

Mobilizing US Agricultural Expertise

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Themes

- World food supply and demand
 - Geography and politics
 - Food crisis and climate change
- Indigenous people, their agriculture/natural resources
 - USA, Iraq, Afghanistan
- Interventions
 - Ag Colleges; Land grant universities
 - Role of teaching, research, extension

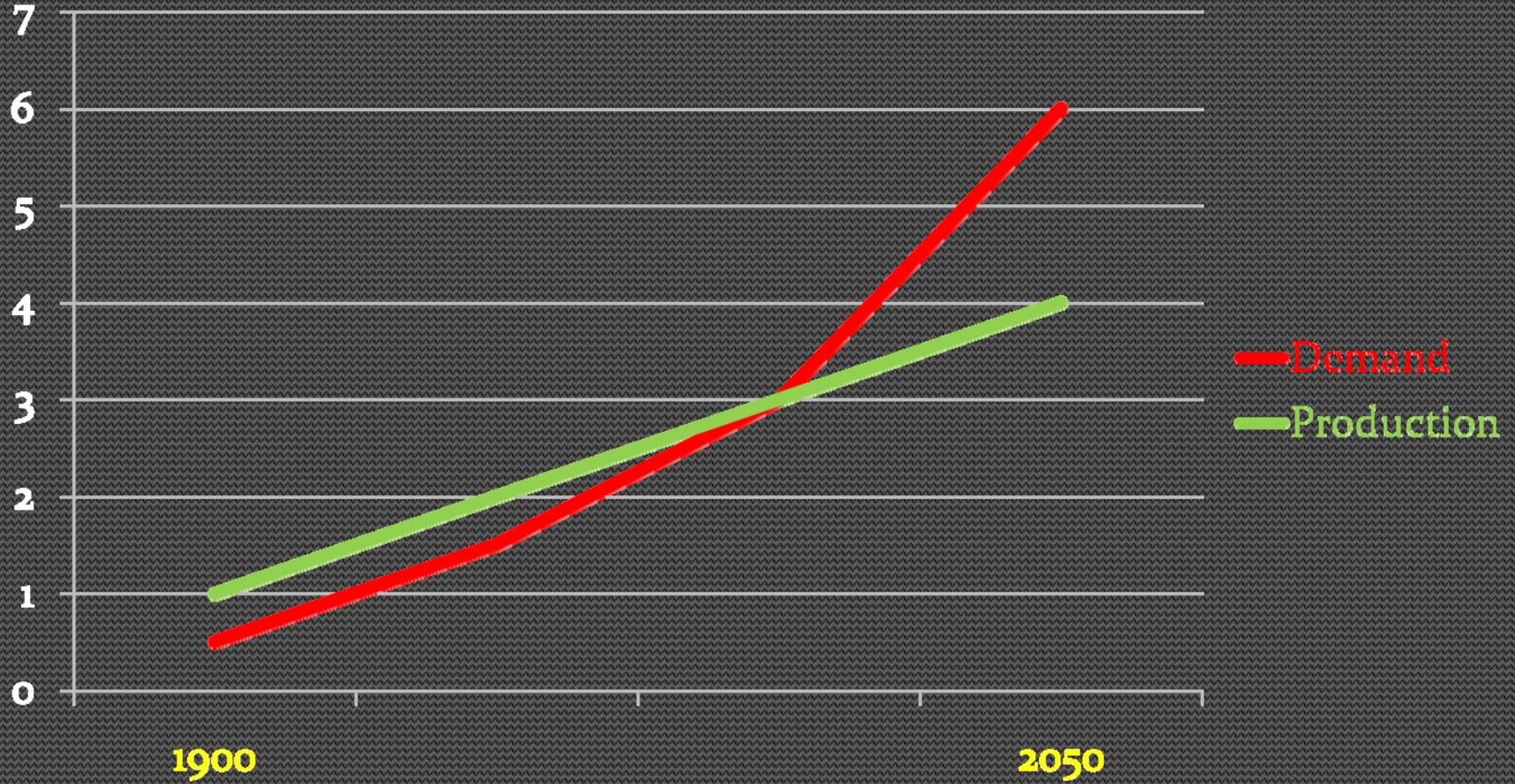
Food supply and demand

- Prices have risen 83% worldwide since 2005
- Rice > 141% , wheat > 130%
- US food budget 9% of annual income
- Cost of energy inputs and transportation >
- Weather and climate impacts on crop and livestock yields

Civil strife blamed on food prices and unavailability

- Afghanistan
- Cameroon
- Egypt
- Ethiopia
- Haiti
- India
- Indonesia
- Italy
- Ivory Coast
- Mauritania
- Mexico
- Pakistan
- The Phillipines
- Somalia
- Thailand
- Uzbekistan
- Yemen

US food production vs. world demand

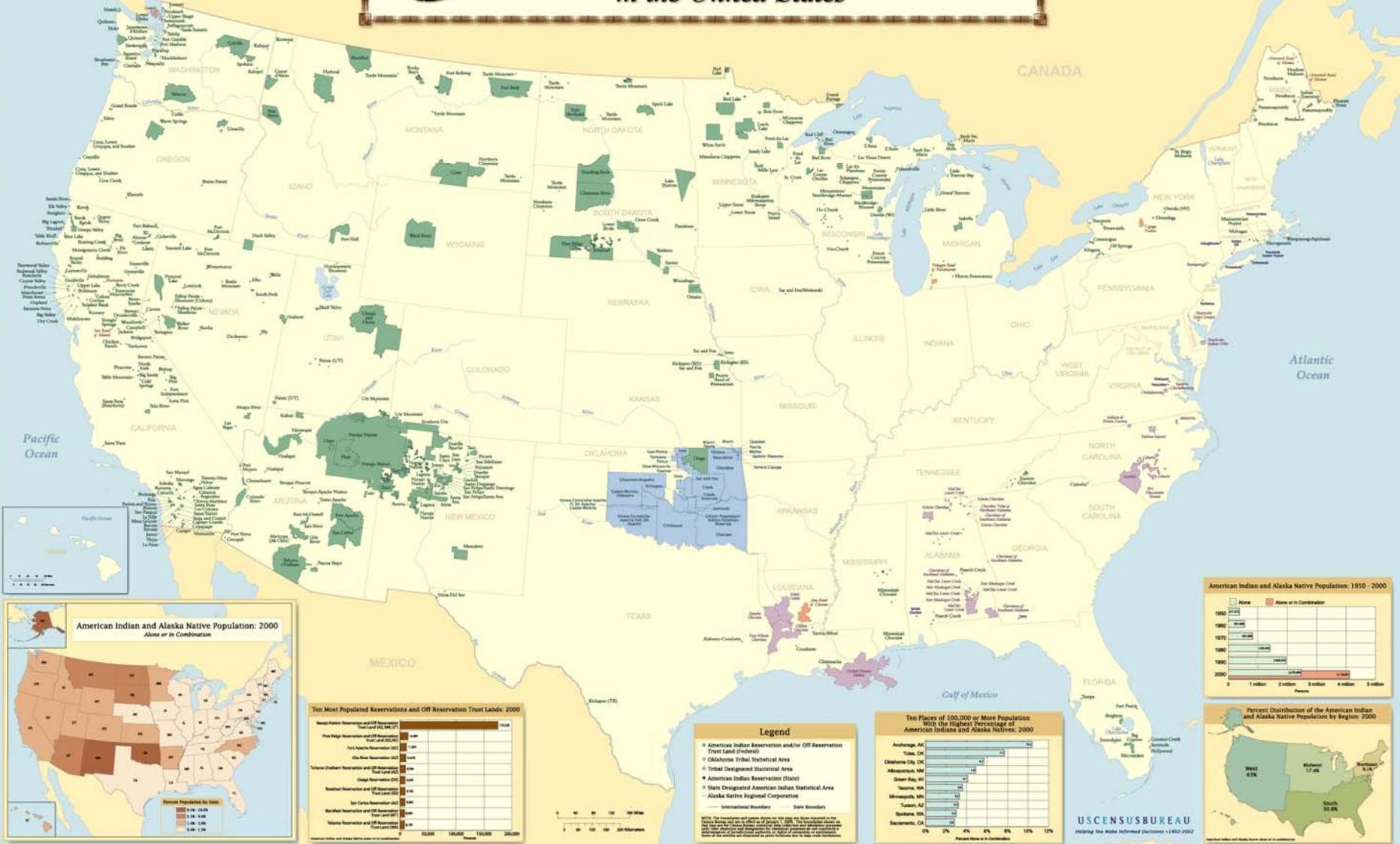


Climate change and agriculture

- Cereal yields in south Asia < 30% by 2050
- Per capita domestic water availability in India < 60%
- Rice yields in Japan < 60%
- Decreased snowpack-snowmelt-runoff-irrigation in Hindu Kush
- Africa rain-fed agriculture yields < 50%
- North Africa agriculture losses 4-7% GDP



American Indians and Alaska Natives in the United States



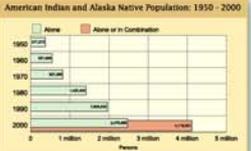
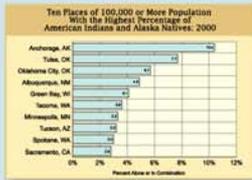
Ten Most Populated Reservations and Off-Reservation Trust Lands: 2000

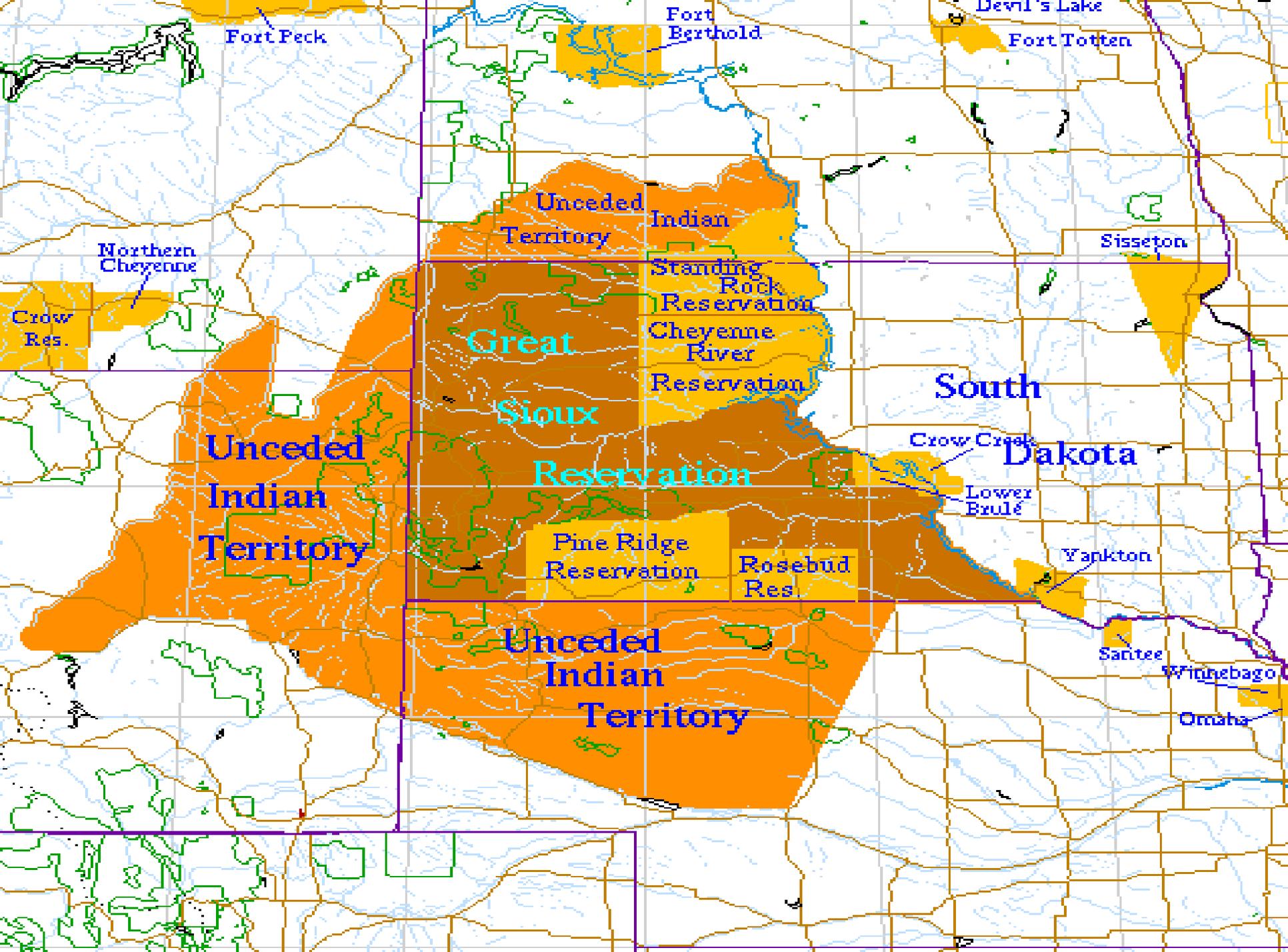
Name	Population	Area (sq. miles)
Navajo Nation	300,000	71,000
San Carlos	160,000	1,000
Fort Belknap	140,000	1,000
Fort Mojave	130,000	1,000
Fort McDowell	120,000	1,000
Fort McDowell	110,000	1,000
Fort Mojave	100,000	1,000
Fort Mojave	90,000	1,000
Fort Mojave	80,000	1,000
Fort Mojave	70,000	1,000

Legend

- American Indian Reservation and/or Off-Reservation Trust Land (Federal)
- Indian Tribal Statistical Area
- Tribal Designated Statistical Area
- American Indian Reservation (State)
- State Designated American Indian Statistical Area
- Alaska Native Regional Corporation
- International Boundary
- State Boundary

NOTE: The boundaries and names shown on this map are not necessarily authoritative. The boundaries and names shown on this map are not necessarily authoritative. The boundaries and names shown on this map are not necessarily authoritative.





Fort Peck

Fort Berthold

Devil's Lake
Fort Totten

Northern Cheyenne

Crow Res.

Unceded Indian Territory

Standing Rock Reservation
Cheyenne River Reservation

Sisseton

Great Sioux Reservation

South Dakota

Unceded Indian Territory

Crow Creek
Lower Brulé

Pine Ridge Reservation

Rosebud Res.

Yankton

Unceded Indian Territory

Santee

Wignebago

Omaha

Near Wounded Knee



High-tech Indian farming



Tribal and university research

GILA RIVER
PIMA-MARICOPA
IRRIGATION
PROJECT

Scottsdale neighbors

4 MILES
HAY FOR SALE
WE DELIVER
FT. McDOWELL FARM
480-837-2585



FORT McDOWELL
FARM HEADQUARTERS
4 MILES

NO
PARKING

THE INDIAN COMMUNITY
SIL PROTECTION AREA
FRONT COUNTRY
HUNTERS CLUB

Hopi corn



Near Mishongovi village



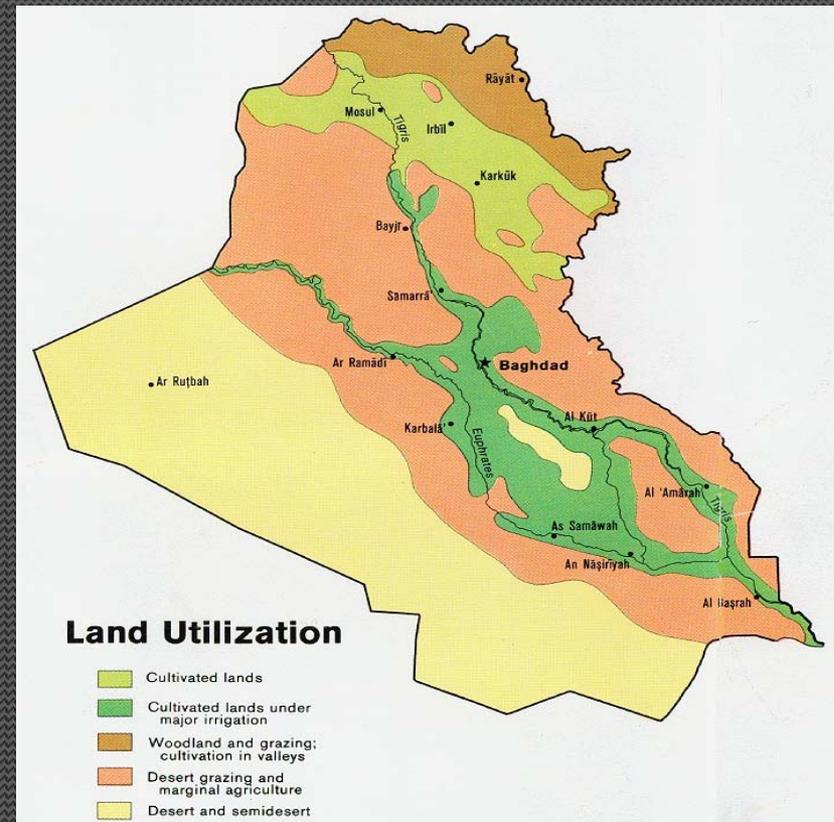
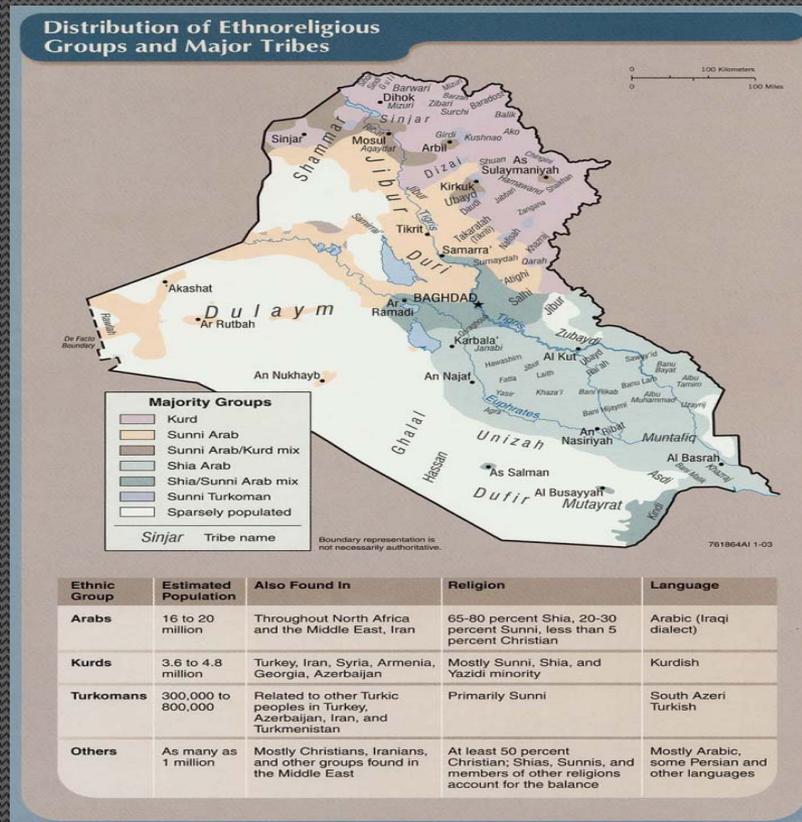
Supai Village



Iraq--tribes (150+) and land use

Volatile land tenure issues remain

Ag is 2nd largest employer



Sulemaini

Irrigation demonstration

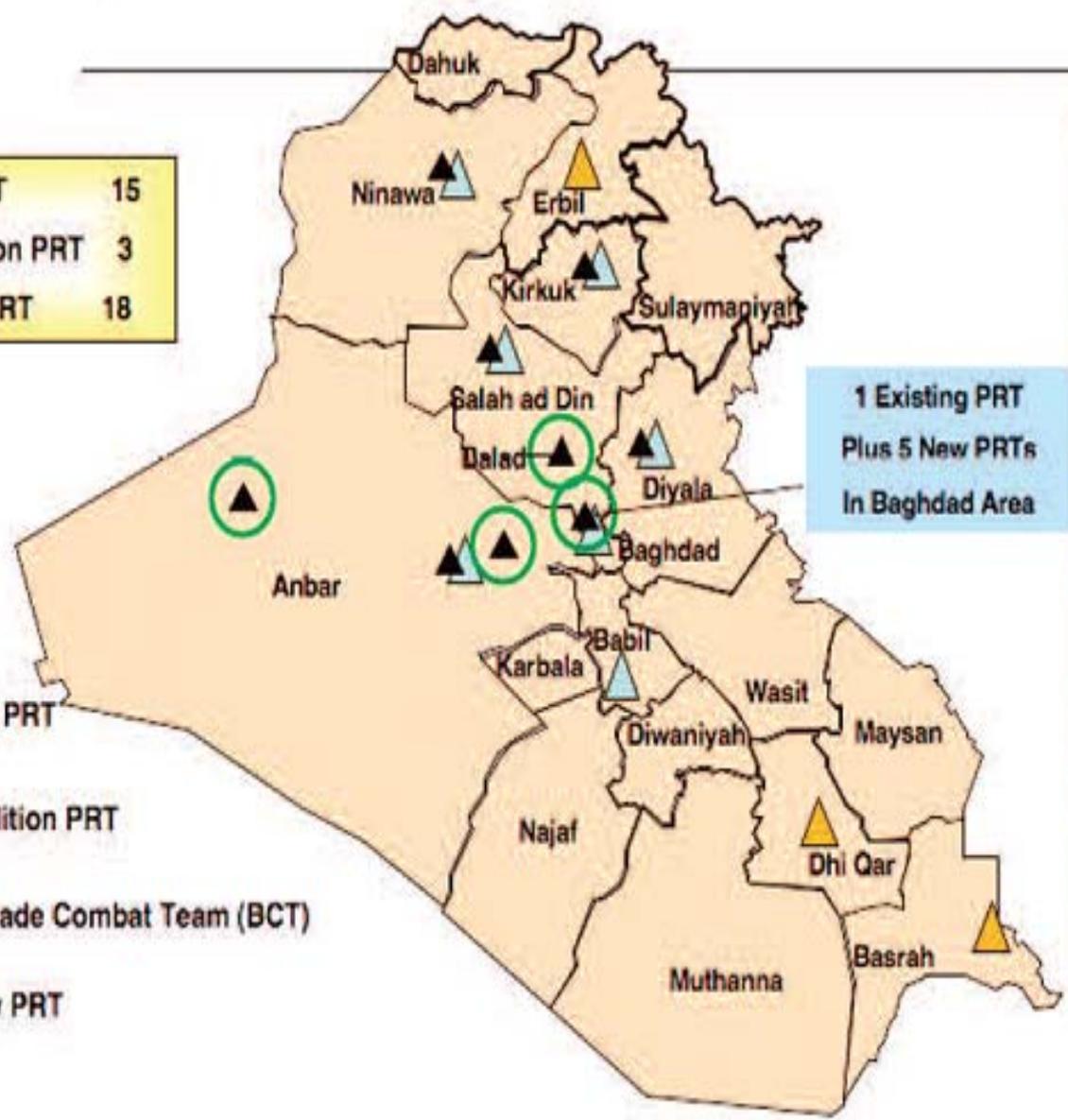


Date palm germplasm



Footprint of Provincial Reconstruction Teams (PRTs)

US PRT	15
Coalition PRT	3
Total PRT	18



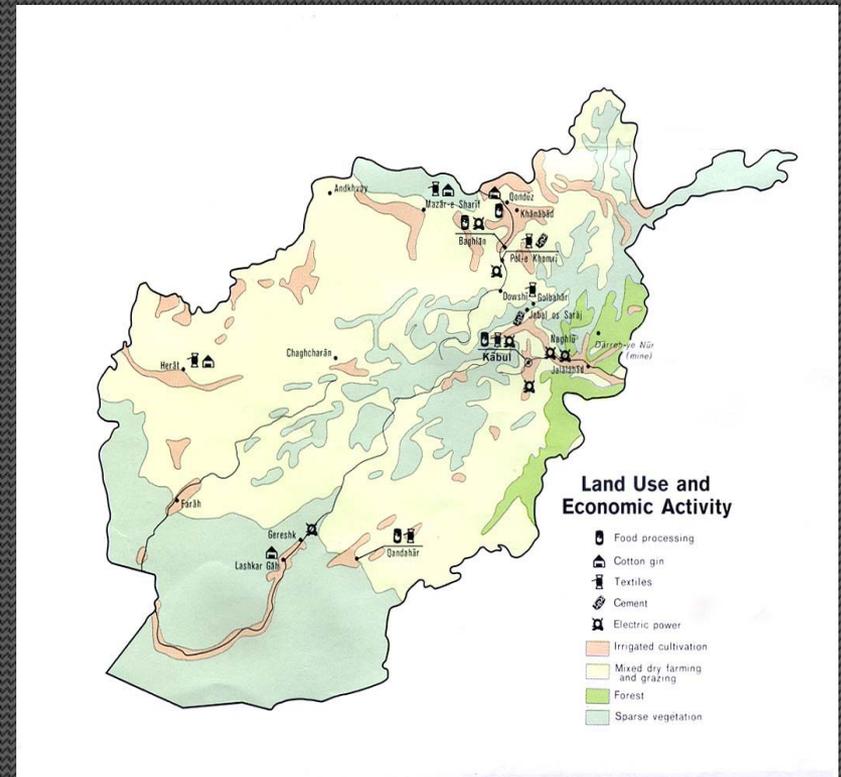
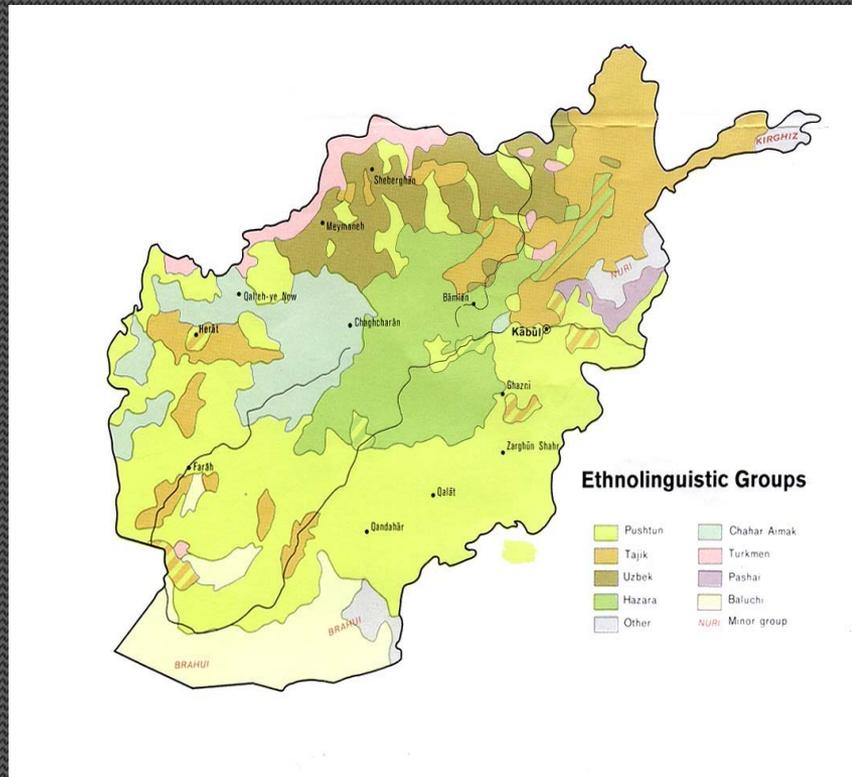
PRT	Location
Ninewa	FOB Marez
Erbil (ROK)	Camp Zaytun
Kirkuk	Kirkuk Regional Air Base
Salah ad Din	Camp Speicher
Diyala	FOB Warhorse
Balad	FOB
Baghdad	Freedom Bldg, IZ; plus 5 FOBs with BCTs
Anbar	Camp Blue Diamond; plus 2 FOBs with BCTs
Babil	REO Hillah
Dhi Qar (IT)	Camp Adder
Basrah (UK)	Basrah Air Station

-  U.S. PRT
-  Coalition PRT
-  Brigade Combat Team (BCT)
-  New PRT

Afghanistan tribes (50+) and land use

80% of the population involved in agriculture

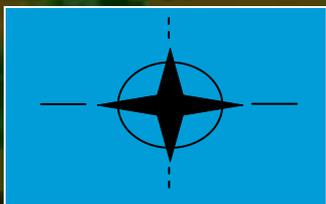
Mostly subsistence but used to export wheat



Jalalabad



PRT Locations - October '06



10 ISAF PRTs



13 Coalition PRTs

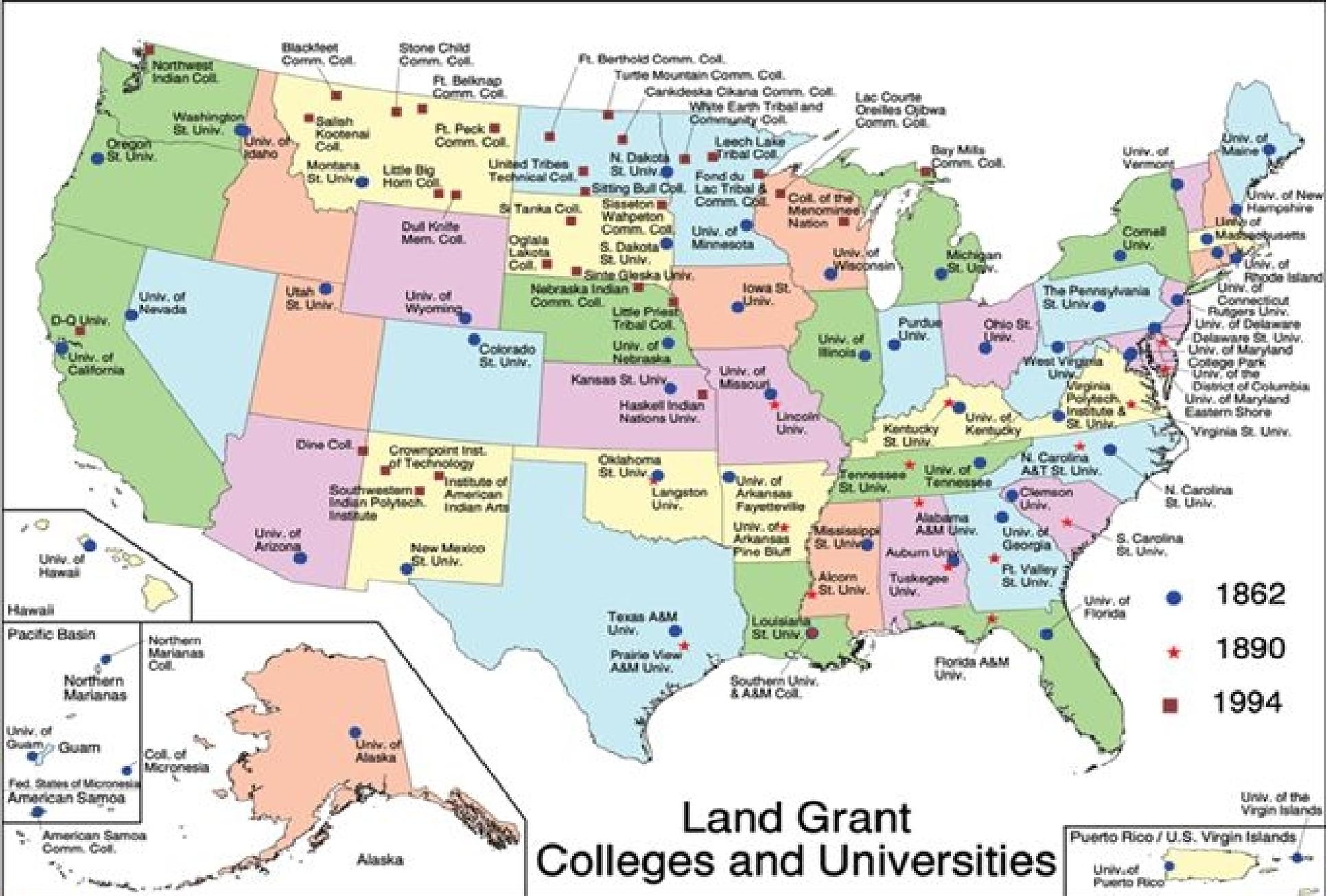
Who “does” international ag?

Los Federales?

- USDA?
- USAID?
- Consultants?

Others...?

- Colleges of Agriculture (1862's)
 - Research
 - Teaching
 - Extension

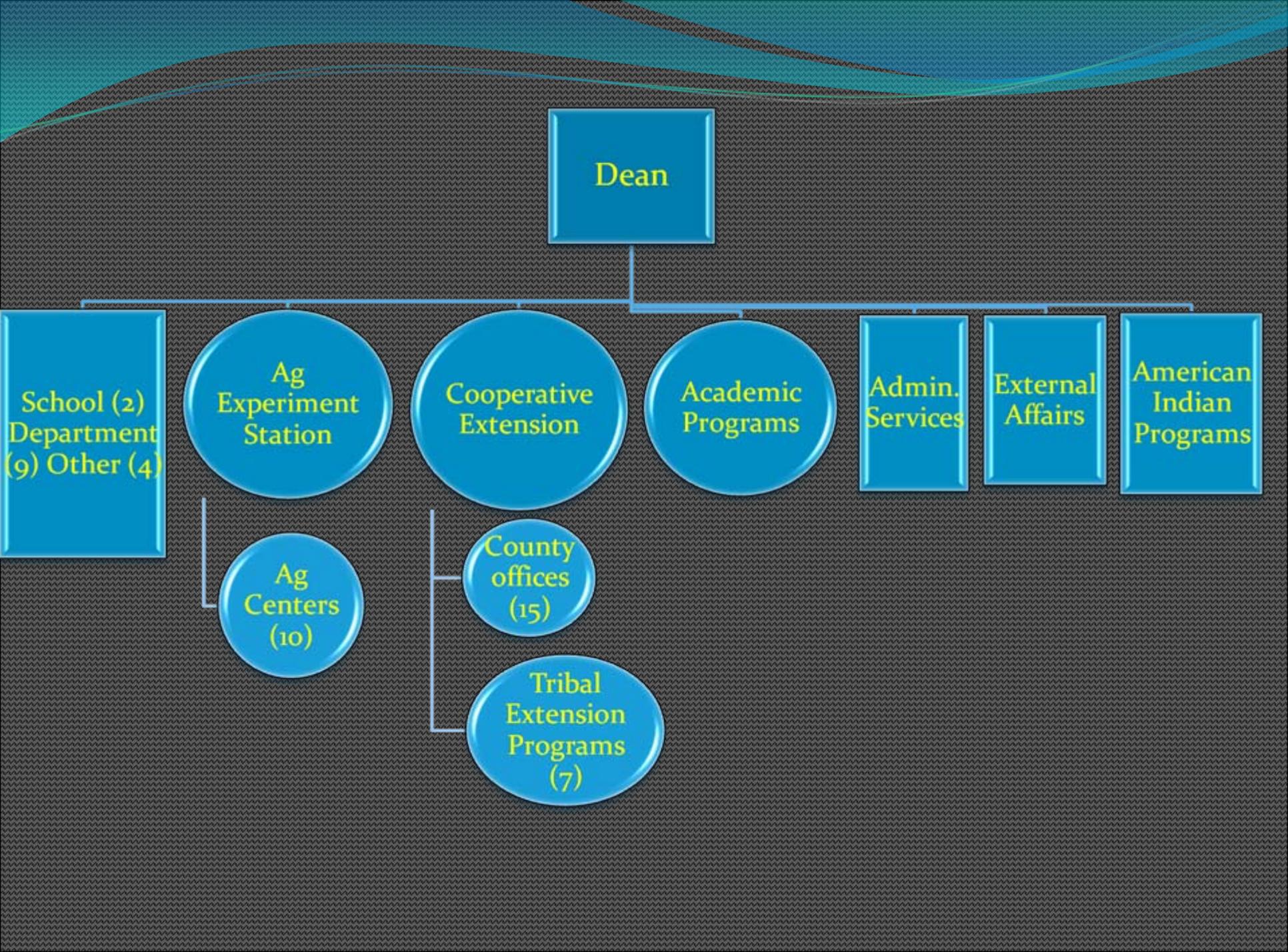


Land Grant Colleges and Universities



Ag Colleges

- 1,091 colleges, universities, vocational and technical schools
- 110,000 students in US agriculture colleges
 - 3,500 professors
- 30 percent of USDA's research appropriations (\$1.5 B) support extramural research—that is, research supported by but not conducted by USDA.
- Smith Lever Act response to concerns that information and technology being developed were not reaching many farmers, particularly those most in need of education.



What are our objectives?

- American-style agriculture in post conflict counterinsurgency environments?
 - John Deere
- International trade in food and fiber?
 - Cargill
- Or...Resettlement of rural areas (vs. feral villages)
- And...Employment , subsistence/local agriculture
 - Teaching, research, extension programs and linkages

And so...?

- Food, natural resource crises will continue
- Indigenous people will be heavily impacted
 - ...and least able to fix things
- US is the world leader in agricultural development and natural resources management
 - Appropriate technology
 - Reasonable interventions
 - Correct mix of US institutions
 - Realistic expectations