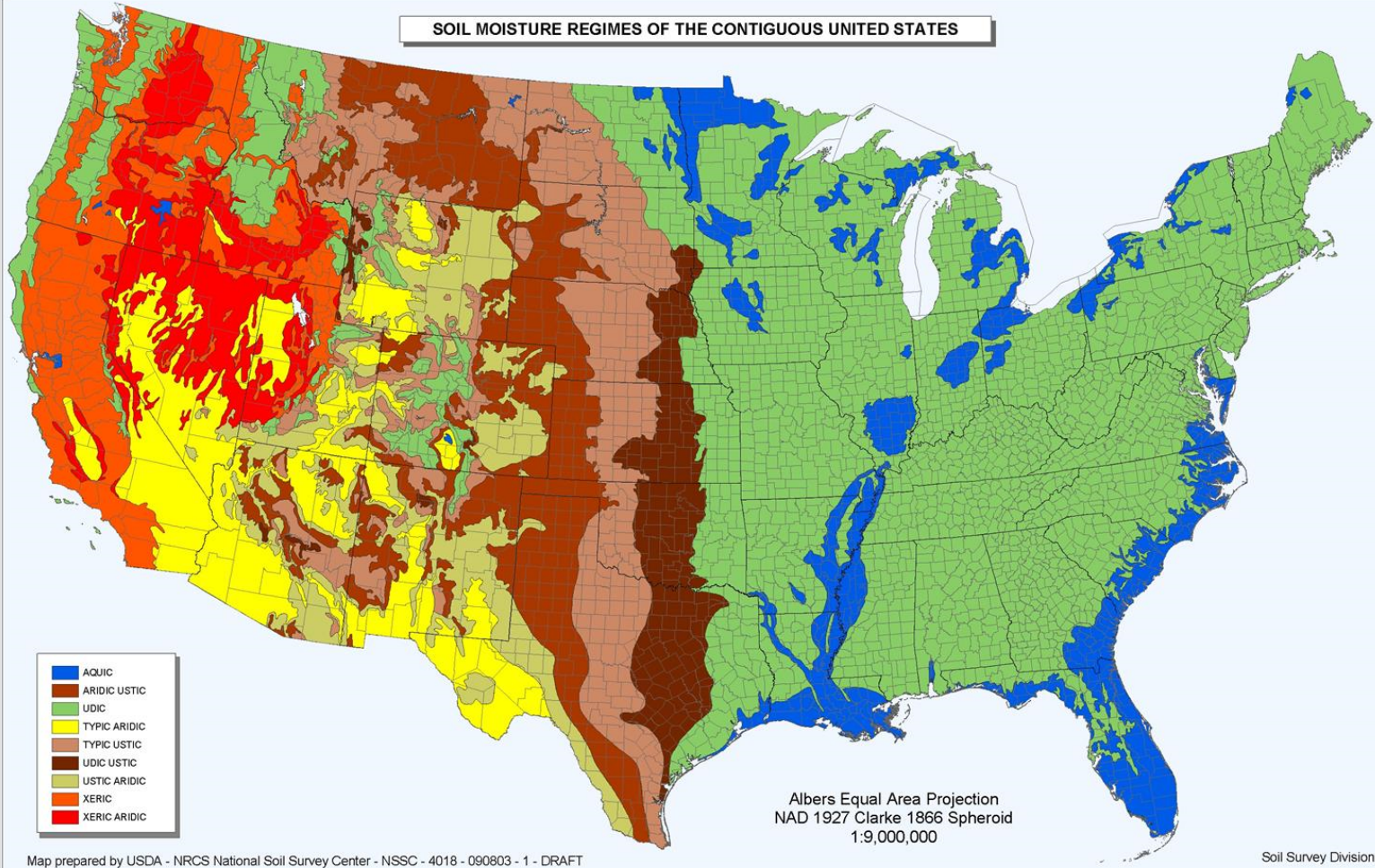
Farm Resource Regions



% of U.S. cropland within Farm Resource Region



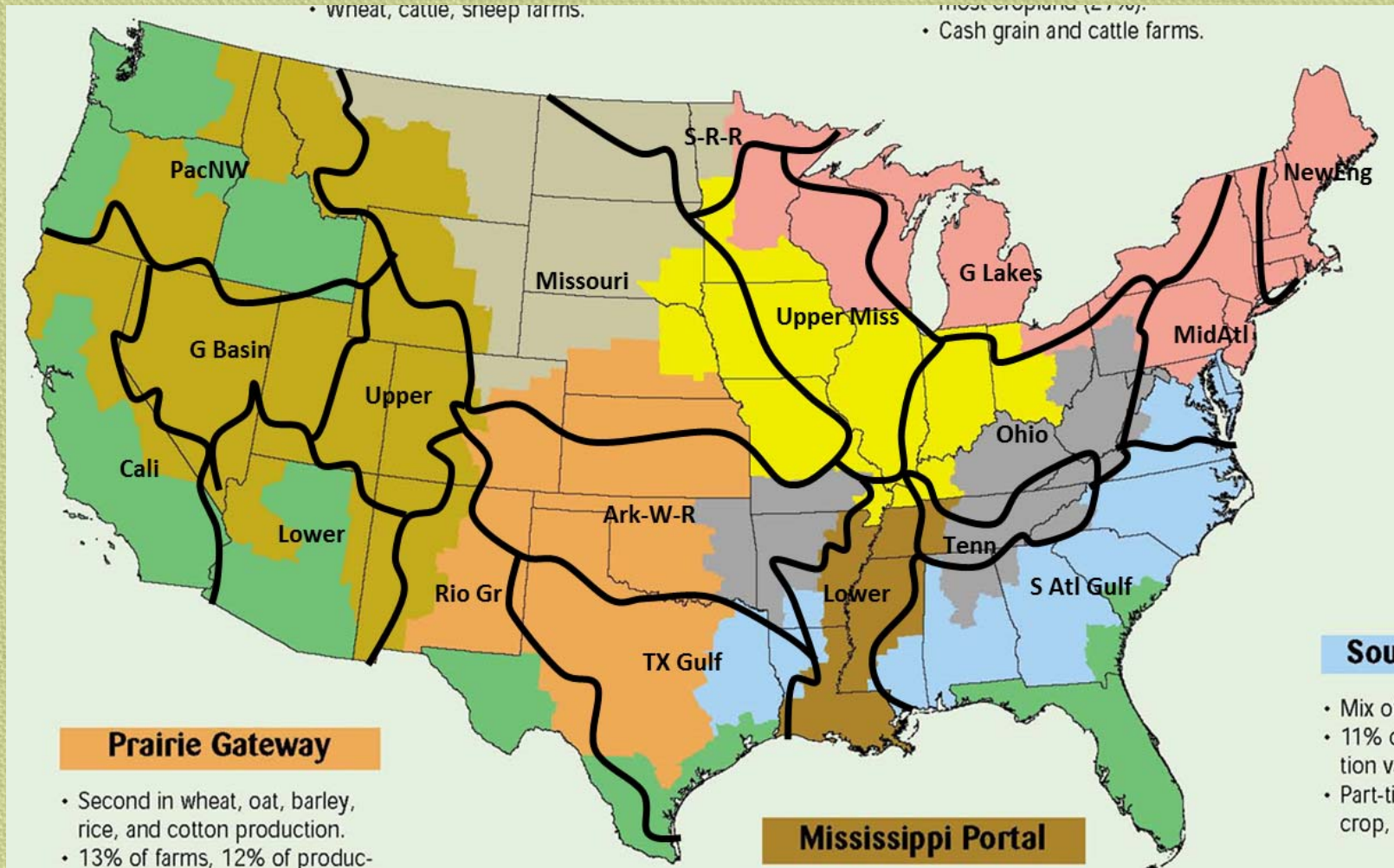
SOIL MOISTURE REGIMES OF THE CONTIGUOUS UNITED STATES



Water Resource Regions

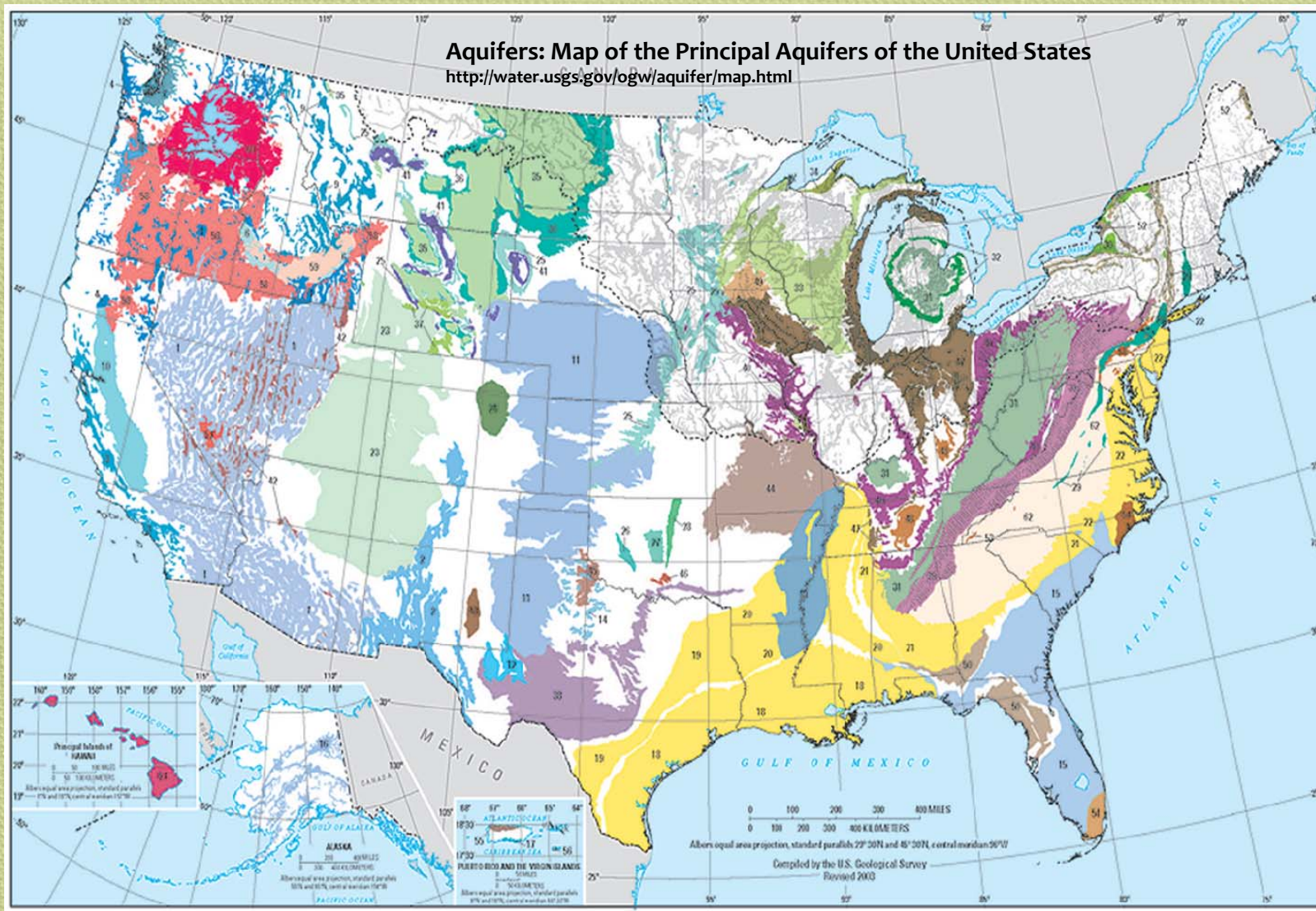


Farm Resource Regions X Water Resource Regions



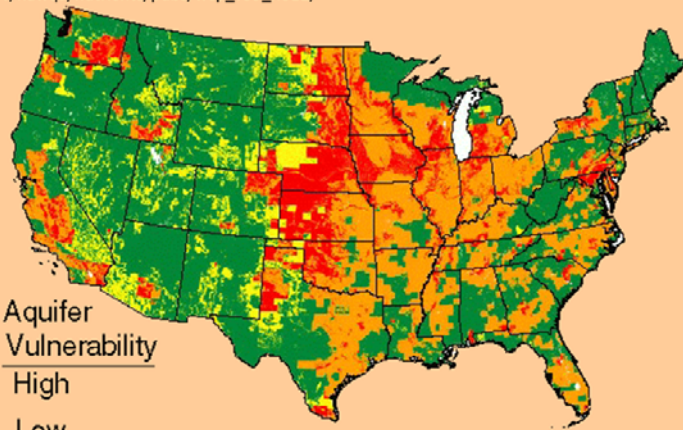
Aquifers: Map of the Principal Aquifers of the United States

<http://water.usgs.gov/ogw/aquifer/map.html>

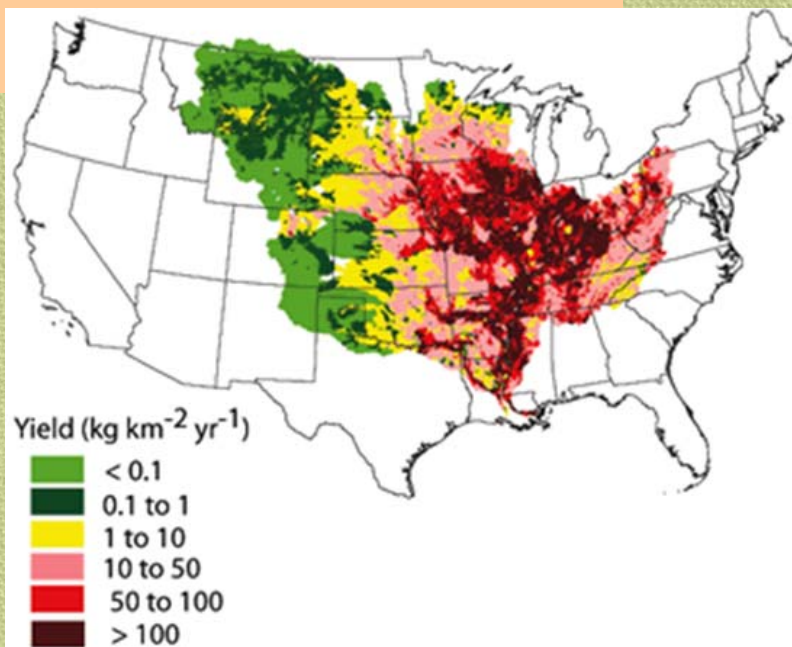


Increasing risk of ground-water contamination

http://water.usgs.gov/nawqa/nutrients/pubs/wcp_v39_no12/



Nitrogen Input		Aquifer Vulnerability	
■ High	■ High	■ High	■ High
■ High	■ Low	■ Low	■ High
■ Low	■ High	■ High	■ Low
■ Low	■ Low	■ Low	■ Low



Groundwater

(A)

EXPLANATION

Inputs, in kilograms per square kilometer per year

- 0 to 1,000
- 1,001 to 5,000
- 5,001 to 10,000
- 10,001 to 15,000
- 15,001 to 20,000

(B)

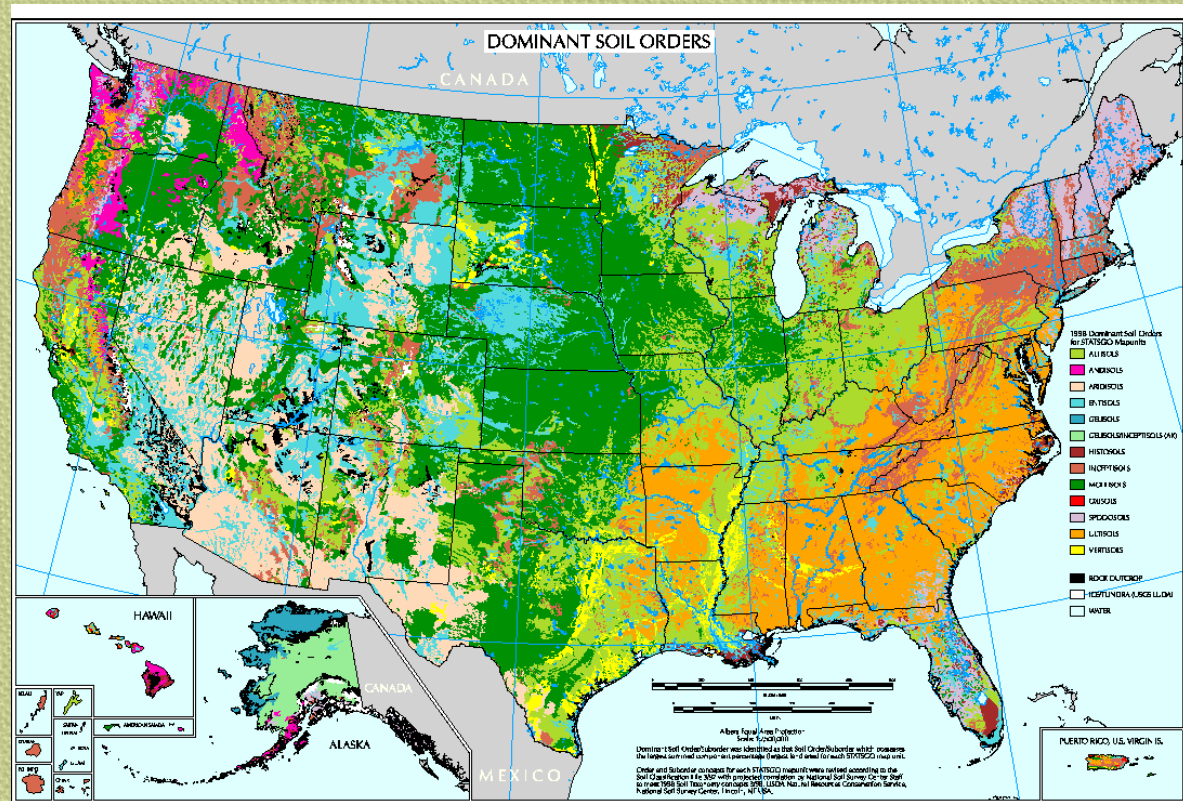
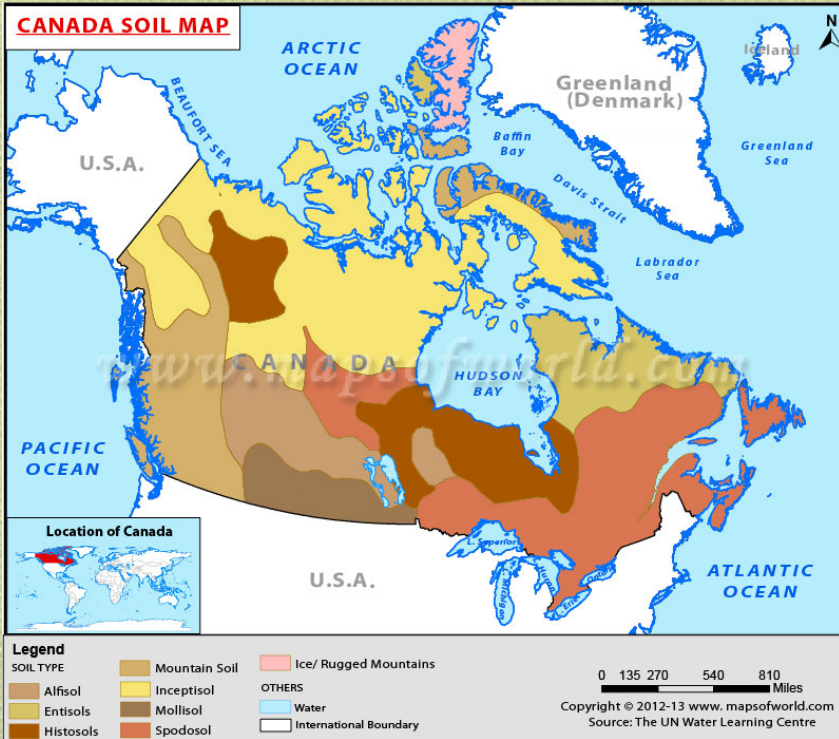
EXPLANATION

Yield, in kilograms per square kilometer per year

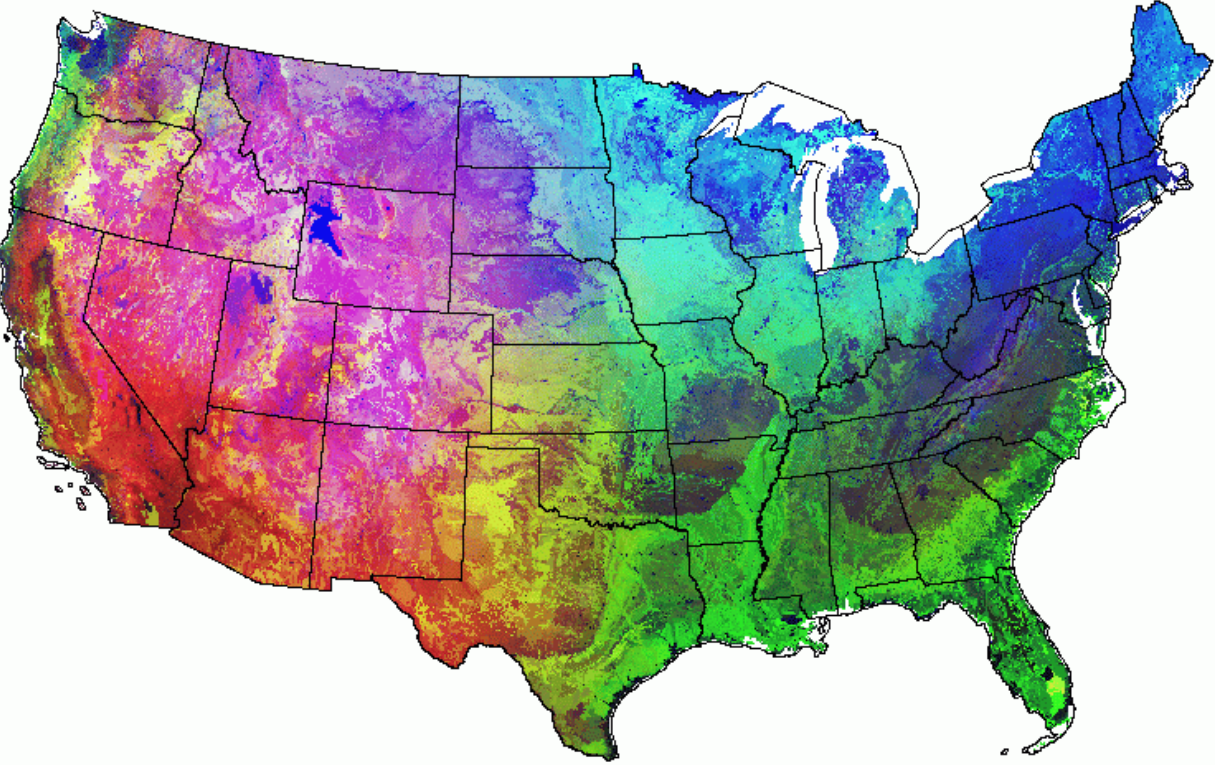
- Less than 200
- 201 to 500
- 501 to 1,000
- 1,001 to 1,800
- 1,801 to 3,050

Figure 6. (A) Nitrogen inputs during 1992 and (B) average annual nitrogen yields of streams for 1980-96 (modified from Goolsby and others, 1999).

<http://ks.water.usgs.gov/pubs/fact-sheets/fs.135-00.fig6.gif>



National Map Clustered on Elev, Soil and Climate into 3000 Areas

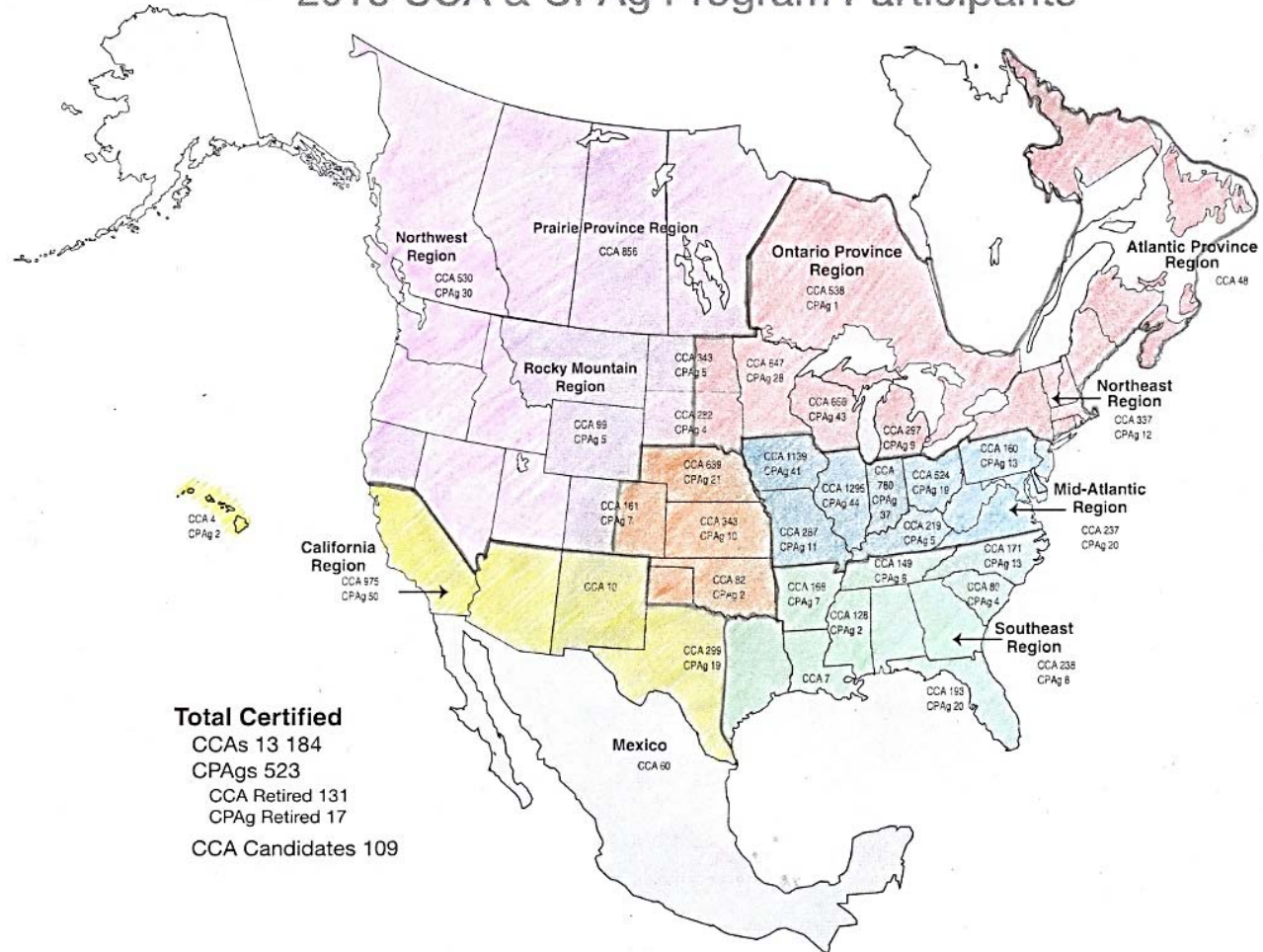


0 200 400 600 800 1000 1200
MEAN ET (2000-2006) mm/yr

Climate



2015 CCA & CPAg Program Participants



Total Certified
 CCAs 13 184
 CPAgs 523
 CCA Retired 131
 CPAg Retired 17
 CCA Candidates 109