

The background of the slide is a photograph of a vast blue ocean under a bright blue sky. A faint rainbow is visible on the left side of the horizon, blending into the blue of the sky and water. The text is centered over this image.

Bringing International Research Experiences Back to the Classroom

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International Projects

- **Mexico and Canada** - North American Mobility Program for Higher Education, US Department of Education,
- **Taiwan** - National Science Council of Taiwan,
- **Israel** - Binational Science Fund (BSF) and the Binational Agriculture Research and Development (BARD) and Israeli Biotechnology Research Inc.
- **Jamaica and SE Asia** - IPM-CRSP
- **Germany**

Bringing International Research Experiences to the Classroom

- Today's students enjoy hearing about other countries
- Many students have international experiences that can be shared
- Internationalizing existing classes increases interest

Bringing International Research Experiences to the Classroom

- Relating the culture as well as the science can make the material more interesting
- Discuss different customs and traditions with students
- For example discussing food and how it is prepared in another country adds depth and helps students relate

International Research in the classroom

Teaching Experiences

- Vegetables Crops
- Web-based Distance learning and classroom

Philosophy:

Integrate internationalism into all courses on special ones.

Give examples from other countries to emphasize points and talk about different ways of doing things

Bringing International Experiences to the Classroom

- **Course taught:**
 - Vegetable Crops Lecture and Lab
 - Upper division course on the production and utilization of vegetables in the US and world
 - Both classroom and distance learning courses are offered of the lecture course
 - Distance learning courses are web-based and picture, video and graphic intensive

Vegetable Seeds

Main Class Text:

- [Introduction](#)
- [Seed Companies](#)
- [Seed Laws](#)
- [Seed Treatments](#)
- [Seed Storage](#)
- [Seed Containers](#)
- [Selecting Cultivars](#)
- [Planting Seeds in the Field](#)
- [Standards of Seed Purity and Germination](#)
- [Cultivar Sources and Regulation](#)
- [Reproductive Characteristics of Common Vegetables](#)

Commercial Vegetable Production Recommendations:

No assigned material

Pictures:

- | | |
|---------------------------|---------------------------|
| • Seed 1 | • Seed 19 |
| • Seed 2 | • Seed 20 |
| • Seed 3 | • Seed 21 |
| • Seed 4 | • Seed 22 |
| • Seed 5 | • Seed 23 |
| • Seed 6 | • Seed 24 |
| • Seed 7 | • Seed 25 |
| • Seed 8 | • Seed 26 |
| • Seed 9 | • Seed 27 |
| • Seed 10 | • Seed 28 |
| • Seed 11 | • Seed 29 |
| • Seed 12 | • Seed 30 |
| • Seed 13 | • Seed 31 |
| • Seed 14 | • Seed 32 |
| • Seed 15 | • Seed 33 |
| • Seed 16 | • Seed 34 |
| • Seed 17 | • Seed 35 |
| • Seed 18 | • Seed 36 |
- [Seed Anatomy \(PDF\)](#)
 - [Seed Vigor \(PDF\)](#)
 - [Seed germination \(Quicktime video\)](#)
 - [Demonstration of automated seed testing \(PPT\)](#)

Links:(these links are provided for information purposes only and do not constitute an endorsement by Virginia Tech of the services or products provided)

[Virtual Seeds from OSU](#)

[National Center for Genetic Resource Preservation](#)

[American Seed Trade Association](#)

[Seed Biology Research Network](#)

[Burpee Seed Company](#)

[Seminis Vegetable Seed Group](#)

[Johnny's Seeds](#)

[Ferry-Morse Seeds](#)

[Harris Moran Seed Co.](#)

[Sunseeds](#)

[Kamlerler Seed Priming](#)

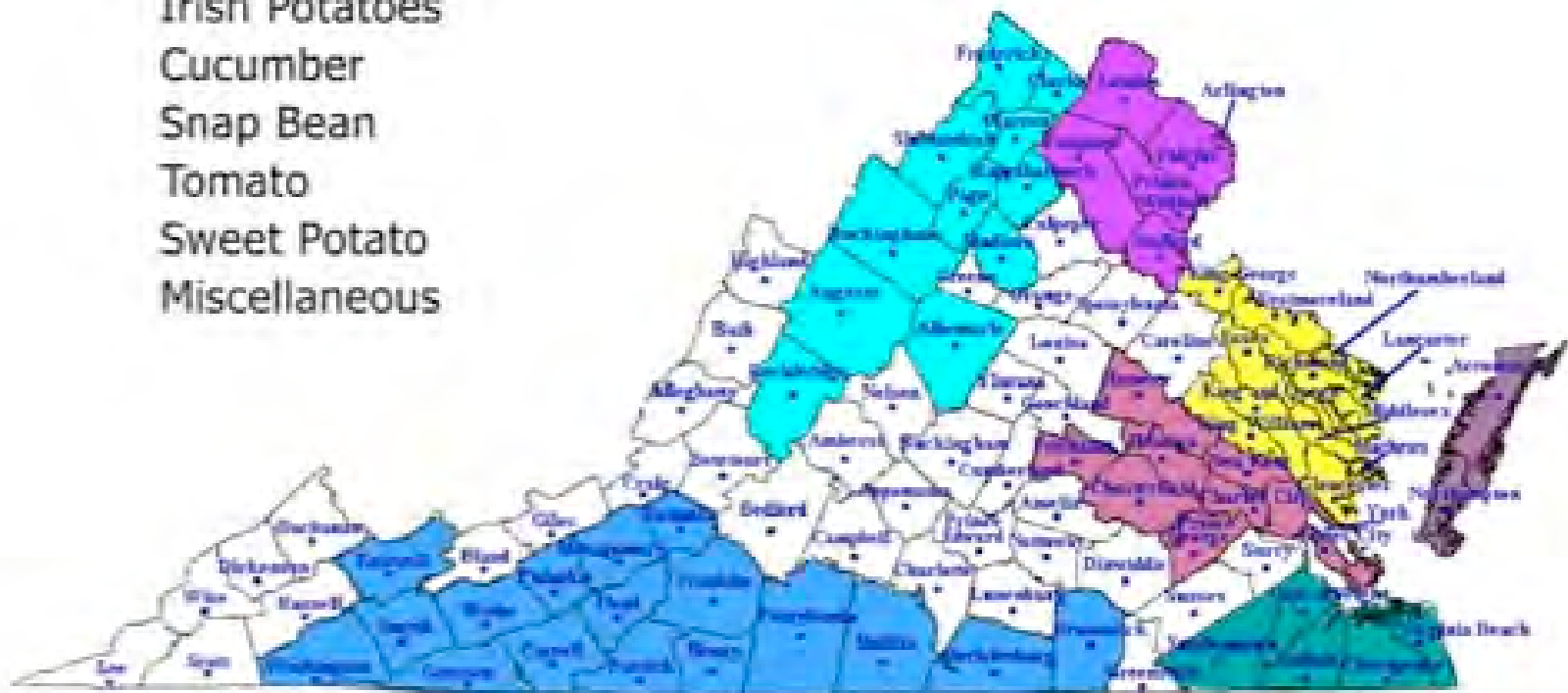
[Celpril Seed Enhancements](#)

[INCOTEC](#)

[Know-You Seeds](#)

1 - Eastern Shore

22,000 Acres
Irish Potatoes
Cucumber
Snap Bean
Tomato
Sweet Potato
Miscellaneous



NetForum - Message Replies

Forum: Hort 4764

Topic: Vegetable Production Areas

Topic Posted by: Greg Welbaum

Date Posted: Sun Jun 16 16:32:19 CDT Eastern 2000

Topic Description: Post your questions on this topic here.



Original Message:

Posted by: Angela Rigney (angrney@perc.k12.va.us)

Date posted: Tue Feb 5 19:04:53 US/Eastern 2002

Subject: Vegetable Production Areas

Message:

Is there the possibility to help farmers in Virginia to utilize their land with a variety of crops? Maybe since the tobacco farming industry is down they could utilize their land and grow some vegetable crops.

Reply:

Subject: Alternative crops

Reply Posted by: Greg Welbaum

Date Posted: Fri Feb 8 11:37:20 US/Eastern 2002

Message:

Virginia Tech, Virginia State University, and the state and federal government have poured millions of dollars into alternative crops development projects for VA and the surrounding tobacco states. Most of these projects have been unsuccessful for a wide variety of reasons. The broccoli initiative in the late 1980s was one high visibility project that you may aware of that was a spectacular failure. The Halifax shipping point farmers market (now closed) was part of this project. The big hope now is for growing transgenic tobacco in VA that produces beneficial proteins for the pharmaceutical industry.

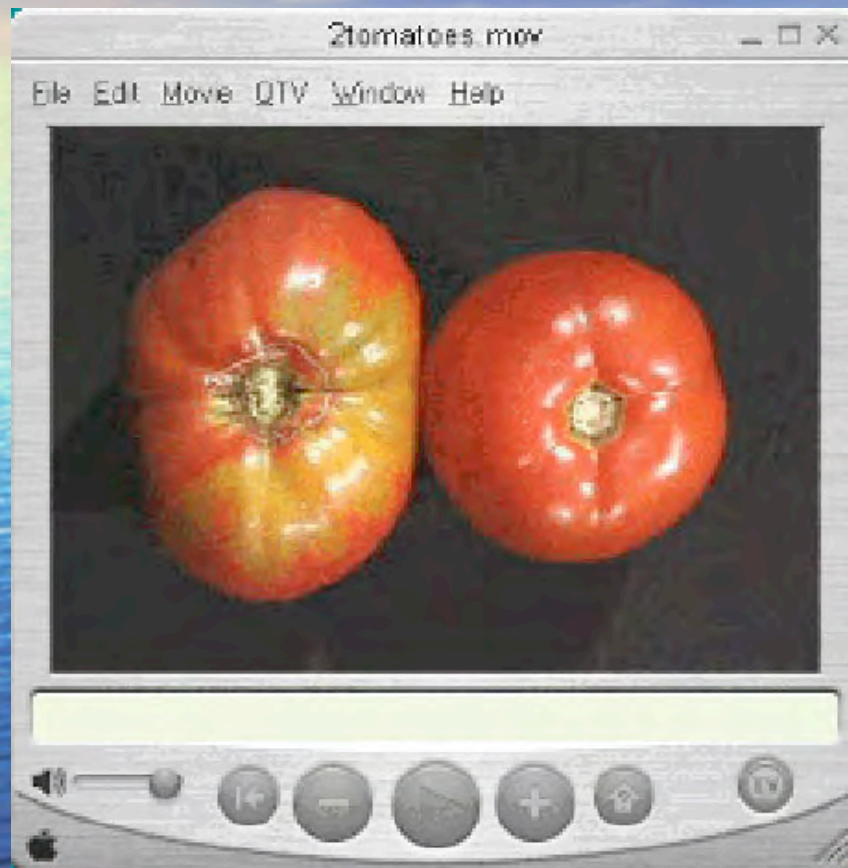
[Reply](#)

Streaming video from the field



Streaming video of field applications adds realism not available in still pictures.

Streaming Videos



- Streaming video adds realism.
- This video allows comparison of heirloom and modern tomato cultivars

Tomato Streaming Video Example



- Students can rotate tomatoes in space to note differences in fruit quality

Soybean germination video



0 Hours

- This QT streaming video allows students to visualize seed germination
- (video provided courtesy of Alan Knapp, Iowa State University)



Artichokes are popular in most countries surrounding the Mediterranean Sea. These buds, for sale at a market in Greece, are sold with six inches of the stem attached. This cultivar is much different than 'Green Globe', the most common cultivar grown in the U.S.



Different regions of the world have different quality standards. This heart-shaped cultivar is popular in Greece but does not have the correct appearance to be successful in the U.S. market because it lacks uniformity, produces a higher percentage of small fruit, has an unusual shape, green shoulders, and radial cracking.

Student Teams and Competitions



Integrating International Research



International Research in the classroom



International Research in the classroom



Integrating International Research into Teaching

Character	'Turbo'	Hiromi
	Avg./plant	Avg./plant
Flea Beetles	5 ± 3	9 ± 4
Lady Bugs	2 ± 1	3 ± 2
Colorado Potato Beetle	2 ± 3	1 ± 3
Tomato hornworm	0 ± 1	0 ± 1

Acknowledgments

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- IPM-CRSP