Abstracts

SMALL GRAIN WEED CONTROL AND HERBICIDE RESISTANCE MANAGEMENT
Dr. Beverly Durgan
In this presentation the results of the 2016 small grain weed control research trials will be presented and strength and weaknesses of various small grain herbicides will be discussed. This presentation will recommend weed management strategies based on experience and extensive research conducted by University of Minnesota Extension.

MANAGING INSECT PESTS OF SOYBEAN: INSECTICIDE-RESISTANT APHIDS AND OTHER CHALLENGES
Dr. Robert Koch
Management of insect pests in soybean is complicated by new challenges. This presentation will provide an update on status of insecticide resistance in soybean aphid, review challenges posed by other pests, and discuss potential impacts of recent regulatory actions on available insecticides. The role of integrated pest management (IPM) in mitigating these challenges will be discussed.

FOUR THINGS YOU SHOULD KNOW ABOUT THE LATEST RESEARCH IN BACTERIAL LEAF STREAK AND FUSARIUM HEAD BLIGHT MANAGEMENT
Dr. Madeleine Smith
Bacterial leaf streak (BLS) and Fusarium head blight (FHB) are two of the most important disease in the grain growing regions of Minnesota and North Dakota. Control of FHB requires a multifaceted approach in order to gain the best control of the disease. Fungicide applications have traditionally been recommended within a very narrow time window. One of the issues discussed in this presentation will be data that recognizes that this spray window can be widened. BLS is an emerging disease which is gaining prevalence in the region. This presentation will address the latest research in to BLS populations and what it will mean in terms of resistance breeding and control of this disease.

SMALL GRAINS VARIETY UPDATE
Dr. Jochum Wiersma
In this presentation the results of the state variety trials for spring wheat and winter rye will be presented and strength and weaknesses of new public and private releases will be discussed. The presentation will include an in-depth discussion on return on investment of the use of fungicides across years.

BEYOND ACADEMICS: REAL-LIFE NITROGEN MANAGEMENT
Dr. Fabian Fernandez
There is a lot of talk about nitrogen management and many that propose simple solutions to managing this expensive input. Nitrogen fertilizers are typically applied to provide corn with this nutrient, but
supplying the form of nitrogen the crop needs, when it needs it, and in the amount it needs it can be challenging. Part of the challenge is that once nitrogen is applied it can undergo several different transformations and the end result can range from nitrogen being highly available for uptake by the crop to completely unavailable. This presentation will focus on some of the most important tools available to help farmers manage nitrogen effectively and also on how to overcome some of the challenges around nitrogen management. An update on results from ongoing research projects dealing with nitrogen management such as in-season applications, urea as nitrogen source, and the value of soil nitrogen testing will be provided.