THE PLACE OF THE HOMEMADE SOIL PACKER IN OBTAINING STANDS OF CLOVERS AND GRASSES

by

Edwin Keltner, Superintendent, Red Soils Experimental Area

and

J. J. Inskeep, Clackamas County Agent

In the Willamette valley probably 75% of the failure to obtain stands of crops having small seeds is due to planting too deep or on loose, poorly prepared seedbeds. Small seeds planted in a loose seedbed either do not germinate because of insufficient moisture, or if they do germinate, may perish before the roots penetrate to the firm underlying soil holding the moisture.

Type of Seedbed Required

The ideal seedbed for small seeds should have a dust mulch of less than half an inch, and as one Clackamas County farmer aptly says, "should be so firm that you can't track a mule across it." The ordinary rubber-tired farm tractor crossing a well-prepared field should leave little or no impression in the soil. The preparation of such a seedbed is especially important for late spring and summer plantings which are becoming increasingly important in the Willamette valley on soils where a catch of clover is difficult.

Preparation of Seedbed

No set rule can be given for preparing the seedbed, because the individual farmer must vary his operations in accordance with prevalence of weeds, frequency of showers, and with the particular soil found on his place.

Generally speaking, the field in question should be plowed or disked several weeks prior to planting. Fall or winter plowing is best where conditions permit.

After the first operation the soil should be worked just frequently enough to destroy newly germinated weeds which deplete the moisture supply. The spring-tooth harrow or disc is commonly used for this purpose and the packer may be used to break clods when desirable.

Any implement which disturbs the surface of the soil also permits moisture to escape, and use of the spring-tooth harrow and disc harrow should be avoided except when necessary for destroying weeds as described.

A well-packed seedbed is very important. The homemade soil packer illustrated in this circular (See page 2) has proven to be a very satisfactory soil-packing implement in the tests conducted on the Red Soils Experimental Area and
also on many farms in the Willamette Valley where this tool has been used. On the first round with this instrument the teeth will penetrate deeply into the soft soil. On succeeding rounds penetration is less and less until the teeth finally ride the surface of a well-firmed seedbed free of air pockets and having a shallow dust mulch. Extra weights in the form of scrap iron, concrete blocks or gunny sacks filled with soil may be added where desirable and may save additional rounds.

The number of rounds necessary to obtain the desired result will vary from two to eight. This number might be reduced by running over the ground once with a corrugated roller. Some farmers have objected to the expense of going over the ground so many times with the soil packer, but this expense is not nearly as great as the loss sustained by the farmer in a partial stand or by a crop failure.

Page 3 presents a drawing of plans of the homemade soil packer that may be helpful to farmers desiring to make this implement.

Seeding

Late spring seedings of red clover have been successful on the Red Soils Experimental Area when using a double disk drill with a grass seed attachment. The lower end of the seed tubes are disconnected and left hanging loose against the frame of the drill in front of the discs which are lowered to the ground. This insures an even distribution of the seed and partial covering. After seeding the corrugated roller is used to finish covering the seed.

If seed is broadcast by hand probably a very light harrowing will be needed before rolling to finish covering the seed.

[Image of the homemade soil packer] The Homemade Soil Packer
HOME-MADE CLOD MASHER & SOIL PACKER

Plans Drawn By
AGRICULTURAL ENGINEERING DEPARTMENT - OREGON STATE COLLEGE
1943