Healthy Soils in Eastern Washington-The Foundation of Healthy Farms

7:45AM-6:00PM February 8th, 2018 Banyans on the Ridge-Pavillion, Pullman WA

The workshop has been approved for 8.5 CCA credits

7:45 – 8:20 Welcome and Registration

8:20 – 8:30 Introduction

8:30 – 9:20 Cropping System Management and Soil Health Impacts

Kendall Kahl: *Research Associate, department of Soil and Water Systems, University of Idaho & Latah Soil and Water Conservation District.* Kendall will discuss the effect of alternative cropping systems on soil health properties in the Palouse. The focus will be the impact of cropping system management on nutrient cycling, soil carbon, soil structure, pH, and earthworm populations for a long-term no-till trial, diversified crop rotations in conservation till systems, and an organic reduced-till wheat-based systems trial.

9:25-10:15 The Roots of Soil Health

Dr. Karen Sanguinet: *Assistant Professor, Department of Crops and Soils, Washington State University.* Dr. Sanguinet will present on the importance of considering the below-ground component of cropping system management. The discussion will include how the presence of roots, and their various structures affect soil erosion, soil structure, soil biology, and soil carbon.

10:15 - 10:30 Break

10:30- 11:20 A Legacy of Erosion by Wind and Water: managing for the future

10:30-10:55 Dr. Brenton Sharratt: *Research Leader for Northwest Sustainable Agroecosystems Research Unit with USDA-ARS.* Wind erosion is a concern in the Columbia Plateau due to emission of fine particulates in the atmosphere that adversely affect human health. Loss of soil, nitrogen, and carbon during the erosion process is detrimental to soil health and the sustainability of farming systems. Information will be presented on soil and nutrient losses associated with wind erosion and management strategies that can be used to control erosion.

10:55-11:20 Dr. Erin Brooks: *Associate Professor, Department of Soil and Water Science, University of Idaho.* In the high precipitation, annual cropping region growers must manage excessive water. Recently many growers have not even been able to seed a spring crop due to high winter precipitation and wet, waterlogged soils. In this presentation we will be discussing the management options to minimize soil erosion and the cascading consequences of wet winters in the high precipitation region of the Palouse.

11:25-12:15 Testing Soil Health in Eastern WA and Northern Idaho
Dr. Dave Huggins *USDA-ARS Northwest Sustainable Aroecosystems Research Unit.* Dr. Huggins will present recent developments in testing soil health and his latest findings using the Solvita and Haney tests. He will also discuss other key physical and chemical tests that growers can use to increase their understanding of soil health, and why it is important to optimizing cropping system performance.

12:15 – 12:50 Lunch

12:50-2:10 Panel featuring specialists from RMA, the Palouse Conservation District, and NRCS

The panel will discuss federal and local programs to help farmers build soil health. They will answer questions regarding their programs and opportunities for partnership to improve on-farm soil health.

Chris Johnson

Tami Stubbs

Cara McNab

Chris Johnson- District Conservationist with Latah County NRCS; **Tami Stubbs-** Conservation Agriculture and Farmed Smart Coordinator, Palouse Conservation District & Pacific Northwest Direct Seed Association; **Cara M. McNab-** Deputy Director, Spokane Regional Office, Risk Management Agency, USDA.

2:10-3:00 Establishing Cover Crops in Dryland Cropping Systems

Leslie Michel: *Soil Scientist for Okanogan Conservation District & M.S. student in Soil Science at Washington State University.* Leslie will discuss the successes and lessons learned from a 4-year on-farm cover crop research conducted in Douglas, Grant, Lincoln, and Okanogan Counties. She will discuss if growing cover crop will jeopardize soil water availability for the following crops and the benefits of cover crops on soil health improvement.

3:00 – 3:15 Break

3:15–4:05 Soil Acidification and Alleviation

Dr. Haiying Tao *Assistant Professor, Department of Crop and Soil Sciences, Washington State University.* Dr. Tao will discuss soil pH, an important parameter of soil health. The topic will cover why fertilizer applications can induce soil acidification. We will also discuss how soil acidification alters soil chemistry, fertility, and soil microbes, which in turn, have major effects on soil health and crop production.

4:10-5:00 Sub-soil Soil Health & An Overview of Soil Health Policy and Programs in the US and WA State

After discussions of the importance of sub-soil soil health by Dr. William Pan, Chad Kruger will discuss the concern for soil health by state governor Inslee and WA state senators including WSDA's support for soil health improvement via Specialty Crop Block Grant program, and the Dairy Nutrient Management Program. Finally, the discussion will include current soil health research efforts by WSU.

Dr. William Pan Professor of Cropping Systems, Department of Crop and Soil Sciences, Washington State University. **Chad Kruger** Director of Northwestern Washington Research & Extension Center, Puyallup Research & Extension Center, and Center for Sustaining Agriculture and Natural Resources, Washington State University

5:00-6:00pm– Conclusion and evaluation – no host bar and social