



Department of Plant, Soil and Microbial Sciences

Physiology of Plant Nutrition

CSS 485 / Spring 2024 / MWF 12:40-1:30

Three credits

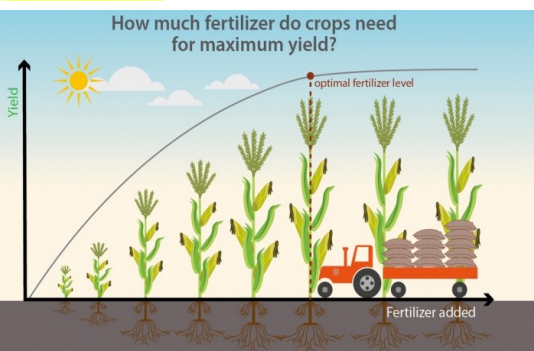
Prerequisite – Plant Physiology or consent of instructors.



Plants convert mineral elements from the soil into organic molecules, thereby serving as a major entry point of these elements into the food web and ultimately impacting human nutrition. Students will learn how plants regulate the homeostasis of these elements and how multiple mineral nutrient signals are wired to influence plant growth. Students will participate in discussions and present on relevant topics in plant mineral nutrition

When you complete this class you should be able to:

- Explain composition of soil with a focus on mineral nutrients.
- Provide insightful understanding of the role of micro- and macronutrients in plant development and quality of the harvested products.
- Provide insightful understanding of the importance of fertilizer production, market dynamics, and the effect on ecosystems.
- Explain how mineral nutrients are transported in plants.
- Develop an understanding of how the nutrient status of plants is diagnosed by plant analysis.
- Develop an understanding of how fundamental knowledge translates to application to increase crop yield while reducing fertilizer use.



Dr. Hatem Rouached

1066 Bogue St, Room A368, East Lansing MI 48824
rouached@msu.edu / 517-353-0168