Developing a student-centered disease diagnostics teaching resource, the case of CBSD

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ACTIVE LEARNING

What I hear, I forget

What I see, I remember

What I do, I understand
Case Study Teaching

NATIONAL CENTER FOR CASE STUDY TEACHING IN SCIENCE

Education Center
The Plant Health Instructor

K-12 Plant Path-Ways to Science
Introductory Plant Pathology
Advanced Plant Pathology
Online Courses
Test a case study teaching method for disease diagnostics using CBSD as the case

Assess student appreciation: lecture vs case study method

enable students to apply theoretical knowledge to solve real life problems

Gauge students appreciation of the CBSD threat, symptoms to look out for and management options available.
Have students take the role of family/professionals and in context of “real life scenario”. Ask relevant questions (experts) and offer possible solutions.
The Case

Neema, Opio, Opolot and Dr. Adungosi.
Disease outbreak, NGO, extension & research work on outbreak - use of alternate crops? resistant varieties.

Class room management:
Preparation, review, discussion, “tweeting”, experts response, presentation, review, reflection exercise.
The Crisis

- Neema’s cassava tubers are rotten and inedible
- The entire self help group has lost their cassava crop to a mysterious disease
- Opolot’s tubers are mildly diseased
- Opio: blamed by Neema and group for providing ‘bad’ cuttings

Solutions:
- Need to identify what the problem is
- Exonerate Neema and Opio from blame
- Create awareness and offer management options for CBSD
Reading the case
Review - Small groups
Presentation and role playing
Field visit
Successful in developing tool

Way Forward

?
Active learning – tool for everyone!

http://edu.basf.us/planthealth/PC/start.html
"Okay, now we need to analyze some data and address several critical questions. I have some data sources on the right that we'll use. Click on them to enlarge. We'll go through the inquiry process together. Please do your best in answering the questions and I'll give you feedback."

**Summary Report of Cases in Bangladesh, 2001-2010**

<table>
<thead>
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<th>Year</th>
<th>Place</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
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</tbody>
</table>

**Disease frequency throughout year**

- Influenza
- Bloodcell cases

**Outbreak Map**

Luby, et al., 2009
Sponsors Of the World Congress on Root and Tuber crops

Thank you

BILL & MELINDA GATES foundation
Thank You
Asante Sana
谢谢