



## Conservation Tillage

Conservation tillage is farming with a goal. The goal is to keep crop residues as close to the surface as possible. This can be achieved by a variety of tillage implements with or without the help of chemicals.

A logical question is why would anyone want to keep crop residues near the surface where they can cause problems? Among these problems are, tillage equipment plugging, plugging the drills, poor seedling emergence and vigor, a reservoir for disease organisms and near optimal growing conditions for weeds.

The answer to this question lies in the fact that residue is frequently the most cost effective control of soil erosion. The control of erosion is the key to maintaining long term productivity on the farm. Other benefits of effective residue management include increased soil moisture storage, conservation of valuable plant nutrients, lower time, labor and

machinery expenses and possible disease reduction.

Loss of long term productivity occurs when soil containing valuable nutrients, micro organisms necessary for proper cycling of nutrients back to the crop and soil as a material necessary for physical plant support is carried away from the farm by wind and water erosion. We have all seen the results in clay nobs and rocky spots that get bigger and bigger and produce less and less.

The fact is all of the problems associated with residue at the surface can be moderated with good residue management. For example, if you have a bad weed problem a step that is sure to help is improving residue distribution behind the combine with a chaff spreader. Uniform chaff distribution means more even germination of weeds in the spring allowing for a greater kill with either the first tillage pass or herbicide treatment. Chaff spread-

ing will also result in improved moisture infiltration, soil moisture storage and can reduce plugging problems. In short, residue management begins at harvest time.

Another concern could be cereal crop diseases. Since moldboard plowing and burning have been shown to be less than 100 percent effective as a control (even they leave sufficient residue to carry disease over into the next crop) another alternative must be found. Rotating into a spring crop of barley and then into fallow followed by winter wheat is an option in controlling the effects of disease. Another alternative is the use of fungicides for control of certain diseases.

If conservation tillage sounds like something you want more information about or you have any questions please feel free to call the Soil Conservation Service at 676-5021 or the Soil and Water Conservation District at 676-5452 or your local district director.

## Rietmann Canyon

The Rietmann Canyon Project is an example of what the Soil and Water Conservation District does. The Board of Directors for the SWCD instructs the Soil Conservation Service to look into these types of projects. When there is an erosion problem like this, what do you do? Who do you turn to? Who provides the assistance? Who does the technical engineering? Who finds out what funds are available? The SWCD does!

The Rietmann Canyon drains by Ella Road into Ione. The project involves that county road, the state highway that intersects this road, the railroad that runs along the state highway, and also the City of Ione that floods every year from this drainage.

The Board of Directors of the Morrow SWCD has made this project one of their priorities and met with the City of Ione and the ICABO (Ione Community Agri-Business Organization) to explore the options.

The main problem was the run off of melted snow on some 2,000 acres of farm ground that drains into the

Rietmann Canyon. Before any channels in the City can be built to carry out this run off, the source of the problem must be identified. The accumulation of snow triggered by a rapid melt on frozen ground is our main concern.

This problem can be solved with the building of terraces on the farm ground which will eliminate the bulk of the problem. With the cooperation of the County, State, Railroad and the City we can nearly eliminate the flooding danger which is present annually in Ione. Presently the SWCD is coordinating with all concerned agencies. There have been several meetings to discuss the major concerns and problems and to address the objectives of this group.

In addition the Morrow SWCD will search for the availability of funds to complete this project. Potential sources are through the Agriculture Conservation Program, Resource Conservation and Development Project (RC&D) and Municipal grants through the East Central Oregon Association of Counties (ECOAC).



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## Grass Species Plots

Nearly 30 grass species are planted at the Morrow County's Public Work Department headquarters at Lexington. The plots were established by the Heppner office of the Soil Conservation Service in cooperation with the Morrow Soil and Water Conservation District several years ago.

Plots are used by district co-operators to view and select desirable variety for intended purpose. The varieties provide information on what is the most suitable grasses in our region in several areas; erosion control (both wind and water) forage for different seasons, use, wildlife food and cover, and weed control.

Grass seed availability will be short this year. A real dilemma with today's conservation reserve program. The Morrow Soil and Water Conservation district will be taking an active role in trying to secure sources of available seed and provide for availability of drills. The district also plans to be actively involved in the conservation reserve program.

View the plots on your own or ask the district or SCS personnel to show the various characteristics of each variety.

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