NOTES
PLANTING WINTER WHEAT AND RYE IN UNPLOWED STUBBLE

Workers in the winter wheat regions of the United States will be interested in the discussion of the problem of winter crops by Academician Trofim Lysenko.

He begins his discussion thus, “The question of planting winter crops on unplowed stubble in the prairie regions and the open sections of Siberia, Transural, and northern Kazakhstan is one of national economic significance.

“Without entering into the essence of the difference between my proposal and the old well known method, I shall enumerate the basic reasons which are commonly given for low yields of crops planted on unplowed stubbles. These reasons are:

1. During dry summers it is hard to obtain germination of winter crops on poorly plowed fallow. It therefore follows that for crops planted in stubbles, (that is, in fields which are not worked at all after the harvest) there would certainly be poor germination. On such plantings germination can be obtained only in years with ample rainfall during the latter half of summer.

2. Winter wheat in the prairie regions of Siberia seldom winters well even on well worked and early plowed fallow. Rye comes through well on ‘black’ early fallow but on late fallow, which is plowed immediately prior to planting, even rye does not winter well. Therefore, planting on fields which are not plowed at all, that is, plantings in stubble would fail even worse.

3. Plowing to a depth of not less than 20 centimeters (about 8 inches) safeguards the field from infestation by weeds. Shallow plowing on the other hand causes serious infestation. Therefore, crops planted in unplowed stubble would be infested even more.

4. During dry summers, winter crops often suffer from lack of moisture even when planted on good black early fallow. It therefore follows that during dry years crops planted in stubbles will die out altogether. This because the moisture on such fields was not only not allowed to accumulate but on the contrary was being exhausted by the preceding crops.

5. Plants feed on minerals. For proper activity of the microorganisms which mineralize organic substances it is necessary to have air in the soil. In the absence of air there will be no plant food and the plants will starve. Working over the soil produces favorable conditions for the access of air. From this it can be concluded that crops in stubbles will certainly starve. On such fields the plants will be small and will produce inferior grain.

“All the explanations brought forth above are, as far as I know, widely accepted among workers in agricultural science.

1Excerpts from translation of “What is the Essence of Our Proposal Regarding Planting Winter Crops in Stubble in the Steppes of Siberia” by Acad. T. Lysenko, Sotsialisticheskoe Khoziaistvo, 5-6: 25-36. 1944. The magazine “Sotsialisticheskoe Khoziaistvo” is the official organ of the Narkomzen (Department of Agriculture of the U.S.S.R.).