

Chemical fallow an an alternative to summer tillage

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The reasons for chemical fallow as an alternative to the traditional summer fallow have been discussed before but bear repeating. One reason is the increased cost of fuel and other farming costs have narrowed the spread between chemicals and tillage until they are nearly equal, assuming chemicals will reduce the need for two to three tillage operations. A second reason is less opportunity for erosion if there is less tillage and, therefore, more crop residue left on the surface. A third reason is research has shown that under most conditions more moisture is stored in the soil profile under chemical fallow or minimum tillage.

A wide variety of chemicals are available for growers to choose the single chemical or combination of chemicals which best fits their needs or situation. A definition of what I mean by chemical fallow is appropriate. When I say chemical fallow I'm referring to the use of a chemical, followed three to six weeks later by a light tillage which establishes a mulch. Less tillage is required throughout the fallow season because the weeds have been controlled and, therefore, are less of a problem in the fallow year.

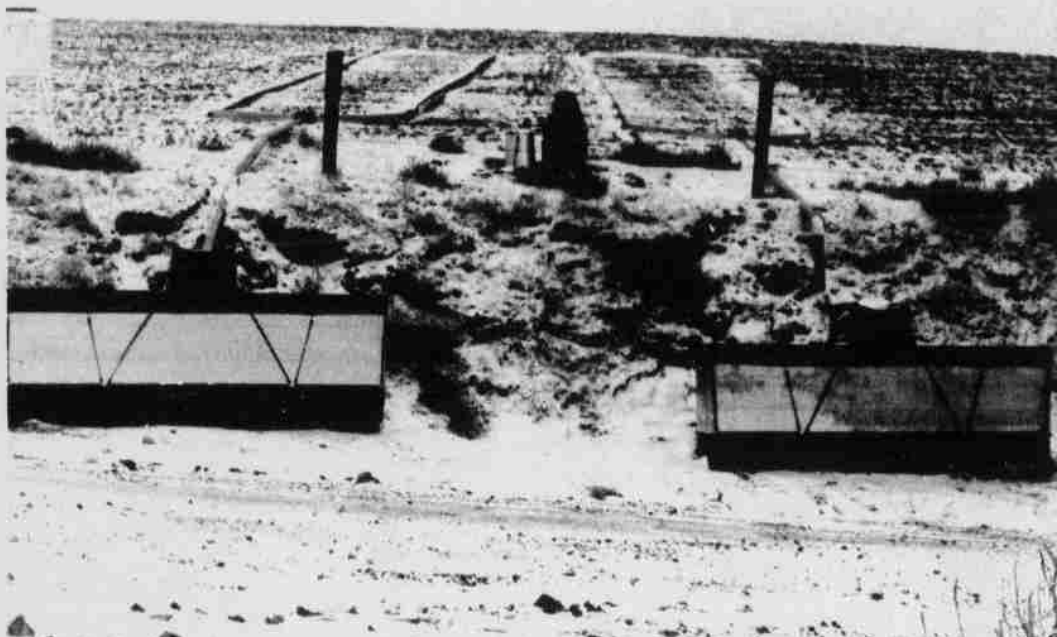
The following chemicals have been cleared for use in chemical fallow in eastern Oregon. Use of trade names does not mean an endorsement of that product. Two types of chemicals are available for chemical fallow; one type is soil active and controls weeds by stopping growth through root contact with the chemical; the second major type is a contact chemical which destroys the plants that have emerged but leaves no residue in the soil.

The soil active chemicals are: Atrazine, Bladex, and Chem Hoe. These products vary some in how they work, but basically should be applied in the fall before you have a large amount of emergence. Chem Hoe should be applied after the soil temperature is below 55 degrees F. These products provide residual weed control until the following spring, or early summer when the chemical breaks down and is inactive.

The contact chemicals are: Roundup and Paraquat. These products should be used in the early spring after all the weeds have emerged. The products only kill what has emerged so later emerging weeds will escape. Tillage, or seeding can occur 4 to 5 days after spraying, so this practice can be used as a pre-plant before seeding spring wheat or barley.

Cost sharing assistance is available from the ASCS office for the chemical fallow practice.

Be sure to follow the instructions on the label.



In order to determine actual soil erosion rates, erosion monitoring plots were established in newly seeded wheat on the Huber farm near Lexington. Each plot is instrumented to continuously record soil temperature, air temperature, relative humidity and precipitation. Each collector tank is instrumented with a recording water level sensor so that runoff amounts and rates can be determined. A frost tube is located between the plots and the frost depth is read each week. Snow depth and snow water equivalent on the plots is also determined each week. After each runoff event, water samples are collected from the tanks and analyzed for sediment concentration.

From this information, we hope to be able to determine the physical and climatic factors responsible for soil erosion and to suggest remedies to reduce soil losses from valuable croplands.

More terrace systems eyed

In the coming year we will see an even larger number of farmers constructing terrace systems on their farms. We will continue to work with those operations on the design and layout and provide information on the terrace maintenance program.

Yes, there has been an awakening and an increased interest in basin type, level terraces. Some of the early systems have provided visual evidence of their value and performance.

What meets the eye is perhaps no longer a vision but, in fact, a reality.

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