



Treat seed grains to control smuts and blights. Bulletin no. 56 March 1918

[s.l.]: [s.n.], March 1918

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WISCONSIN BANKERS' FARM BULLETIN

Treat Seed Grains To Control Smuts and Blights



THE DRY METHOD OF TREATMENT IS EASIER, BUT LESS THOROUGH
When applying formaldehyde hold the sprayer close to the ground. The grain
should be thoroughly shoveled so as to allow the spray mixture to come
in contact with as many as possible of the smut spores.

File this bulletin where you can find it

Distributed by

Wisconsin Bankers' Association

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Treat Seed Grains To Control Smuts and Blights

Wisconsin has been asked to produce this year the largest crop in its history and she is "going over the top" as she always has.

Everybody is planning to do his very best and to do so will take advantage of all the information on seed grain treatment that can be obtained.

The following conversation between two farmers that met at a feed store in one of the towns is typical of what is going on all over the state.

"Good morning, John! How are you today?"

"Fine, thanks, Bill, how's yourself? By the way, I haven't had a chance to see you since I was down to Madison 'taking in' the short course. I am going to make good use of some of the dope given out there."

"Glad to hear it. I couldn't go, too many chores to do."

"One thing that I got straight on was in regard to seed grain treatments. Mr. Vaughan gave a talk on smut on oats, barley, and the like and illustrated his points with charts you could see clear across the room."

"Go ahead and tell me about it."

"You were right last spring when we were talking about corn smut and I was wrong. It's just as you said: 'It doesn't do any good to soak seed corn in formaldehyde solution to kill smut. Corn smut isn't carried over on the seed at all—only on old smutted stalks in the field or in manure.' But smuts of oats, barley, wheat and rye are all carried over with the seed and about all of them can be killed by treating the seed with formaldehyde before planting. You know Professor Moore told us about that several years ago, but I guess that was before you moved in here. I've tried it a couple of times on oats and it sure does the business. The first time I tried it I treated my seed just as they told me and then just for fun I sowed the last round with some oats right from the bin that hadn't been treated. And you should have seen the difference when those oats headed out! You could see right to the row where I had treated the seed; no smut at all! And that last round was just black with smut. I haven't treated any of my seed grain now for a few years and I found last summer that some smut was creeping in again, and in my barley I noticed that scattering plants blighted down; got stripes in the leaves and later turned brown and died."

"Yes, I remember. A. G. Johnson of the Experiment Station was around last summer looking over barley fields for this trouble."

"I just learned down at the short course that that is what they call 'stripes' disease, a germ disease carried with the seed much the same as smut. They say, though, that it is harder to kill than the smuts and that it is best to actually soak the seed for two hours in the formaldehyde solution. But when that is done, not only the stripe is killed but the covered smut, and most of the loose smut too."

"That's alright, but I don't believe I'll have help enough to soak all my barley seed. I guess I'll plan to soak enough for a small field where clean seed can be grown for another year."



SMUT LOWERS OAT YIELD.

It can be prevented by proper seed treatment.

"Yes, that's a good plan."

"They showed us a smut machine down there at the short course, too, that seems to be a pretty handy thing. I understand that our county agent is going to get a number of them to be let out to clubs. I think I'll telephone him tonight to see if I can't get one for our farmers' club. I think it would be a good thing. We could then divide up on the expense and carry the machine around in our autos. It doesn't take very long to run the grain through, of course, the grain has to be well cleaned up first the same as for any of the other seed treatment methods."

"They gave us some good simple directions for treating seed grains. I have a copy of them here in my pocket. Here they are."

FORMALDEHYDE SEED TREATMENT.

Making the solution.—Add 1 pint strong commercial formaldehyde (40 per cent) to 30 or 35 gallons of water in a barrel or tank.

Applying the solution to oats, wheat, and rye.—1. **Dipping method.** Dip loosely filled gunny sacks, about a bushel in each, into the solution and let soak for 5 to 10 minutes, then drain pile and cover with wet sack or canvas for 2 hours. Spread out and dry. Avoid freezing. Sow a little more if the grain is swollen. 2. **Smut machine.** The smut machines can be used for wetting the grain. Leave it wet in the sacks for a couple of hours, then spread and dry. 3. **Sprinkling.** This method if carefully done, does not get the grain so wet. Success depends upon the grain being uniformly moistened with the solution. Apply the solution with fine garden sprinkler as the grain is being shoveled over on barn floor, canvas or in tight wagon box. Then cover and handle as when dipping. 4. **Dry method.** (Tried out thus far only for oats.) Take 1 pint of 40 per cent formaldehyde to 1 pint of water and put in a common atomizer. Spray this solution onto the grain while it is being shoveled over on a barn floor or canvas, holding sprayer close to the grain. It is enough for 40 or 50 bushels of grain. Then pile and cover for 5 hours. It may then be bagged and sown at once or kept indefinitely. There is no danger from freezing or heating, and because the grain is not wet and swollen there is no need to increase the amount to be seeded.

Applying the solution to barley.—The dipping is the best for barley. And in case the fields have had "stripe" or loose smut the seed should be soaked two hours, then drained and dried.

"Now I tell you—that 'dry method' (No. 4) looks good, for we could help each other and treat our oats now any day—but they said that method does not always take out quite all the smut, a very little sometimes remains. It would be mighty handy to do it that way when we couldn't do better. I believe that smut machine is really the thing for us though, don't you?"

"Yes, I really think it is."

"But we'll have to see about it right away if we're going to get one in time. I'll 'phone our county agent right after supper this evening and then bring up the matter at the club meeting tonight. You'll be there, won't you?"

"Yes. There are some other matters coming up, too."

"Well, so long, John, I'll see you later."