National Agriculture in the Classroom

Louisville, KY

From Soil to Plate
June 18, 2015 (Wednesday)
3:30 - 4:45 p.m.

Carole K. Lee
University of Maine at Farmington
Professor of Elementary Education

Poll: How many?

A. Elementary teachers
B. Middle school teachers
C. High school teachers
D. College Professors
E. Farmers
F. Work related with Agriculture

Agriculture Partnership Program

Maine Agriculture in the Classroom

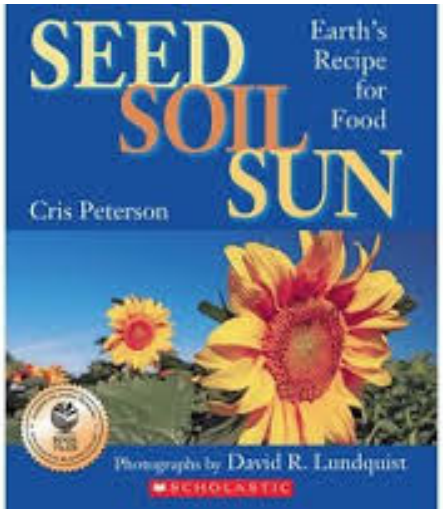
- Willie Grenier – Executive Director

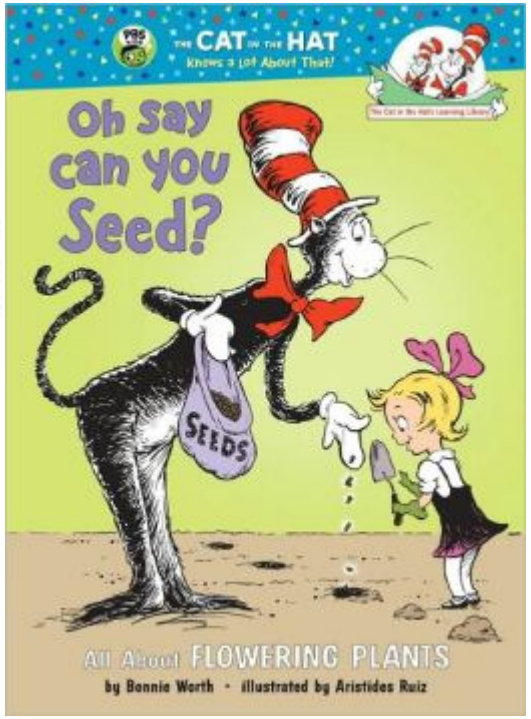
Department of Agriculture

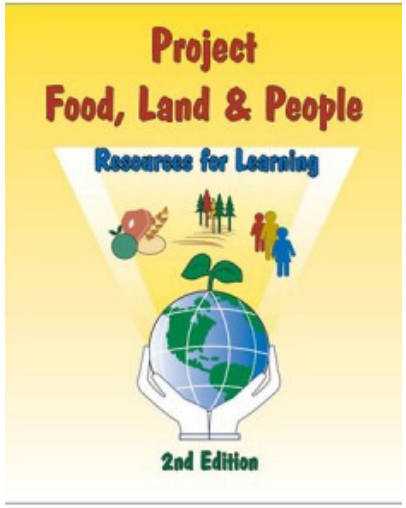
- Cathy Murray - Entomologist

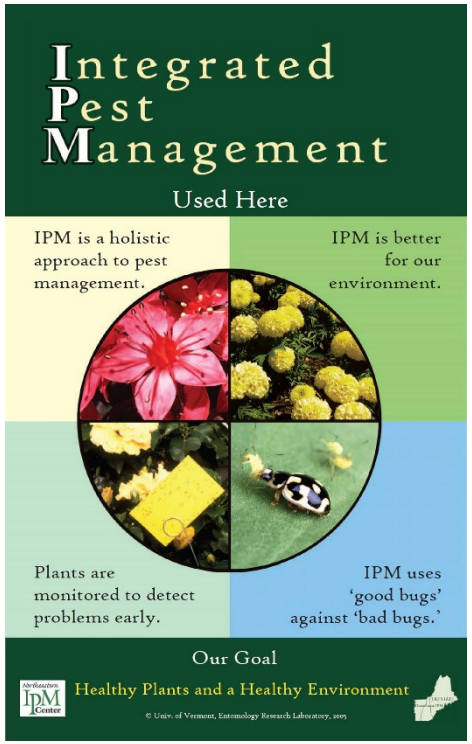
UMF science methods class – 10 hours teaching time related with agriculture

Resources from MAITC & Dept of Agriculture

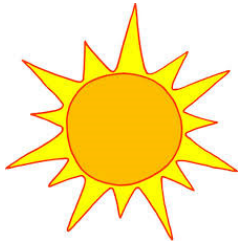








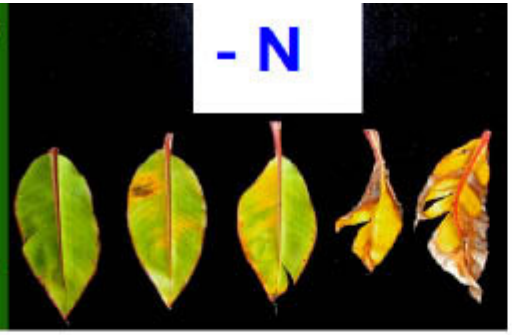
Line of Thoughts



Nutrients – CHO, Proteins, Fat

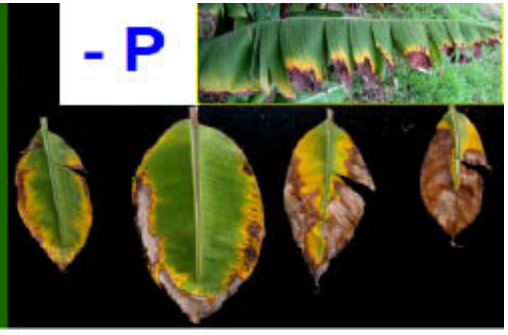
Nutrients – N (nitrogen), P (phosphorus),
K (potassium)

N deficiency: leaves turn light green, then yellow patches appear. Midrib often turns pink.



Nitrogen is vital in chlorophyll production (for green leaves), DNA and proteins.

P deficiency: leaf margins often turn scorched brown, not too much yellowing.



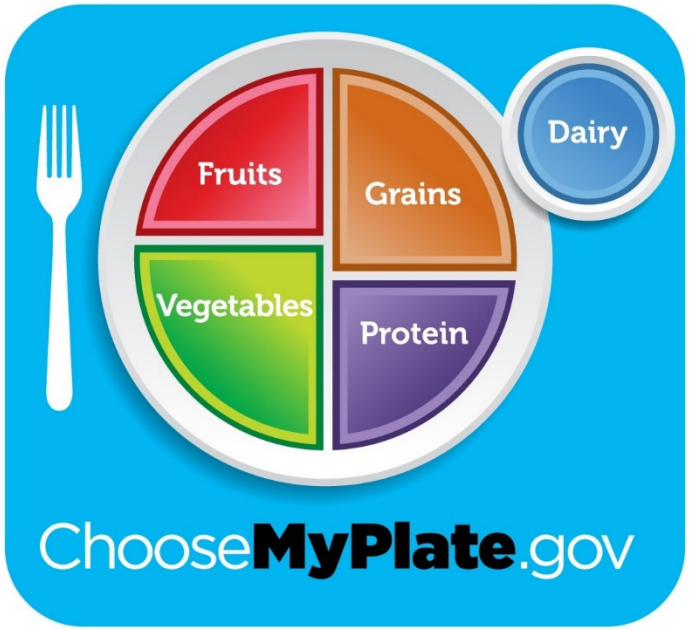
Phosphorus is important for roots growth, and flower and seed formation.

K deficiency: leaf margins and tip turn yellow, then scorched brown.

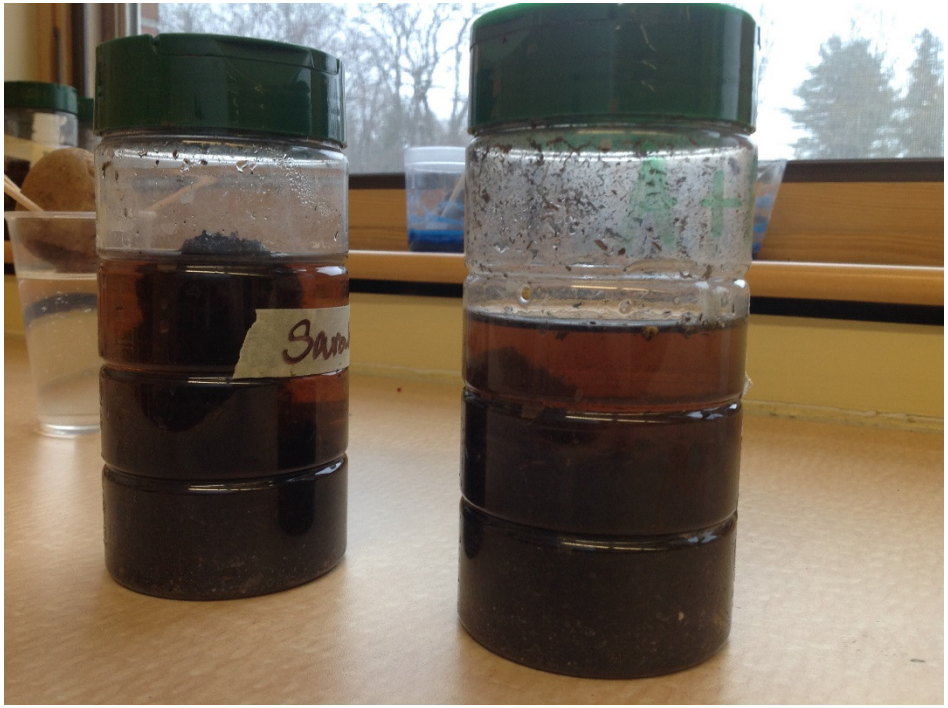
Mg deficiency: interveinal chlorosis causes a light (yellow) band along the leaf.

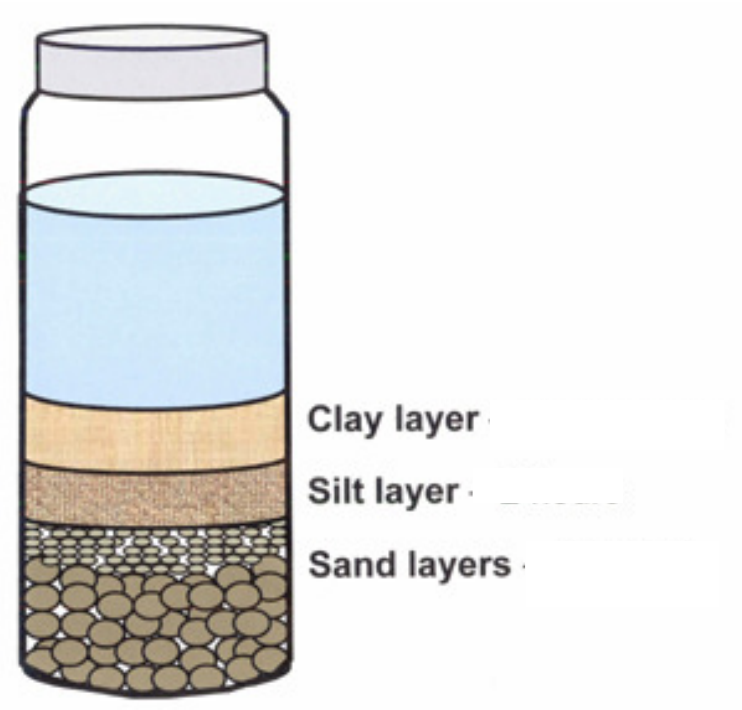
A balanced diet

- To be healthy



Soil





Germination of seeds

Growth of the plants

Seed Germination

- Misconceptions
- Knowledge gained

What parts of the plants are we eating?

National Standards

- Science Standards (NGSS)
  - Science as Inquiry
  - Life Science
  - Soil Science
- Language Arts
  - Reading and Writing
- Math
  - Collecting Data and Representing Data

Test of Nutrients in Food

- Test for carbohydrates
  - Glucose
  - Sucrose
  - Starch
- Test for protein
- Test for fat

Test of Nutrients in Soil

- Test for Nitrogen (N)
- Test for Phosphorus (P)
- Test for Potassium (K)

Germination of seeds

- Simulation of germination of seeds
- Explorelearning.com

Benefits

- An authentic experience of learning about agriculture
  - Maine Agriculture in the Classroom
- Inquiry-based science learning
- Brainstorming ideas
- Researching and Collaborating
- Problem-solving

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Questions and Comments

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