Proposal for 2003 – 2004
Northwest Columbia Plateau Wind Erosion/Air Quality Project

Objective 8: Awareness and Understanding by Rural and Urban Populations

Title: Grower Technology Access and Adaptation for Profitable Farming Systems that Control Wind Erosion

Personnel: Principle Investigator: Roger Veseth, WSU/UI Extension conservation tillage specialist, Moscow; Cooperators: Bill Schillinger, WSU dryland research agronomist, Ritzville; Greg Schwab, WSU Extension soil fertility specialist; Don Wysocki, OSU Extension soil scientist, Pendleton, OR; Russ Karow, OSU Extension agronomist, Corvallis, OR; Stephen Guy, UI Extension crop management specialist, Moscow; Bill Pan, WSU soil scientist, Pullman; Frank Young, USDA-ARS research agronomist, Pullman; Keith Saxton, retired ARS agricultural engineer, Pullman; and other researchers, Conservation District and USDA-NRCS staff and other Ag support personnel involved in management practices for wind erosion control.

Objective
To develop educational materials and programs for NW growers and Ag support personnel to accelerate grower access to and adaptation of profitable farming systems technologies for control of cropland wind erosion. This project will be conducted in collaboration with the Extension education project of the PNW STEEP (Solutions To Environmental and Economic Problems) research and educational program on conservation farming systems, and other related projects the region. Collaborative technology transfer efforts include:

1) PNW Extension Conservation Tillage Update newsletters
2) PNW Extension Conservation Tillage Handbook Series
3) Web site -- PNW Conservation Tillage Systems Technology Source (http://pnwsteep.wsu.edu)
4) PNW Direct Seed E-mail List Server
5) NW Direct Seed Cropping Systems Conferences
6) Brochures on Best Management Practices for Wind Erosion Control in Dryland Cropping Systems and Irrigated Cropping Systems
7) Field Days and Tours on Conservation Tillage Systems

Recent Accomplishments and Plans for 2003-2004

1) PNW Extension Conservation Tillage Update – This newsletter continues to be an effective PNW technology transfer tool. A total of three issues were published in 2002 -- February, May and November. The February issue included a special promotion on the availability of the 2002 NW Direct Seed Cropping Systems Conference Proceedings, an article on the WSU Extension publications on grower experiences with alternative crops in eastern Washington, a new PNW
Conservation Tillage Handbook Series on economics of conservation tillage in a wheat-fallow rotation, updated list of Web site resource links on cropping systems technologies, an announcement on the new PNW Extension publication on retooling agriculture – a report on direct seed cropping systems research in the PNW, and highlights of 2002 coming events. The May issue included two new PNW Conservation Tillage Handbook Series – one on expanding Internet / e-mail access to PNW direct seed systems technology, and the other on the occurrence of Rhizoctonia root rot in direct seed systems in a low precipitation zone. It also included an updated table of contents for the PNW Conservation Tillage Handbook, and a detailed description of upcoming 2002 field days, tours related to conservation tillage systems. The November issue included brochures for the Dec. 5-6, 2002 Annual Research Review of the Columbia Plateau Wind Erosion / Air Quality Project, the Jan. 7-8, 2003 STEEP Annual Research Review, and Jan. 8-10 NW Direct Seed Cropping Systems Conference and Trade Show. It also included an article on the opportunity for grower-to-grower learning at the 2003 Direct Seed Conference; a description and order form for the new video from the June 2002 Direct Seed Drill Demonstration featuring 11 drills near Genesee, ID; and a preliminary listing of 2003 field days, tours and other coming events related to conservation tillage systems. The current Update mailing list is about 2,800, primarily PNW producers (roughly 1,900), researchers and extension specialists, county extension educators, conservation districts, NRCS staff, and Ag service industry, and Ag media.

2) PNW Extension Conservation Tillage Handbook Series -- Three new PNW Handbook Series were distributed through the February 2002 and May 2002 issues of the PNW Conservation Tillage Update newsletter for addition to the Handbook, and were added to the Internet version of the Handbook on our PNW Website (see No. 3 below). Printed copies in the Update are 3-hole punched and ready for insertion into the large 3-ring binder Handbook. Since the Handbook was published in 1990, 55 new Series publications have been completed. The Handbook now contains 153 Handbook Series publications and is a major reference on conservation tillage systems technologies in the Northwest.

3) Web Site -- PNW Conservation Tillage Systems Technology Source -- (http://pnwsteep.wsu.edu) The Internet and E-mail are rapidly becoming a major communications and technology access tools for PNW Ag support personnel and growers. The PNW STEEP Web site and new PNW Direct Seed E-mail/Web List Server (see # 4 below) are helping meet this expanding PNW demand for computer technology access and an improved communications network on direct seed cropping systems. The STEEP Web site currently averages over 200 hits per day and provides access to conservation tillage systems technology developed through the Columbia Plateau Wind Erosion / Air Quality project, STEEP and related NW research programs. Website additions in 2002 included: the new PNW Conservation Tillage
NW Direct Seed Conference proceedings and information on the 2003 Conference, updating the
calendar of events, adding Web resource links and other information resources. The 72-page
color WSU publication titled Farming with the Wind (which is nearly out of print) was added to
the Website as part of an expanded listing of the Wind Erosion / Air Quality Project resources.

2003-2004 Plans -- Website additions and revisions will continue on the above publications,
conferences and other informational resources in the future.

4) PNW Direct Seed List Server -- Initiated at the request of NW growers, the initial address
list of about 200 people in early 2000 included university and ARS researchers, extension
specialists, county/area Ag extension educators, conservation districts, USDA-NRCS
agronomists and conservationists, initial contacts for grower organizations and Ag support
industries, and a limited number of growers. The list has expanded to over 470 by December
2002, including PNW Direct Seed Association members with e-mail access. Messages are
stored on the List Server page of the Website for access by those added to the list over time.
More than 80 messages were posted on the List Server in 2002. 2003-2004 Plans -- This List
Server will continue to be promoted and utilized as a communications network on conservation
cropping systems technologies.

5) Northwest Direct Seed Cropping Systems Conferences -- This project and the STEEP
Extension project will continue to provide leadership for the annual Conferences in cooperation
with the PNW Direct Seed Association, and with support from Ag industries, other grower
organizations, and Ag support groups and agencies. The fifth annual Conference was held on
January 16-18, 2002 in Spokane, WA. It was attended by 860 growers and Ag support
personnel. Efforts were undertaken with the Spokane Chamber of Commerce Ag Bureau to
coordinate the Conference organization and publicity in conjunction with to the Jan. 15-17
Spokane Ag Expo -- the largest Inland Northwest Ag Show with over 300 exhibits -- and PNW
Farm Forum and seminar series in adjoining facilities. Conference registration included entrance
into the Ag Expo and Farm Forum. In exchange, Ag Expo received contacts for prospective
exhibitors from previous Conference Trade Shows. It was co-sponsored by 12 Ag companies
and agencies, and developed and promoted in cooperation with 12 PNW grower organizations
and Ag support groups. The program featured 24 speakers, including 10 growers, from Idaho,
Oregon, Washington, and the Canadian Provinces of Alberta and Saskatchewan. A Direct Seed
Poster Exhibition also featured 32 posters. Some major program areas focused on management
strategies for direct seed cropping systems include: changes in nutrient cycling and fertility
management over time; managing for improved soil biology and direct seed benefits to soil
health; redesigning crop rotations; and Brassica crop selection and management. Panel sessions
provided in-depth discussions on several topics including: impacts and management of soil
acidity, the make-up and management of key soilborne crop pathogens; field record systems,
mapping strategies and the integration of financial and physical farm data; strategies for
managing heavy wheat residue, and intensifying rotations in the low and intermediate rainfall
zones.

A significant part of the 2002 project involved planning the sixth annual Conference and a new
Trade Show scheduled for January 8-10, 2003 at the WestCoast Hotel in Pasco, WA. The Direct
Seed Trade Show is the first commercial trade show with the Conference since 2000 and will
feature over 30 commercial exhibits. The program will feature 28 speakers, including 6 growers, from Idaho, Oregon, Washington, South Dakota and New Zealand. A Direct Seed Poster Exhibition will also highlight research and educational projects in the region. Conference presentations will provide the latest in direct seed systems research results, equipment and management innovations, and experiences. Topic areas include: high versus low disturbance openers, weed control, stacked rotations and other pest management strategies, transition economics, marketing strategies, residue management options, managing soil carbon and productivity, and grower experiences. At least 10 industry representatives will present new commercial innovations in direct seed drills and openers for seed and fertilizer placement, residue management and hillside stability. **2003-2004 Plans** – Preparations for the 2004 Conference are getting underway. As in the past, the Conference will be largely self-supporting with registration fees and industry financial sponsorships with registration fees kept as low as possible in order to encourage grower participation during these difficult economic times. However, a small amount of project funding is being requested to partially support printing and mailing costs for Conference publicity materials.

**6) New Brochures on Best Management Practices for Wind Erosion Control -- 2003-2004 Plans** – Two brochures will be developed and printed as WSU Extension bulletins for dryland cropping systems and irrigated cropping systems. The brochures will highlight “tried and proven” conservation practices that growers can implement in the short- and long-term with little risk compared to their traditional practices. They will also feature newer conservation practices under development that may have the potential for even greater economic and environmental benefits in the future. Depending on the availability of additional funding, at least 5000 copies of both the dryland and irrigated brochures will be printed. The brochures are tentatively planned with 8-panel layout and will printed in color on 11 X 17 coated paper.

**7) Northwest Field Days and Tours on Direct Seed Cropping Systems** – The project team compiled descriptions of 38 field days, tours and other events in 2002-03 highlighting new cropping systems technologies for direct seeding in the Inland Northwest and applicable areas of the Northern Great Plains and Canadian Prairie Provinces. The listing was distributed in May 2002 through mailings to Extension Ag Educators, Conservation Districts, USDA-NRCS offices, the main Ag service companies and fieldmen. The event descriptions were also included in the May issue of the PNW Extension Conservation Tillage Update newsletter, put on the PNW Conservation Tillage Systems Information Source Website, and sent on the PNW Direct Seed E-mail List Server.

Many of the members of the Wind Erosion Extension and STEEP Extension projects were involved in organizing 14 field days and tours that featured conservation tillage and/or more intensive cropping systems and crop options. The total attendance at these events was more than 1730. **2003-2004 Plans** – Personnel in the Wind Erosion Extension and the STEEP Extension projects will continue to provide leadership in organizing and promoting field day, and tours of research trials and grower farms to share the research results and experiences on direct seed / conservation tillage systems in cooperation with other university personnel, grower organizations, and Ag support groups, agencies and industries. The Update newsletter, PNW Website, PNW Direct Seed List Server, and other publicity options will be utilized to help promote the field days, tours, and other related events to NW growers and Ag support personnel.