



# ipmPIPE & Innovative Disease Diagnostic Tools for Onion Diseases

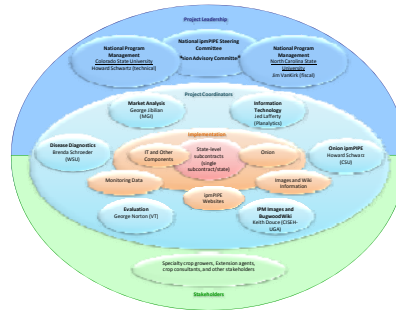
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Additional Washington Participants: Lindsey J. du Toit, Tim Waters, Carrie Wohleb

## Vision Statement:

The *long-term goal* of this proposal is to develop, fully deploy, and evaluate a sustainable online information management platform called the Onion ipmPIPE (Onion integrated pest management Pest Information Platform for Extension and Education) to optimize sound pest management decision-making in specialty crops.



Organization of the Project

## Objective 1: ipmPIPE Network Infrastructure and Operations:

Validate scouting protocols for priority pests of onion system.

Provide management tools to stakeholders that relate descriptive stages of plant growth to weather, pest and disease thresholds with timely management strategies.

Enhance management resources to include an image gallery to aid in-field and laboratory identification of key diseases and pests which will be linked to a wiki-information tool.

Add economic monitoring of onion crop markets to help stakeholders make more timely and informed decisions for crop production and pest management.

Assess the adoption level of these tools and resources used by growers, advisors and other key stakeholders.



## Outreach Plan:

The outreach and evaluation plans for the Onion ipmPIPE component are multifaceted with a network of delivery systems extending through all participating states and online resources. It emphasizes efficiency and avoids duplication across states and regions. As each portion of the plan is produced, it is reviewed for relevance to each participating state, content, and ease of use.

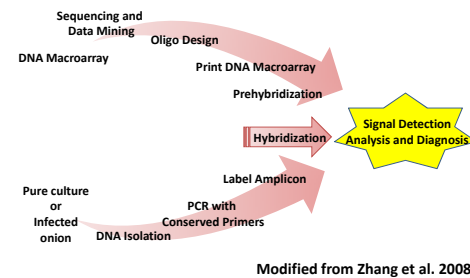


<http://apps.planalytics.com/aginsights/pipehome.jsp>

## Objective 2: Innovative Pathogen Diagnostic Development and Validation:

Develop and enhance a DNA macroarray detection method for bacterial disease complexes, viruses, and fungal pathogens affecting onions in the field and storage.

### DNA Macroarray Design and Implementation



Modified from Zhang et al. 2008

## Mission Statement:

The *mission* of this proposal is to invest resources into aspects of onion production and this specialty commodity (bulb onions for fresh market and storage) to the PIPE infrastructure in response to the needs of onion stakeholders across the U.S.

## Objective 3: Incorporation of Disease Risk Decisions with Economic Justification:

Economic, Social and Environmental Benefits:

The real-time price discovery tool for specialty crop commodities will help onion stakeholders make more timely decisions in relation to disease and pest management options and strategies. This scalable commodity component will enhance the overall utility and economic value of the ipmPIPE to specialty crop stakeholders, and sustainability of production and pest management systems throughout the USA.

		2010 Dealer Price (USD/cwt)			2010 Grower Price (USD/cwt)		
Region		Low	High	Average	Low	High	Average
<b>Onion — Red Globe</b>							
#1 Jbo	(Other)	40.00	40.00	40.00	30.00	30.00	30.00
#1 Lge	(Other)	40.00	40.00	40.00	30.00	30.00	30.00
Region		Low	High	Average	Low	High	Average
<b>Onion — White</b>							
#1 Jbo	(Other)	30.00	30.00	30.00	20.00	20.00	20.00
#1 Lge	(Other)	30.00	30.00	30.00	20.00	20.00	20.00

<http://onion.coop/>

## Stakeholder Engagement:

Producers and other onion industry stakeholders have been involved with the development of regional and national Pest Management Strategic Plans; dialogue between specialists and commodity groups at the state, regional and national levels and the ipmPIPE Steering Committee members contributed to development of the project. The Advisory Committee (listed below) oversees the project and provides critical feedback throughout the duration of the project.

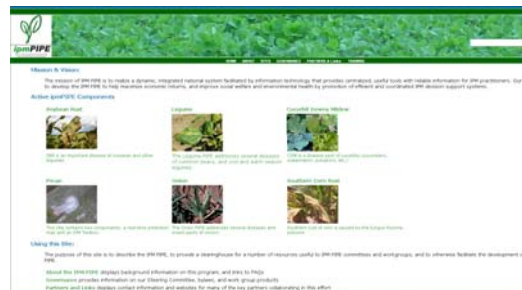
### ADVISORY COMMITTEE:

- Wayne Miner, Executive Secretary of the National Onion Association
- Bill Dean, Board Member with Pacific Northwest Vegetable Association
- Paul Ruskiewicz, Chairman, New York State Onion Industry Council
- Morgan Reeder, President, Utah Onion Association
- Robert Sakata, Onion Grower and President of the Colorado Onion Association



United States Department of Agriculture  
National Institute of Food and Agriculture

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<http://www.alliumnet.com/IPMPipe.html>