

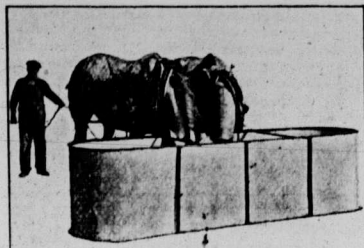


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# Field Crops

## GUMBO LAND

On a number of farms throughout the country there are spots or small pieces of land which do not yield any crop to speak of, on account of their being very heavy, hard to work and very much like gumbo in nature. Such patches of ground are hard to treat and their presence in the field cuts down the yield considerably. The trouble with such spots is that usually they do not have sufficient drainage, due to the fact that the soil itself is composed of very fine soil particles which pack very closely together, closing out the air from the plant roots in the soil and retarding the seeping away of moisture. The problem of draining such spots is one which should be given due consideration. In most cases it would not be at all profitable to put in a sub-surface tile drain. Such method is altogether too expensive. But if the texture of the soil can be lightened and opened up so as to make it more porous much of the heavy, water-sogged condition will be overcome. There are several ways of reaching this condition quite within the means of every farmer. The object sought for is to increase the porosity of the soil by incorporating in it more humus or vegetable matter. Hence where gumbo spots appear throughout the field in comparatively small patches a small straw pile can be blown over the spot when threshing in the fall and then allowed to rot, eventually being turned under when plowing. Another and perhaps better way, because the amount of straw applied to any given spot can be controlled, is to apply from time to time good coatings of strawy manure. This, when repeatedly plowed under, will not only add to the plant food in the soil but will add humus to the ground also, and in subsequent plowings the soil will be found to be much more friable. Experience with this type of soil has been had in South Dakota and the treatment of such land together with the results obtained is fully outlined in "The Story of a Gumbo Field," by Alfred Wenz, appearing in the Dakota Farmer, as follows:

Eleven years ago a field, largely gumbo, lay waste and unproductive. Recently I walked over the same field and found it carpeted with the finest growth of young alfalfa I have seen anywhere in the state this year—and I have been in many fields.

It lies just south of the buildings of the S. D. State School and Home for the Feeble-Minded at Redfield and is part of the 487-acre farm of that institution. The whole farm is more or less gumbo—principally more—and not the least of the many tasks of Superintendent Kutnewsky has been the study and reduction of this rich but refractory type of soil. He is making the gumbo over into tillable and productive land.

### Reducing Gumbo

The first time he tried to turn over this particular field he went at it with four good horses on a sulky plow but could do little more than scratch the surface. He saw that cultivation alone would get him nowhere with gumbo.

So he added humus. Every load of straw, trash and manure that he could raise, beg, steal or borrow he dumped onto the gumbo. He was in no hurry to plow it under. Sometimes he would let a coating a foot thick lie and rot for several years.

When this was plowed the soil was found more amenable to discipline. It was not so stubborn. It had really turned over a new leaf. And Superintendent Kutnewsky kept that leaf pasted down with more manure. Also he kept plowing and tilling deeper.

On the field, now dark green with alfalfa, he put in some of his best licks. "More manure, plow deeper," he ordered. Finally he deep tilled to a depth of from ten to eighteen inches. Then a few years ago he sowed alfalfa.

### Alfalfa's Part in Reducing Gumbo

The result was a fair stand, but spotted—hardly what a man would

care to boast of. But he let it grow for several seasons.

At last he plowed it up and it fell from the moldboard as mellow as well cultivated loam—"I never had soil turn over finer," he said. Now he was beginning to see results; the soil, thanks to the organic matter of the manure and alfalfa, was friable. It took up moisture readily and did not bake. Getting the stuff punctured with alfalfa roots gave the finishing touch in subduing it.

### Good Crops on Gumbo

The first crop on this alfalfa sod was potatoes—164 bushels per acre. Last year corn was grown, a heavy yield of fodder, well eared on the lower ground in spite of an extremely dry season which nearly destroyed corn on neighboring loam soils.

The crops on this deeply cultivated gumbo seem to stand drought better than those nearby on sandy loams—the friable surface, varying in thickness with the depth of plowing, is not only an ideal seed bed but it is a protective covering for the underlying gumbo, keeping it moist and soft, and plant roots push down into it easily and find an almost certain supply of moisture.

This spring the field was sown to alfalfa with a light seeding of oats as a nurse crop. This fall the alfalfa is a luxuriant stand and there is hardly a weed in sight.

From worthless gumbo to rich alfalfa—score one for manure, cultivation, alfalfa roots and a man who knows how to use them.

## MANITOBA-GROWN ALFALFA SEED

Manitoba now has home-grown alfalfa seed. The first threshing of alfalfa took place on the government demonstration farm at Neepawa on October 31st. About six acres of the first crop of alfalfa was threshed and from this one field of less than six acres there was obtained 25½ bushels (1,535 lbs.) of clean, pure seed, the quality of which is exceptionally high.

This alfalfa was grown on the farm of H. Irwin near Neepawa. The seed was the well known Grimm's variety and was sown in rows three feet apart and so thoroughly cultivated by machine and by hand that all weeds were exterminated. About three pounds of seed per acre were used and the field treated with soil from old alfalfa land. The soil of the field was a warm sandy loam. The harvesting was done by mower and the alfalfa cured in bunches and afterwards stacked for some weeks. Beyond an occasional unmatured seed the sample is apparently well matured.

The machine used in threshing this alfalfa is the first clover machine that has started in Manitoba, if not the first to be used west of the Great Lakes. It gave perfect satisfaction and it is expected that the farmers will go more into the growing of alfalfa and that many of these machines will be required in the near future.

### ALFALFA LEAF SPOT

In several places thru the West where fields of alfalfa have been successfully grown, there has been noticed this year a disease which affects the leaves of the plant. Little brown spots appear on the leaves. These spots increase in number and finally the leaves drop off. Since the leaves are the most valuable part of the plant an affection of this kind is very serious. So far as we know there has not been up to the present any specific remedy assigned which will control this disease. It is called alfalfa leaf spot, and the possible causes assigned for this trouble are as follows: Hot and humid weather, lack of proper inoculation, lack of lime in the soil, and "wet feet," or lack of proper drainage. About the only way suggested to deal with this disease at the present time is to cut the crop as soon as the spots are noticed on the leaves of the plant.

# Dry Farming

## FOR DRY BELT FARMERS

As a result of the heavy damage suffered from drought in Southern Saskatchewan and Alberta, and lesser damage in some other parts of the country, farmers will find it worth dollars and cents to them to study the most approved method of dry farming tillage operations. In order to place the very best information before our readers we have secured the three most reliable books on the subject:

## Dry Farming:

Its Principles and Practice

By WM. McDONALD

The author of the book has had practical experience in the Transvaal and in the dry districts of the United States, and most of his information is drawn from Utah and Montana, where dry farming has been a great success. Professor W. J. Elliot, Principal of the Agricultural High School at Olds, Alta., says, "I could certainly recommend 'Dry Farming' to all those who are considering this work in any one of its phases." The book is written in simple and interesting style and may be understood by any farmer who reads. It contains 290 pages, is well illustrated and attractively bound.

Post Paid - \$1.35

## Soil Culture

By H. W. CAMPBELL

This book has been sold by the thousands thruout the dry belts of the United States. It deals with every phase of dry farming, tillage, and discusses the various questions exhaustively. Special attention is given to wheat, potatoes, trees, sugar beets, alfalfa, irrigation, and tillage implements. The book contains 320 pages, is fully indexed and well bound.

Post Paid - \$2.50

## Dry Farming

By Prof. JOHN WIDSTOE

Professor Widstoe's book is the first attempt to assemble and organize the known facts of science in their relations to the profitable production of plants without irrigation in regions of limited rainfall. The needs of the actual farmer, who must understand the principles before his practices can be wholly satisfactory have been kept in view primarily, but it is believed that the enlarging group of dry farm investigators will also be materially helped by this clear presentation of the subject.

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