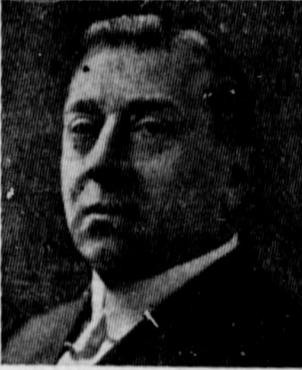


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P. N. U. No. 28, 1916

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**SELECT CLEAN SEED**

**Most Important Precaution in Control of Potato Scab.**

**Disinfection Treatment is an Added Foresight—Neither Will Be Effective if Soil is Already Full of Disease.**

(From the United States Department of Agriculture.)

The treatment of seed potatoes with formaldehyde or with corrosive sublimate has been recommended for many years as a preventive of scab and other diseases carried on the tubers.

Such treatment is, on the whole, profitable, but has several limitations which should be clearly recognized to prevent disappointment, according to the specialists of the department. The object of disinfecting seed potatoes is to destroy the germs of scab and other surface parasites which might otherwise be planted with the seed and infect the new crop. Only surface infections are reached by this method. It is only partially effective against deep pits of common scab. Formaldehyde is less effective than corrosive sublimate against the black sclerotia or resting bodies of rhizoctonia, or russet scab, and against powdery scab. Neither chemical, as ordinarily used, will destroy silver scurf. Either one will kill surface infections of blackleg, but neither fusarium wilt nor late blight infection in potato tubers can be reached by any seed treatment, nor can any of the nonparasitic diseases of potatoes, such as mosaic leaf roll, and curly dwarf, be prevented. See Farmers' Bulletin 544 for description of these troubles.

Clearly, therefore, the most important precaution against these diseases is to select clean, disease-free seed potatoes from healthy, vigorous plants, as determined by field inspection during the growing season and at harvest. Seed treatment should then be applied as an additional precaution.

**Soil Conditions and Potato Diseases.** Soil conditions have an important relation to potato tuber diseases; and many of these are widely spread throughout the country, perhaps na-

or poorly drained soils. Blackleg, on the other hand, is carried by infected seed. No potatoes showing a deep brown discoloration at the stem end should be planted.

Sulphur tends to prevent common scab. It is not a substitute for corrosive sublimate or formaldehyde, but is a good drier for cut seed. Applied to scab-infected soils at the rate of 500 pounds per acre it reduces the scab, but such heavy applications cannot be generally recommended as profitable. Preliminary experimental trials are advised.

**How to Disinfect Seed.** The formaldehyde treatment consists of soaking the potatoes, before cutting, for two hours in a solution made by adding one pint of formal-



Potato Affected With Common Scab.

dehyde to 30 gallons of water. The solution can be used repeatedly. The gas treatment is no longer recommended.

Corrosive sublimate is used at the rate of 1-1,000 for one and one-half to two hours. Dissolve two ounces of the salt in hot water and dilute to 15 gallons. This is a deadly poison. Use with great care. It must also be kept in wood, porcelain, or glass vessels, as it attacks metal. It is more effective than formaldehyde, particularly against rhizoctonia and powdery scab. Do not use the same solution more than three times, as the strength diminishes with each lot of potatoes soaked.

To treat large quantities, set several barrels on a slightly elevated platform. Fit a plug in a hole in the bottom of each barrel, fill with potatoes, cover with solution, let stand two hours, draw off solution, and pour into another barrel. Increase the number of barrels in proportion to the quantity to be treated. Another method is to use a large wooden vat or trough, into which the potatoes in sacks are lowered by a rope and pulley and later hauled out, drained, and dried on slatted racks.

Seed potatoes may be treated several weeks before planting, provided they are not reinfected by storing in old containers or storage bins.

Sprouted potatoes are injured by treatment, but will throw out new sprouts. In general, however, potatoes will not be injured by following the above directions. Many growers believe germination is improved by treatment.

**PLAN FOR CUTTING SPINACH**

Convenient Way is to Use Sharp Hoe to Slice Off Large Plants of Edible Size.

As convenient a way as any for cutting spinach is to use a sharp hoe to slice off the large plants as soon as they reach the edible size, thus leaving the smaller ones for a week or two to grow larger. By so doing the season can be somewhat extended without risk of having the plants develop seed stalks, which they will start to do at the first hint of warm weather.



Potato Affected With Russet Scab, Showing Russeting and Cracking Associated With Rhizoctonia of Western Potato.

tive to some soils. Common scab is favored by a neutral or slightly alkaline soil, and seldom gives trouble in acid soils. It is therefore increased by liming and by fresh stable manure, wood ashes, and alkaline fertilizers, such as nitrate of soda and ground bone, while acid phosphate and sulphate of ammonia tend to diminish scab.

Rhizoctonia occurs to some extent in nearly all soils, but appears to attack potatoes most when the conditions are unfavorable to the best development of the potato plant. Bring the land to an ideal state of tilth to minimize loss from rhizoctonia.

Powdery scab is worst on cold, wet,

**TREATING SCOURS IN HORSES**

Give Mixture of Whole Oats and One-Ninth Part Wheat Bran—Have Teeth Attended To.

For scours in horses, feed a mixture of whole oats and one-ninth part of wheat bran by weight, allowing one and a fifth pounds of this for each hundred pounds of body weight as a day's ration. In the same way feed one pound of hay per hundred pounds of body weight. Increase hay and decrease the grain mixture when the horse is idle. Let him run out in the yard daily, when not at work and when the weather is fine. Muzzle him between meals if he eats his bedding. Allow free access to rock salt. Give the drinking water before meals unless he has access to pure water at all times. Have his teeth attended to by a veterinarian, and if he bolts his feed mix some hard peas with it or put it in a very large box, or have some cobblestones in the feed box.

Dispose of farm sewage by means of a home-made septic tank.

**DOES IT PAY?**

To buy cheap seeds because good seeds are scarce and high in price?  
Of course it does not.  
Records which have been kept of the time and labor expended and the yield secured tell the story.  
It's the same all along the line. Cheap seeds never paid and never will.

**Profit in Variety.**

Always and with any variety of hens variety in feed brings the best egg results.

**Won't Fatten on Corn.**

A fowl that will not fatten when heavily fed on corn is not in good physical condition.

**Avoid Navel Disease.**

Look out for navel disease in spring colts. Cleanliness—that's the word.



—Six feet through at base, 4 feet 6 inches through at top, five feet above ground. Giant Stumping Powder did a clean job, taking out roots and all without tearing a big hole in the ground. Farmers who have used them know that

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always save them money, time and work. They save money because they lift and heave as well as shatter, and go further than high explosives that merely split the stumps. They save time and work because they get out the stumps—big or little, green or dead—in a condition easy to handle. "I get better results from Giant Powders than from any other powder I have used," says A. E. Adkins, Woodburn, Ore.

There are two Giant Farm Powders, both made especially for Pacific Coast farmers. Eureka Stumping Powder is most economical for dry soil and Giant Stumping Powder saves money in stump blasting in wet soil. Try these two. Compare them with the powder you have been using, and you will always use Giant in future. Write us and we will have our nearest distributor supply a trial case at the lowest market price.

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Better ways of removing stumps and boulders, making ditches, planting trees, and breaking up the subsoil are described in our five illustrated books. They were written for western farmers, to meet the conditions that you have. Write us for the book on the subject you are interested in.

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**Her Proud.**

The reading class was in session and the word "furlough" occurred. Miss Jones, the teacher, asked if any little girl or boy knew the meaning of the word.

One small hand was raised. "Furlough means a mule," said the child.

"Oh, no, it doesn't," said the teacher. "Yes, ma'am," insisted the little girl. "I have the book at home that says so."

Miss Jones told the child to bring the book to school. The next morning the child came armed with a book and triumphantly showed a picture of an American soldier riding a mule, under which was the caption: "Going home on his furlough."—Philadelphia Ledger.

For sore feet rub on Hanford's Balsam. Adv.

**A Mistake.**

"Pa, is your business an unrefined one?"  
"Of course not, daughter. What makes you ask that?"  
"Because I heard you telling uncle about your gross receipts."—Baltimore American.

**How It Happened.**

"Strange, one of your twins is blonde and the other is a brunette."  
"Well, we never could afford a maid. I washed one child and my husband washed the other, and that one grew up dark."—Louisville Courier-Journal.

**Ruling Thought.**

Belle—Harry says he is for fair elections all the time.  
Nell—Yes, Harry always did like blonde effects.

**Fabulous Country.**

"What is this Never Never Land?"  
"That's where the good cooks come from."—Louisville Courier-Journal.



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"So?"  
"Yep. No delay about messages consigned to us. Our place is near the ball park."—Louisville Courier-Journal.

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**The Smile of Serenity.**

"That man is surely an optimist."  
"How do you know?"  
"He smiles continually."  
"Maybe he's an optimist and maybe he's a diplomat."—Washington Star.

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