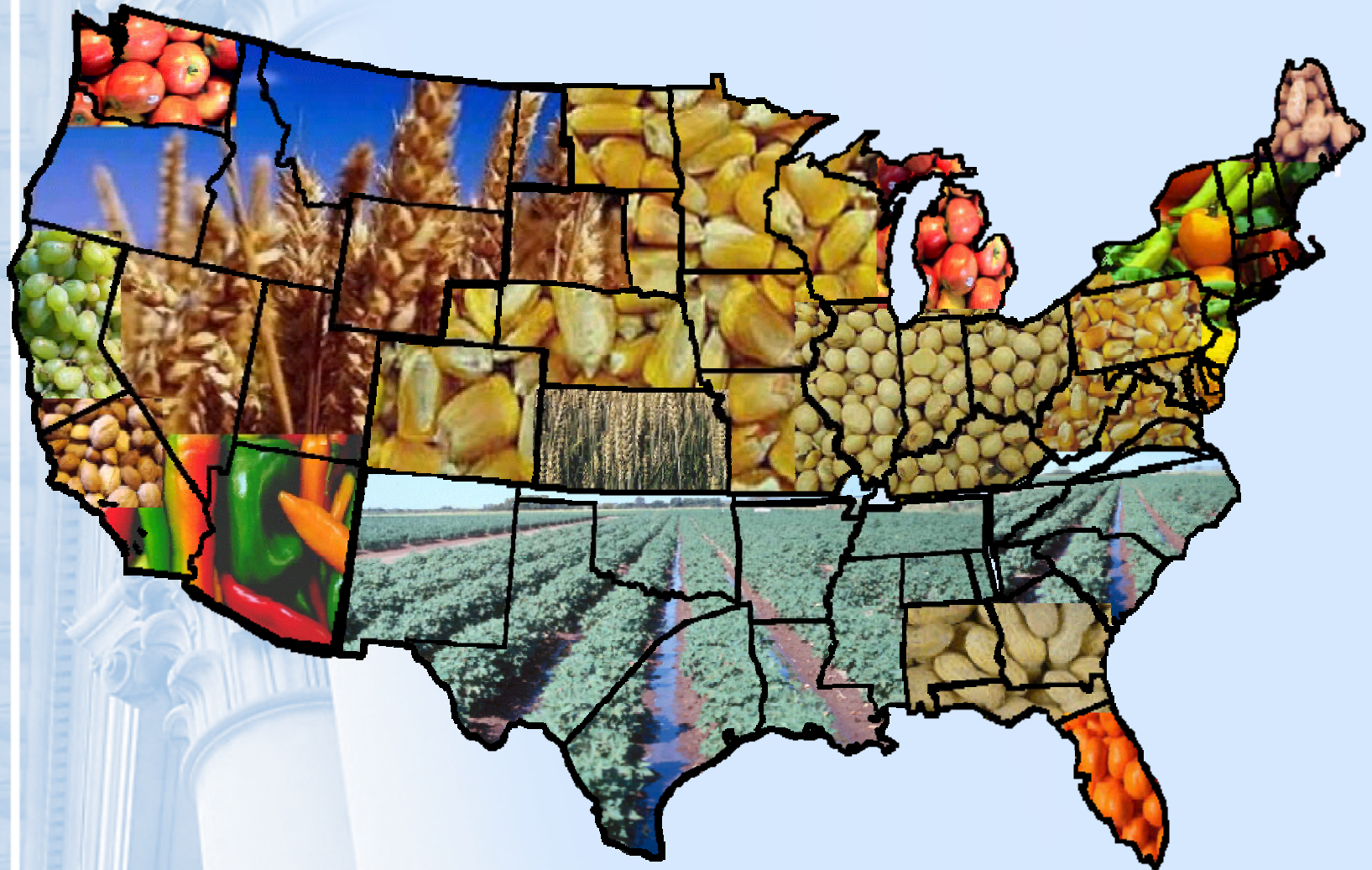


# Educating the grower and the consultant: Practical on-farm applications of IPM

Greg Willoughby, Ph.D.  
Helena Chemical Company  
Division Agronomist  
North Central US

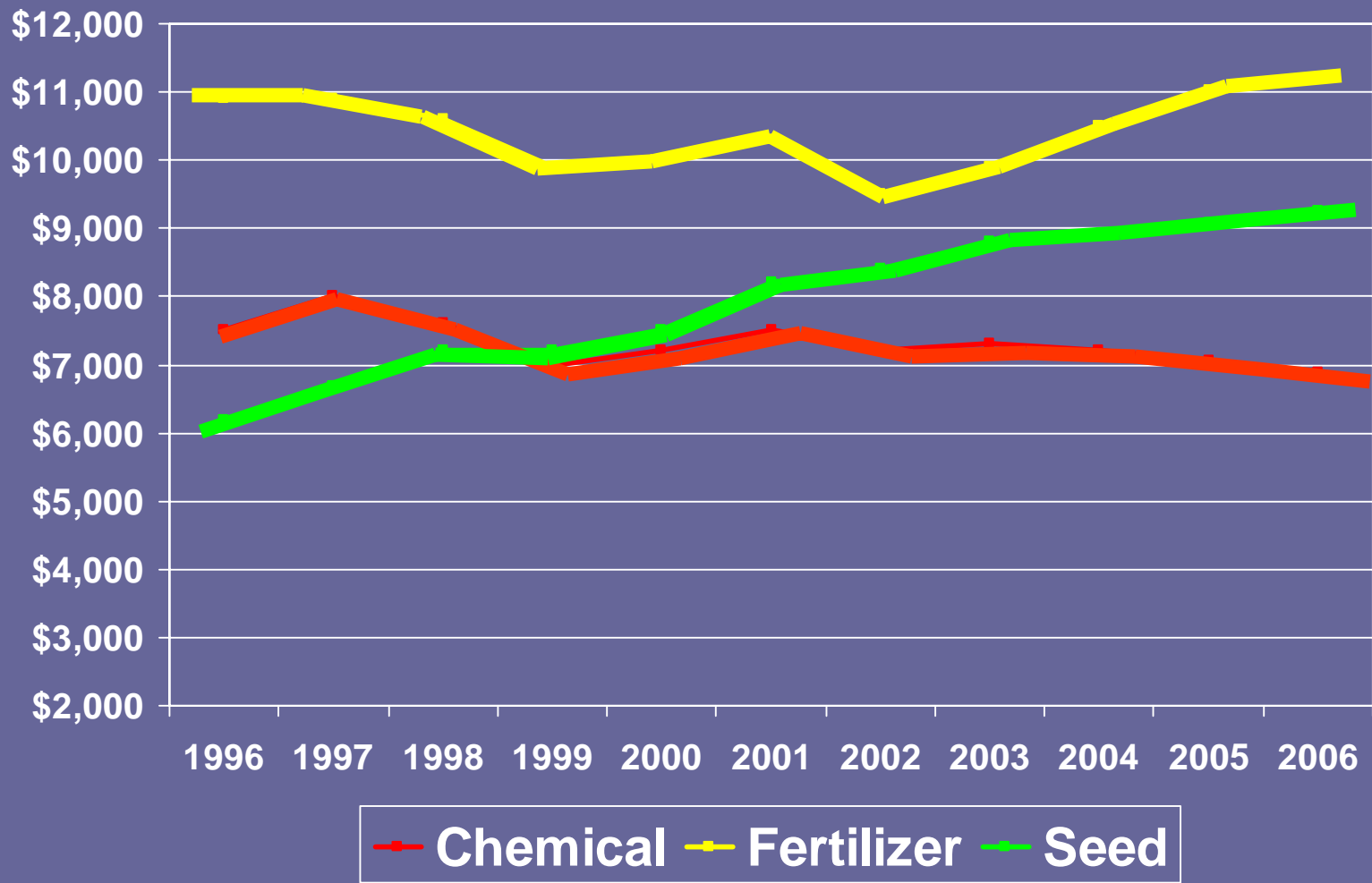




## IPM Defined

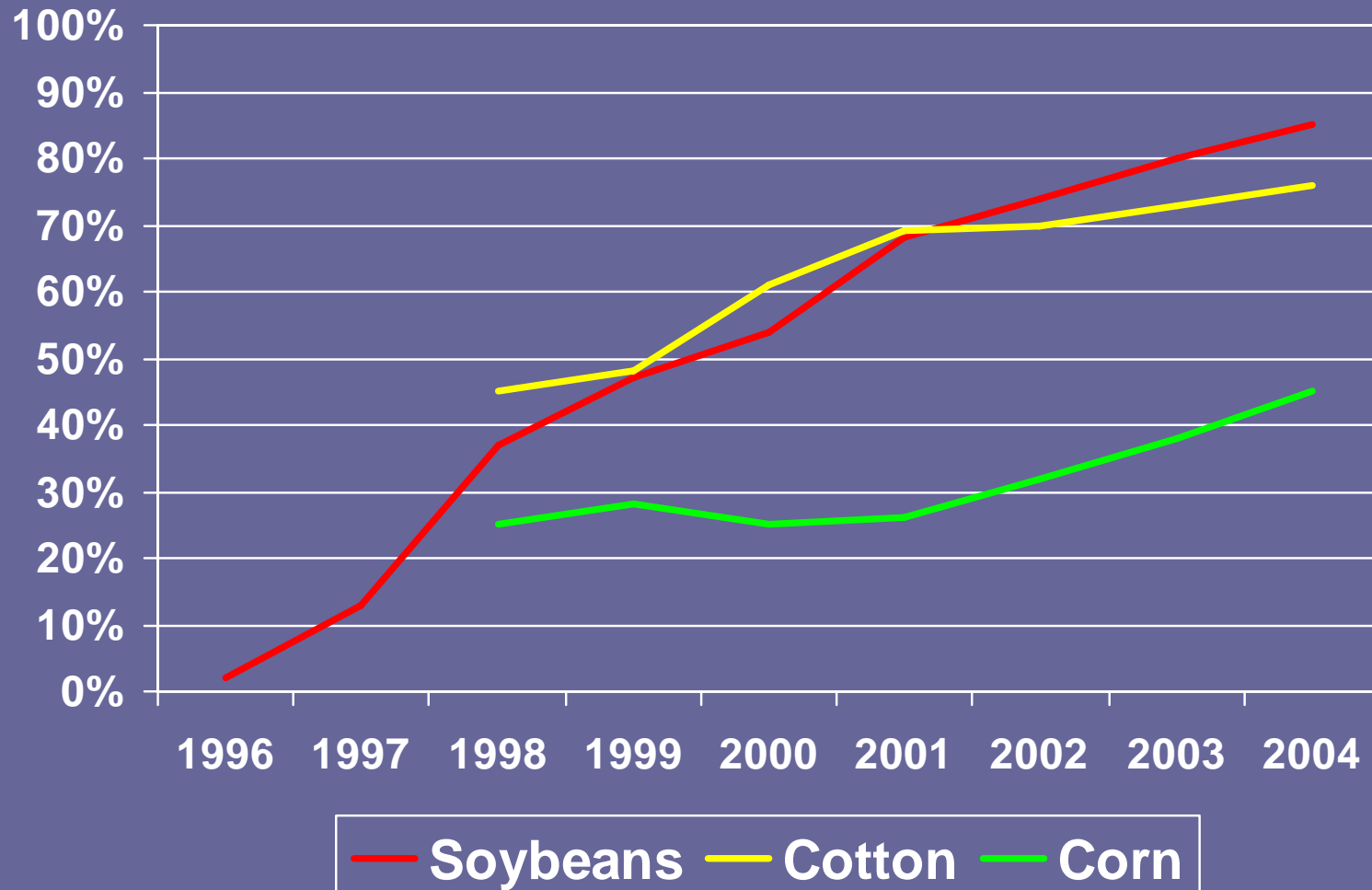
“Integrated Pest Management is the coordinated use of pest and environmental information along with available pest control methods, including cultural, biological, genetic and chemical methods, to prevent unacceptable levels of pest damage by the most economical means, and with the least possible hazard to people, property, and the environment”.

# Crop Input Market Trends



% of Total U.S. Acreage

## Biotech Trends

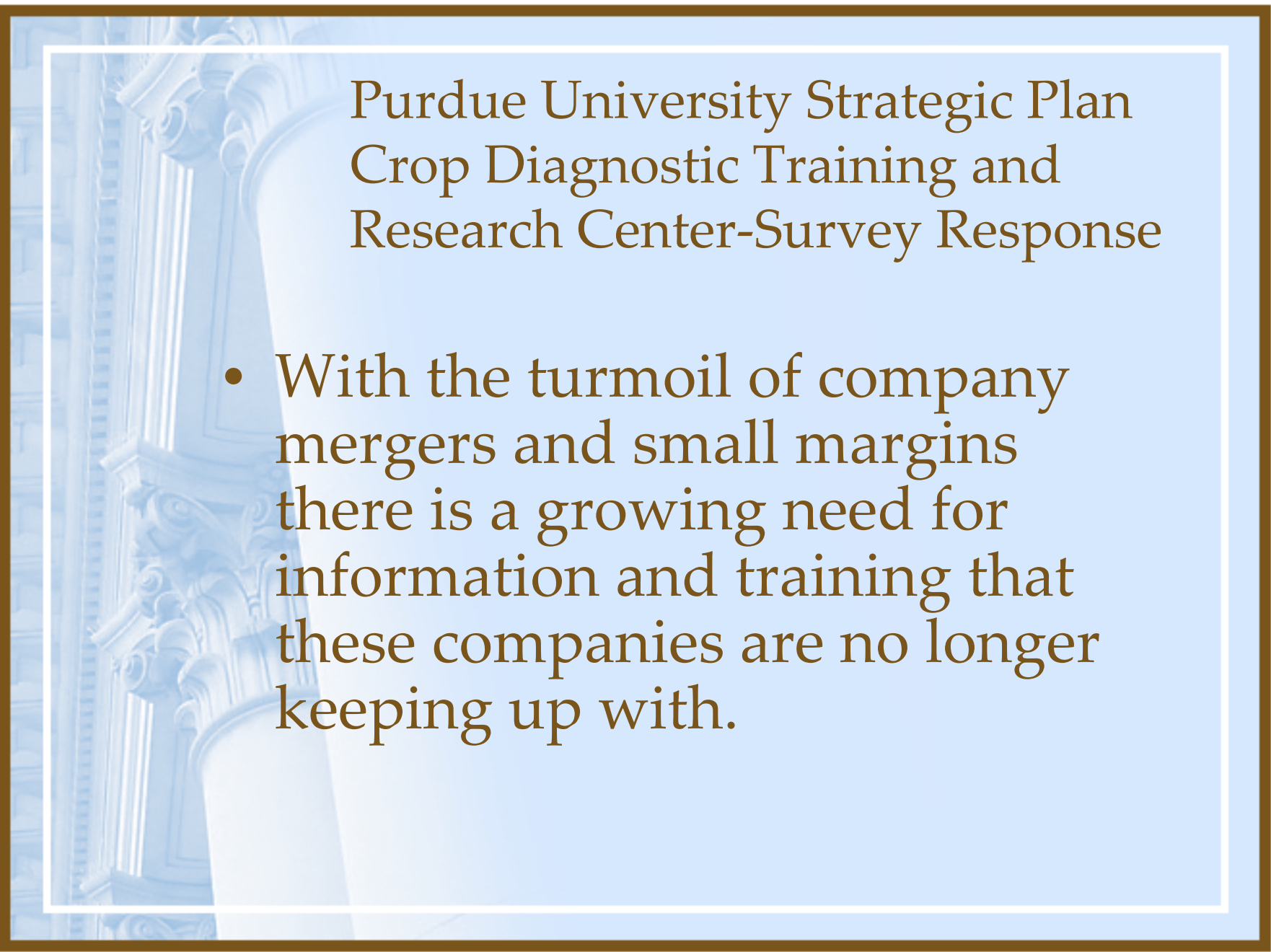




# Purdue Crop Diagnostic Training and Research Center

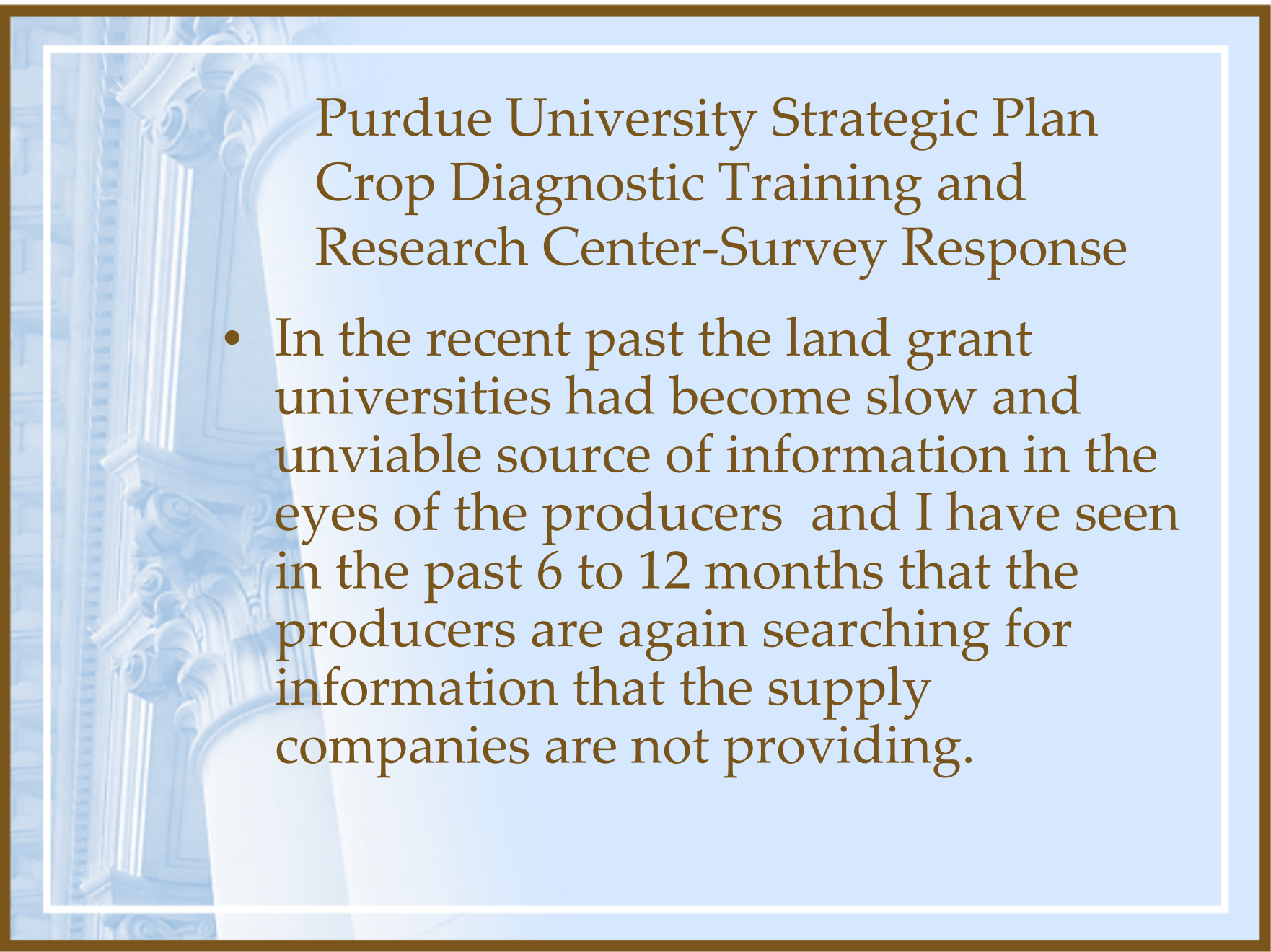
In 2001

- 100 acres in 4 locations across Indiana
- Small plot demonstrations showcasing in-field problems
- Crop consultants, industry sale and tech reps, pesticide applicators target audience
- Maxed out in terms of time by faculty and calendar for training.
- Small groups of 15-30 individuals with 60-120/day

The background of the slide features a faint, blue-tinted image of classical architectural columns, likely from a university building, which are partially visible on the left side. The entire slide is framed by a thick brown border.

## Purdue University Strategic Plan Crop Diagnostic Training and Research Center-Survey Response

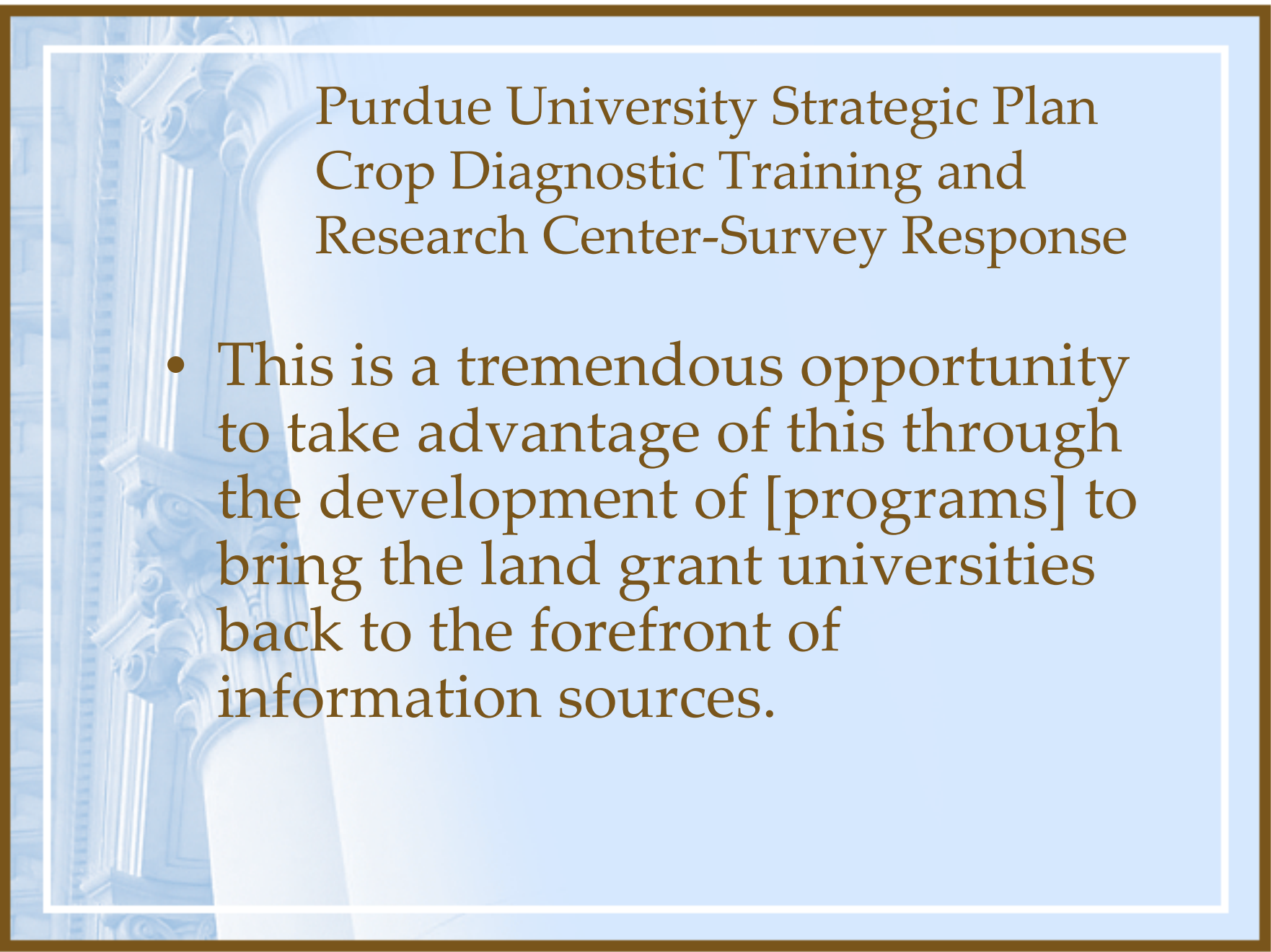
- With the turmoil of company mergers and small margins there is a growing need for information and training that these companies are no longer keeping up with.



## Purdue University Strategic Plan Crop Diagnostic Training and Research Center-Survey Response

- In the recent past the land grant universities had become slow and unviable source of information in the eyes of the producers and I have seen in the past 6 to 12 months that the producers are again searching for information that the supply companies are not providing.





## Purdue University Strategic Plan Crop Diagnostic Training and Research Center-Survey Response

- This is a tremendous opportunity to take advantage of this through the development of [programs] to bring the land grant universities back to the forefront of information sources.

The background of the slide features a light blue gradient with a faint, semi-transparent image of classical architectural columns on the left side. The columns are white with detailed capitals and fluted shafts. The entire slide is framed by a dark brown border.

# Education of Dealers and Growers

- Traditional
  - Cooperative Extension Service
    - Role was defined to disseminate knowledge from research to end user
  - Retail role was minimal to non existent
    - Not a Profit Center

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## Education of Dealers and Growers – Cont.

- Pesticide License (as we know today) were not required for growers only a “registration”
  - Minimal requirements if any
- HIGH percentage population involved in production agriculture

The background of the slide features a light blue gradient with a faint, semi-transparent image of classical architectural columns on the left side. The columns are white with detailed capitals and fluted shafts. The entire slide is framed by a thin brown border.

# What Happened

- Industry grew & GREW
  - Competition became increasingly large
  - Education was a profit center in that it made relationships unique
  - “Less need for University”
- Regulations increased
- Population percentage decreased to 5%+ in production agriculture

The background of the slide features a light blue gradient with a faint, semi-transparent image of classical architectural columns on the left side. The columns are white with detailed capitals and are set against a darker blue background. The entire slide is framed by a thin brown border.

# Bubble Burst

- Companies Merged
  - Education no longer a profit center so positions cut.
- Fewer Extension faculty with decreased emphasis on production agriculture
  - Federal/grant funding driving shift
  - High retirement rates
    - Replaced with more research FTE



The background of the slide features a light blue gradient with a faint, semi-transparent image of classical architectural columns on the left side. The columns are white with detailed capitals and fluted shafts. The entire slide is framed by a thin brown border.

# Today

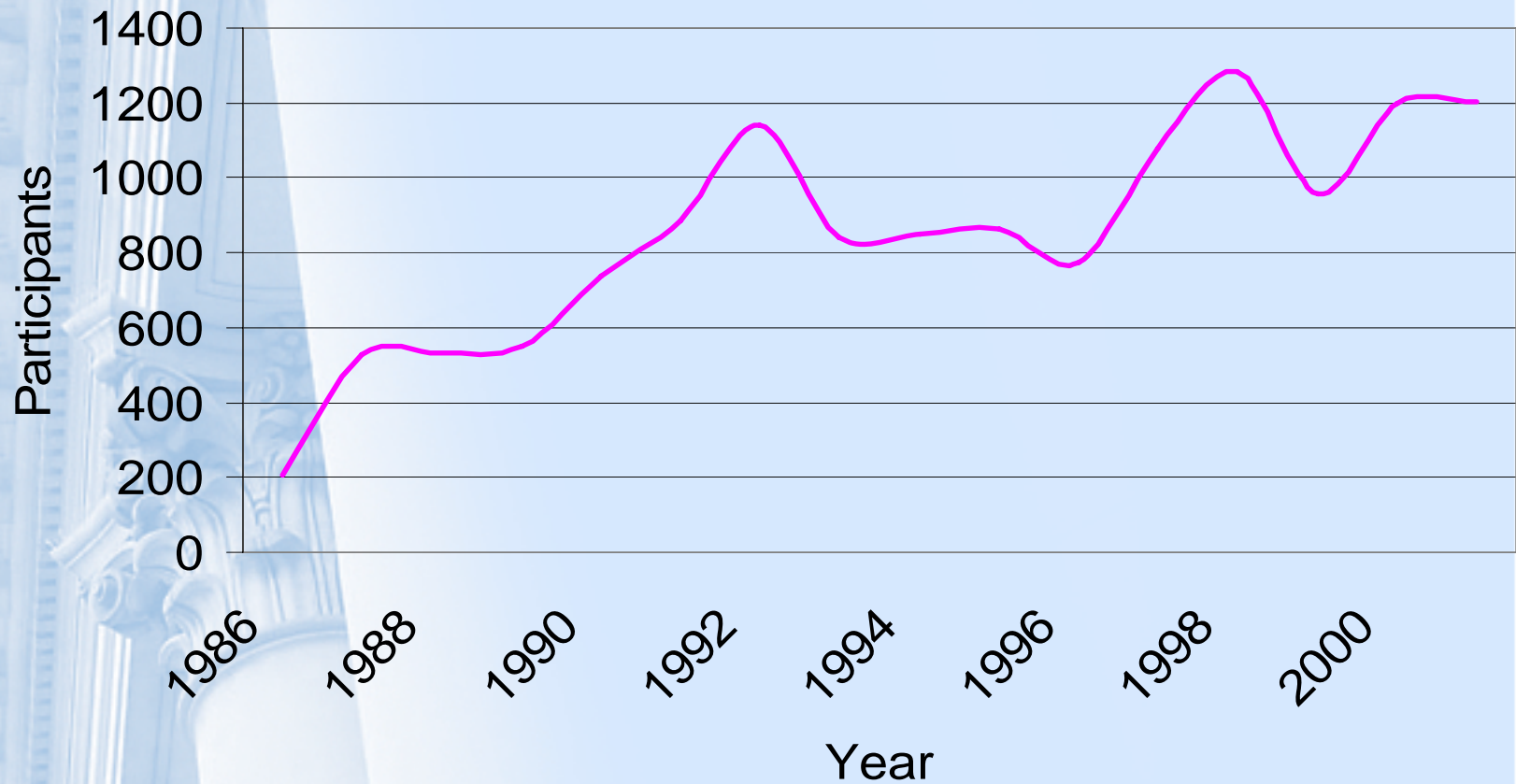
- University Level
  - Fewer Extension Faculty to “Hit the Road”
  - County CES staff decreased, some counties merged
    - Higher emphasis on homeowners less to production agriculture (population)

The background of the slide features a light blue gradient with a faint, semi-transparent image of classical architectural columns on the left side. The columns are white with detailed capitals and fluted shafts. The entire slide is framed by a thin brown border.

# Today cont.

- Industry
  - “out of touch” opinion of Academics
  - Profit Center concept again viable due to few companies and few unique chemistries.
- Population
  - World Wide Web as information warehouse
  - Confusion

## Enrollment 1986- 2001 at all Diagnostic Training Centers





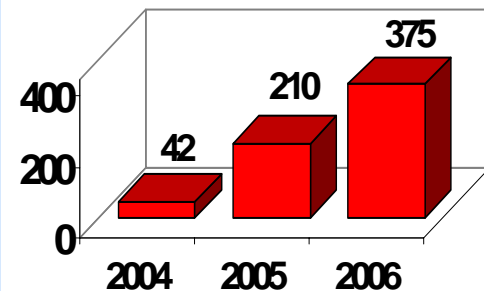
# Modern-EPA

- Pesticide Regulation is Heavy
  - Producers take tests (hard tests to some)
  - Require recertification
    - Complete or partial retest
    - Continuing Education Hours
    - Combination

# Modern-USDA

- TSP Programs
  - Encourage responsible use by offering money
  - Labor intensive paperwork
  - Outside consultant often needed especially CNMP
- Conservation Security Program
- EQUIP (\$20/ac)


**Growth in CSP Funding**





# Response –Univ./Govt.

- Pesticide Applicator Programs
  - Greater emphasis on responsible use
  - Not done with tenured faculty
  - Money from fees as partial or whole support.
    - State money in some cases
- Extension Faculty time more directed to train the trainer mode on Agronomics
  - Road show concept or convention

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# Response - Industry

## Certification Programs

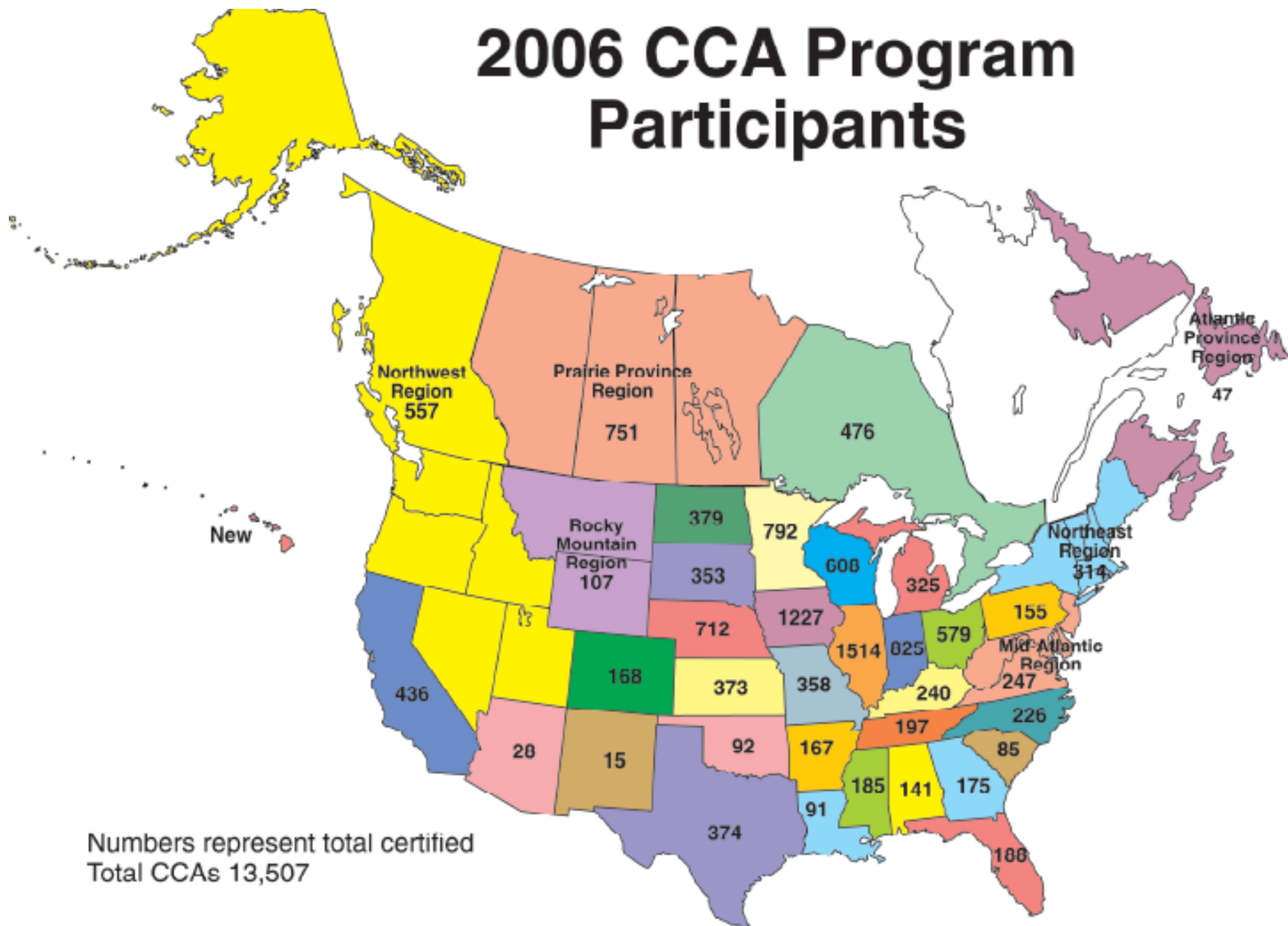
- Certified Crop Advisor Programs/ARCPACS cert./Professional Crop Consultants
  - Look back to University for support
  - \$5-10/ac for TSP/CSP/CNMP payments

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# ARCPACS history

- Created as a certifying registry within the Tri-Societies in 1977 - ASA, CSSA, SSSA
- Concept of certification for weed scientists, plant pathologists & horticulturalists - April 1991
- Approved development of a Certified Crop Advisor category - Aug 1991

# 2006 CCA Program Participants



The background of the slide features a light blue gradient with a faint, semi-transparent image of classical architectural columns on the left side. The columns are white with detailed capitals and are set against a darker blue background. The entire slide is framed by a thin brown border.

# Industry Cont.

- Due to time only allowed out of field for 3-7 days a year
  - Half of that is internal training
    - Leaves 1-3 days for outside information
- University web sites and newsletters are critical



A decorative background image featuring a series of classical columns, likely from a Greek or Roman temple, rendered in a light blue, semi-transparent style. The columns are arranged in a perspective view, receding into the distance. The entire slide is framed by a thick brown border.

# A Profile

## Helena

- 2 day 15 credit workshop fueled by at least 1/2 speakers from University
- Weekly agronomic conference calls in season
- Bi-monthly newsletter
- Why ASK? Bulletins
- Email Alerts
- Network with CES on local plots for pesticide credit for growers

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# Future

- Mass downloads are increasingly important (although we don't like them)
- Current information delivery
  - Newsletters, web updates, etc
    - Extension bulletins are a resource not a delivery mechanism
- Leaders are those that are doing production work and looking at ECONOMICS not just efficacy
- TIME to learn is minimal and costly



Thank you

# Abstract

## **Educating the grower and the consultant: Practical on-farm applications of IPM.**

Speaker – Greg Willoughby, PhD, Helena Chemical Co., Indianapolis, Indiana

Education of sound agronomic principles has traditionally been the responsibility of the Land Grant Colleges through their extension programs. The changing roll of these Universities in the Midwest and the shift in population from production agriculture into non agricultural sectors has inherently shifted some of this education into the private realm. In many cases we now have the extension system in a "teaching the teacher" role or it is being accomplished through pesticide applicator programs. An overview of some of these programs will be covered.

# URLs

- NSF Center for IPM
  - <http://www.cipm.info/index.cfm>
- NC IPM
  - <http://www.ncpmc.org/>