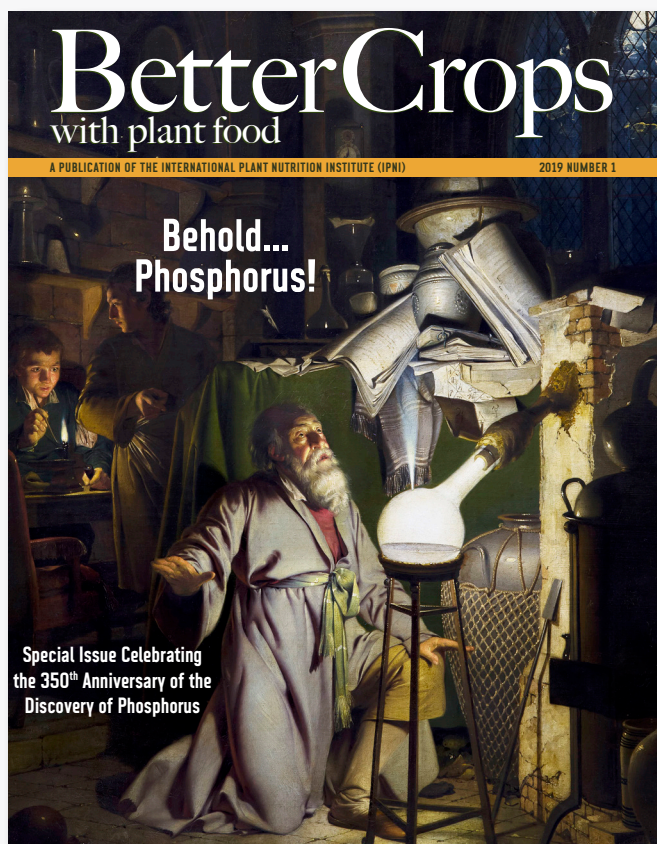


350 Years and Counting.....



As 2019 marks the 350th anniversary of Hennig Brandt's discovery of phosphorus (P), sometimes referred to as "the Devil's element", it is a time to reflect back on the number of significant scientific advancements that have followed. As IPNI prepares to close its doors this June, we view this final special issue of *Better Crops* as a legacy of the research collaborations our organization has engaged in over the years to not only advance the field of crop nutrient management, but increase the adoption of practices across the globe through improved awareness.

World population is expected to increase by two billion people by 2050, elevating the urgency to advance the science of P management to more sustainably meet the global needs for food, fiber and feed while minimizing environmental impacts. The articles included in this P issue were chosen to strategically step through the fundamentals of P science, capturing highlights of the progress that agriculture, through the work of great researchers, has achieved over the decades.

To highlight the contribution of P to agricultural advancement, we begin this special issue of *Better Crops* with a historical perspective summarizing the impact

of P on the global food supply. Balancing crop needs while minimizing ecological impacts is a conundrum facing the world, which will require a transformative solution based on new innovation. The breadth of the issue is described through articles focused on sources, cycling, uses, and spatial disproportionality. As science continues to advance to better quantify available soil P, we highlight topics around rhizosphere interactions, soil test approaches, and management strategies for increasing availability. We conclude this special issue with a projection on the future of P.



Patrick O'Connor

As we embark on our journey and move forward in the field of P science, during this time of climate and landscape change, our cropping systems must focus on adaptive management practices that engage sustainable solutions—ensuring that we integrate the use of our P sources with the principles of 4R Nutrient Stewardship and the adoption of conservation practices.

Cheers to the future of sustainable P management!

Heidi Peterson

Heidi Peterson
Phosphorus Program Director