

Crop Protection Network: An Infrastructure for Multi-state Extension Efforts

Abstract

The breadth and strength of agricultural extension from U.S. land-grant universities is larger than any other extension effort in history, and it continues to increase in importance as the role of extension adapts to a changing world. As a result, faculty extension specialists have increasing demands on their time, often with fewer resources available.

Multi-state research and extension projects have become more common in an effort to address the needs of clientele while dealing with limited resources. Multi-state projects are particularly relevant in the crop protection area as many crop management issues are similar across regions, extending beyond the boundaries of any single state. However, without a formal infrastructure for handling multi-university extension outputs (publica-

tions, videos, etc.), the impact of these collaborative efforts can be hampered by limited stakeholder access, complicated branding, and a lack of formal impact tracking.

To streamline the collaborative process (while retaining the unbiased perspective of the land-grant universities and stakeholder trust), we organized the Crop Protection Network (CPN). The goal of the CPN is to serve as infrastructure for collaborative extension outputs. We hope to secure the support of the individual universities, because we believe that support will encourage the continued participation of extension specialists in these important multi-state and international efforts, helping enhance the visibility and success of agricultural extension.



- **1800 B.C.** Early extension efforts: Mesopotamians drew pictures on clay tablets that described how to water crops.
- **1300 A.D.** European renaissance: Agricultural innovations and discoveries prompt European landowners to share information with their tenants about how to improve agriculture.
- **1796 A.D.** President George Washington encourages Congress to develop a state-funded institution to disseminate information and research related to agriculture.
- **1862 A.D.** President Abraham Lincoln signs the Morrill Land-grant College Act, initiating the formation of an institution for the study of agriculture and the mechanical arts in each state.
- **1879 A.D.** France becomes the first country to establish a fully state-funded agricultural extension service.
- **1887 A.D.** The Hatch Act is signed into law to support the development of agricultural experiment stations.
- **1890 A.D.** The second Morrill Act is signed into law, appointing funding for each landgrant.
- **1914 A.D.** The Smith-Lever act is signed into law, appropriating \$10,000 a year to each land-grant institution for extension activities.
- 1988 A.D. The Smith-Lever act is amended with the Agricultural Research, Extension, and Education Reform Act (AREERA), requiring a portion of Smith-Lever funds to be used on multi-state extension activities.

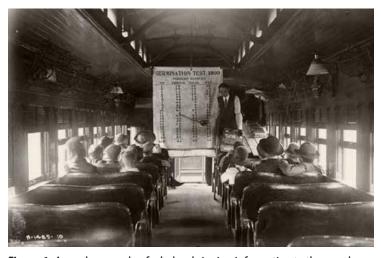


Figure 1. An early example of scholars bringing information to the people was a travelling "Seed Corn Gospel Train" where farmers learned about seed selection best practices (Courtesy Special Collections and University Archives lowa State University Library).

Need for Crop Protection Network: New Challenges and Open Opportunities

Even with an innovative spirit and a collaborative mentality, agricultural extension specialists face challenges that can seem ominous (and at times, insurmountable). For example, the American Phytopathological Society (APS) published a paper in 2009 addressing the difficulties plant pathologists will face in the future. According to the report, 50 percent of university plant pathology faculty will retire between 2008 and 2016. This will create an experience gap and leave empty positions that universities will have to choose whether or not to refill — all at a time when many university budgets may be tight.

The same paper reported that faculty positions will also become vacant as a result of faculty moving to industry or other universities. Many departments have chosen to refill these vacated positions, others have not, or have altered the scope of the positions after they are vacated (for example, changing a position from tenure track to non-tenure track).

Budget constraints have forced some states to reduce the number of county-based extension educators, which has contributed to a disconnect between extension specialists and farmers. Without land-grant extension staff present in the daily lives of agricultural communities throughout the state, university extension specialists may lose their recognition and value to stakeholders.



There is a danger of denigrating extension's value in the public eye, and it is important that agricultural extension specialists continue to be a visible source of unbiased agricultural information for farmers and industry. One way to do this is by branding collaborative efforts in a way that capitalizes on the trusted extension relationship that has been built with farmers over the past 100 years. Such collaboration is necessary if extension is going to succeed in the modern era.

Crop Protection Network: Hard at Work

To meet the need for a branded collaborative infrastructure, we have developed an organization called the Crop Protection Network (CPN). CPN's aim is to serve as the infrastructure for developing and disseminating crop protection information resources. This model has been successful for other multi-state, issue-based groups such as the Midwest Cover Crops Council and the North Central Region Water Network, and we aim to replicate this success within our disciplines, strengthening our own extension efforts.

The CPN logo that appears on all of our publications speaks to our mission (Figure 2). We are primarily concerned with field crop issues — represented by the corn, soybean, and wheat seeds in the logo. Other field crops and related issues can be easily addressed within the infrastructure of this organization.

The logo also explicitly states that the CPN is "A Product of Land Grant Universities." This emphasizes our tie to the unbiased, research-based ideals of the land-grant universities and like-minded institutions in Canada (such as the Ontario Ministry of Agriculture, Food and Rural Affairs). The CPN model allows multiple universities and provincial entities to collaborate under an umbrella that still gives institutional credit and doesn't compromise affiliation

The CPN has already helped streamline collaborative outputs, and generated strong publications that take advantage of the expertise present throughout the North Central United States and Canada. The *Soybean Disease Management* publication series, which won the 2015 American Society of Agronomy Extension Education Community Education Materials Award, is one example of the strength of publications that have come out of the CPN. We store all CPN outputs on a single website (CropProtectionNetwork.org), which provides a central

location for all collaborative projects. We encourage all participating institutions to link these publications on their respective websites. Such links credit the publication's contributors and their institutions while capitalizing on the strength of existing extension efforts.

Keeping the publications in a central location allows the CPN to update publications quickly, and more efficiently track outputs and report impact to participating institutions. A single location also improves search engine optimization. When multiple institutions post the same publication, they are competing with one another and driving down their search engine rankings. But when multiple institutions link to the same document, search engine rankings improve.

Currently, non-profit commodity groups such as the United Soybean Board and North Central Soybean Research Program and the Grain Farmers of Ontario support the CPN. However, our aim is to also secure the support of land-grant universities (and related institutions), which will illustrate the value of these multi-state and international collaborative efforts.

We consider official administrative support to be as simple as a written notice from the state extension specialist(s). We will acknowledge this support by including the institution's logo on the CPN website. If an institution provides financial support to the CPN, we will acknowledge that institution in the "Sponsor" section of the website and on all outputs.

To learn more about supporting the CPN, please visit our website's Contact Us page, CropProtectionNetwork.org/contact.



Figure 2. The Crop Protection Network logo designates that an output is part of a multi-state and international collaboration of university and provincial extension specialists and public/private professionals. These outputs provide unbiased, research-based information to farmers and agricultural personnel.





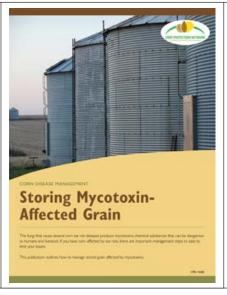




Figure 3. Examples of CPN outputs include full-length publications (left), scouting cards (center), and fact sheets (right).

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