HOW MUCH SEED PER ACRE.

In a recent issue of the Breeders' Gazette there appeared a letter touching the question of the proper amount of seed wheat per acre required to give most profitable results. Calling the attention of Prof. W. J. Spillman to the article has resulted in bringing forth an excellent contribution from him giving still further information on this topic, which is so important to Northwestern grain farmers. We give below the letter and follow it with the remarks by Prof. Spillman.

When wheat is worth nearly $1 a bushel farmers give more attention to the amount of seed used. If three pecks will produce a good crop why use six pecks? Illinois is the unfortunate wheat state this year, with her average condition reported at 45. The question of seed is a vital one with such a short crop, as thousands will have seed to buy.

Doubtless there are seasons and conditions of soil in which three pecks of seed are ample. If one has good land and a seed-bed well compacted and fine and the weather is favorable for germination, with three pecks of clean, sound seed evenly drilled in at a uniform depth of one and a half to two inches he can reasonably count on a good stand thick enough to produce an average crop in a favorable season. But if one has not the favorable conditions of soil, well-worked seed-bed, and moisture ample for prompt germination at time of seeding, it is safer to increase the amount of seed. We have not used more than five pecks per acre for many years and think this amount ample for our land when well prepared. In fact, our rule is not to risk seeding until the ground has been sufficiently worked to make a good seed-bed. We believe success in wheat-growing depends more on this than on the amount of seed.

A long series of experiments made by the Ohio Experiment Station with amounts of seed per acre varying from two to ten pecks indicates that from five to six pecks give the best average crops. If the soil and season are such as to cause every grain to grow and stool out freely two pecks make a good thick stand, and large yields have been made from this small amount of seed. But it is so very rare to combine so many favorable conditions that it is safer to use on a good seed-bed four to five pecks, and on one not so fine and firm it is safe to put on six pecks.

Early preparation for wheat and thorough working are the means to justify the smaller amount of seed.

L. N. B.

The above discussion of the subject named in the heading, by one of our leading agriculturists, Mr. Bonham, of Ohio, states the case so fully that little need be added. I have been looking up the subject in the publications of the various experiment stations and find that not a great deal of experimentation has been done along this line. I think the reason for it is that such discordant results have been obtained as to discourage the experimenters. Several stations have undertaken such experiments, but only two have carried them over sufficient length of time to give results from which conclusions could be drawn. These are Indiana and Illinois. In order to compare the results obtained at these two stations it will be necessary to express them in per cent. instead of in bushels. Taking the yield, when four pecks of seed are sown as 100 per cent., the following figures show the relative yield, when less or more is sown:

Pecks seed used .	2	3	4	5	6	7	8	9
Yield per acre...	84.3	95.3	100	103.0	105.4	106.2	105.1	98.5

From this is appears that, in a series of six years in Illinois and twelve years in Indiana, the average results were in favor of seven pecks per acre. It should be stated, however, that almost every rate of seeding used came out first during one or more seasons. If we take the results for any one year, no conclusions can be drawn from them. This shows that the season, condition of soil and other factors of plant growth are of the greatest importance, and that under some conditions two pecks of seed per acre may be better than six or seven. The data accompanying the experiments alluded to above give no clew as to what those conditions are. Mr. Bonham, drawing on his own rich experience, and on good judgment regarding farm practice, has probably given a correct statement of the conditions that determine the amount of seed to use in any one case. The farmers in this section seem to have settled on four pecks as the best on the average.

W. J. SPILLMAN,
State Experiment Station.

BUZZINGS.

By Mrs. Chas. Lee.

O, busy bee! exalted so!
We'd work like you, we vow,
If we could loaf six months or so
As you are loafing now.

Temperature alone will not decide when bees will fly. If badly in need of a flight, they may fly at 40 degrees, whereas they might stay quietly in their hives at 60 degrees if there were no pasturage and they had not been long confined.

Mr. Gubler, in Revue International, says he has found by years of trial that bees winter better in hives not painted. We have a number of our hives unpainted, and cannot say that we have noticed any difference. We try to have the cover painted, as they shed water better, and do not warp so easily.

Gleanings says that the Busy Bee for October is devoted almost entirely to sweet clover, using the shears freely on Gleanings. This is something all the beekeepers like to see. Use the shears and pass it on, brothers. Give sweet clover the place it justly deserves—second to none as a honey bearing plant unless it might be alfalfa.

Shading bees by means of fruit trees has some objections to my way of thinking. The fruit often drops on the hive, thereby irritating the bees, causing them to rush out at the least jar to the hive, and the fruit under foot is not pleasant, especially if it causes one to stumble while carrying a hive of bees or a super of honey.

There has been quite a lively discussion the past summer among prominent bee men concerning deep cell foundation. I believe it is still an unsettled question. We will perhaps hear more concerning it next season. Now the no-bee-way section, with its cleated separator, is on the table for discussion. It seems to possess several advantages over the open sections. We will endeavor to give them a fair trial next summer.

GIBBS' LOCK-LEVER POST-HOLE DIGGER

This cut represents a long felt want as a labor-saving device for

DIGGING POST-HOLES

on the ranch, or for putting in telephone poles. As a labor saver it has no equal. One man with this tool can do as much work as three men could the old way.

AGENTS wanted in every county in Washington, Idaho and Montana.

For information, address

J. L. MYERS,
General Manager
1106 Pacific Avenue,
TACOMA, WASH.

WOOL GROWERS, DEALERS and OWNERS OF SHEEP

WE PAY PROMPT CASH FOR

Sheep - Pelts - and - Wool

WOOL SACKS FURNISHED IF DESIRED

SEATTLE WOOLEN MILL CO., - Seattle, Wash.