

corporate the leaves and vegetable matter with the soil itself, and thus in the course of thousands of years build up soil on which man can live.

In the alluvial soils, old lake beds, or what we know as bottom land, grass suitable to the soil is sown—water grasses, rushes—all of which, by spreading their leaves in the air, obtain carbon and add this to the soil. Minute organisms begin their work. The soil is really alive; indeed, the liveliest kind of a thing. Some of these have a way of obtaining nitrogen from the air, like the clovers. Others of them work up the vegetable matter, and still others on other products. And so in a wonderful and mysterious way, which we are just beginning to understand in these later years, the soil was gradually prepared for the home of man. Thus we see that nature in her soil making operations is very careful about two things—first, to supply vegetable matter; second, to supply nitrogen from the air—hence her wide use of the legumes.

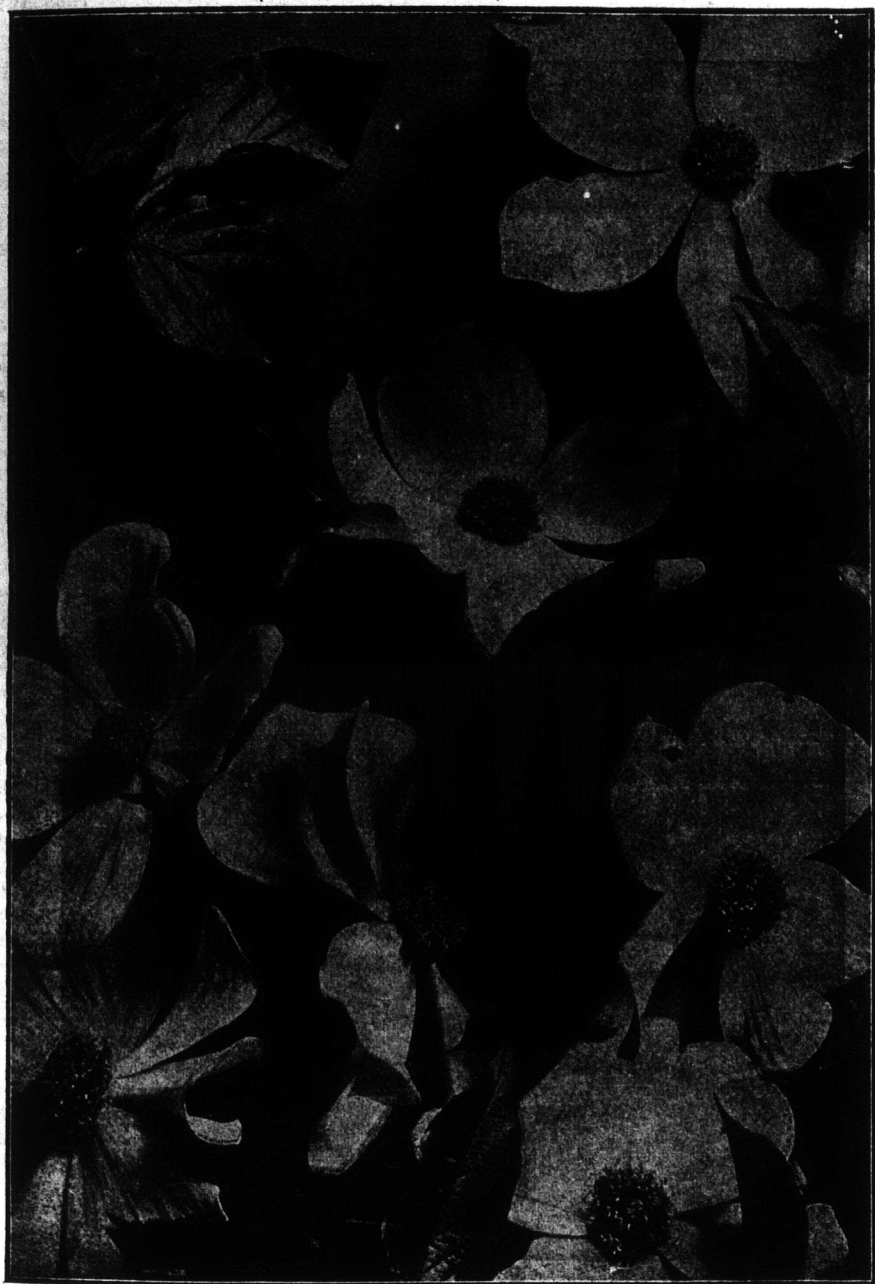
These soils, however they may be

#### The Physical Condition of the Soil.

The crops of 1912 will depend mainly on three things: the physical condition of the soil before planting, at planting, during cultivation, and the growth of the crop; the temperature and the rainfall. The temperature and the rainfall are under the control of another Power, to give as He sees fit. The physical condition of the soil will be determined in part by conditions over which we have no control, and in part by the farmer's intelligence while working under these conditions.

While we can not fix the temperature of the season, yet we can so manage our affairs as to get the most out of what is given us. The same is true with regard to rainfall. We can waste it, we can save it; and we can do something, but not much outside of drainage, in getting rid of it when in excess.

We would not care to say which of these three—the physical condition of the soil, the temperature or the rainfall



Western Dogwood (Cornus Nuttallii).—Canadian Alpine Journal.

formed, differ greatly in the size of the soil particles. In sand the soil particles are coarse; in gravel much coarser. Hence soil of this kind requires a great deal of water, for the simple reason that water can exist in the soil only on the surface of the individual grains, however small or large they may be. In other soils, for example the clays, the particles are very small, perhaps smallest in the volcanic ash soils. Hence these soils have a greater water-holding capacity and will hold water in a dry time.

Now we have not told you all about soils—very little, in fact; but we wish our boys and girls to have some intelligent idea about it; or at least we wish to tell them how to obtain an intelligent idea of how the soils on which the farmers must depend for a living in all time to come were made; how long and tedious was the process; how careful the great Soil Maker through all His agencies has been to add humus material and nitrogen to the soil through the long ages.

—is most important. They are all three of vital importance. It matters not how rich the soil may be, or what its possibilities. It may have potash and phosphorous and nitrogen in abundance, and yet if it is not put and kept in proper physical condition, they will not contribute very greatly toward the harvest. A poor soil kept in proper physical condition during the season will yield a much better crop than a very much richer soil, so farmed that it is out of physical condition.

By a proper physical condition we mean such a state of tilth that the plants will have an opportunity to occupy the ground with their roots as fully and quickly as possible; a condition that will enable them to utilize the heat to the best advantage where it is deficient, and that will make the greatest possible use of the rainfall that is given us during the season. The best example of fine physical condition is a clover sod plowed at the proper season (in the north in the fall, in the very southern portion of our territory in the

## 1c Per Acre TO Kill Gophers

I guarantee it absolutely. I guarantee that a 75c box of Mickelson's Kill-Em-Quick will kill every gopher in an 80 acre field. A \$1.25 box of Kill-Em-Quick will kill 4,000 gophers and save you \$400 at least because there are 4,000 gophers on an average 160 acre field and each gopher costs you 10c in grain you don't get. Don't put up with the destruction gophers mean—don't stand for the losses they make! Spend 75c or \$1.25 now for a box of.

### Mickelson's Kill-Em-Quick Gopher Poison

and watch every gopher on your farm die or disappear. Kill-Em-Quick draws them like a magnet because its odor and taste are attractive to them. They leave grain, shoots and juicy joints for Kill-Em-Quick. They have over it. And one single poisoned grain kills them before they can wink an eye. Kill-Em-Quick has been tried, tested and proved the quickest, cheapest and surest way to kill gophers, squirrels, field mice, sage rats and prairie dogs.

#### Use It Right NOW

Go to your druggist and purchase a box of Kill-Em-Quick. Don't take anything else or you will be disappointed. If unable to obtain it from druggist I will supply you direct on receipt of price and send it post prepaid. If my gopher poison doesn't live up to every statement I have made, I personally will refund your money promptly, no argument or red tape—just money. Protect your crops and profits this year by spending 75c or \$1.25 now. Isn't it worth while?

#### Mail Me a Postal Or Letter

Kill-Em-Quick is easy to use. Full directions are on every box. But if you want special advice—if you have peculiar conditions to contend with, write me at once. I have made a study of gophers, squirrels, prairie dogs, field mice, pocket gophers, rats and other field pests and will gladly give you the benefit of my experience free. Anyway write me a postal now for my book that tells how to save \$100 on every 40 acres.

Anton Mickelson, President

Mickelson Kill-Em-Quick Company  
Dept. O Winnipeg, Manitoba, Canada

Get  
FREE Book



## Louden Perfect Barn Equipments STOP WASTE

For more than 45 years our best thought and energies have been given to the problem of stopping waste on the farm—not only economy of time and labor, but also conservation of soil fertility.

Our first patented device was a crude wooden hay carrier produced in 1867. From this beginning there has been developed and perfected

### The Great Louden Line of Barn Tools

the most perfect, efficient, and economical ever devised—KNOWN AND

USED ALL OVER THE WORLD.

**Louden Flexible Tubular Steel Cow Stanchions** keep the cows lined up but allow perfect freedom of movement and comfort. Can be hung on homemade wooden frames.

**Louden Sanitary Steel Stalls** are made of tubular steel, easy to clean, keep the barn light, perfectly ventilated and sanitary.

Also patented Adjustable Stalls which align cows of unequal length on the gutter and keep them in line; patented adjustable stanchion holders; bull and calf pens, self-cleaning steel mangers, etc.

**Louden Feed and Litter Carriers** of galvanized sheet steel, running on overhead tracks. Reduce the time and labor of chore work one-half to three-fourths.

The LOUDEN LINE includes also, **Louden Hay Tools**; Louden's Bird Proof Barn Door Hangers; and all fittings and accessories for completely equipping barns of every size.

Let them make you money by making your cows give more and richer milk, and by saving time and labor—every hired hand saved, means \$400.00 or more per year, which is 8% interest on \$5000.00. And they will last longer and give better service than any other Barn Tools made.

**Patents**—All Louden Tools are built under original patents covering all essential features. We guarantee our tools to be free of infringement on any patents owned by others. We guarantee to hold each and every purchaser of LOUDEN goods safe from all harm or damage from infringement claims.

Send sketch of your barn plan and we shall advise you what equipment you need. We shall also tell you what the cost will be. Send for our Catalogue "Everything for the Barn". Write to-day. See the Louden Line of Barn Tools at your dealers.

Louden Hardware Specialty Co.

Dept. 22 Winnipeg



When writing advertisers please mention The Western Home Monthly