

## FARMERS SHOULD BE CAREFUL IN BUYING ALFALFA, CLOVER AND GRASS SEEDS

Bushels of the Seed of Noxious Weeds Planted Every Year by Farmers Throughout the State--Immense Losses Caused by Spread of Quackgrass, Crabgrass and Like Pests.

[By D. H. Rose, Assistant Professor of Botany, Kansas Agricultural College.]

IF YOU were to offer a farmer several bushels of mixed weed seeds, free for sowing, he would refuse to use them and probably would think you out of your senses for offering them to him. But many farmers over the state have this year sown seeds by the bushel and have paid a good price for the seed. Not, perhaps \$10 or \$12 a bushel, but at any rate several dollars more than it was worth.

And how has this happened? In this way: Seed of alfalfa or clover or English blue grass was for sale close at hand, cheap, and the farmer bought

13 seed of foxtail to every square foot of ground. If the sample is only one per cent impure, there will still be at least two seeds to every square foot. There are surely enough weed seed grown every fall without their number being increased by the unnecessary and careless sowing of more.

It is true that not all of the seed examined has been found to contain impurities to the extent of 10 per cent or even 5 per cent. It should be said also, that the number of samples examined this year has been slight, smaller than usual and a large proportion of them came from seed houses.

It might be thought from this the seed bought from a seed house is sure to be clean. This, unfortunately, is not always true. Not that all seed men are dishonest, or that none of the seed they have is pure. Credit must be given them for trying to put on the market as good grades of seed as they can obtain. But even with the best of cleaning machinery some weed seeds are sure to be left behind. Among those especially hard to remove are buckhorn and foxtail from clover and alfalfa, Russian thistle from alfalfa, cheat from English blue grass and bromegrass, and quackgrass from bromegrass. It must be remembered that in some years most of the seed is clean as it comes from the threshing machine, and in other years foul with weed seed and other trash. Seed that grades No. 1 fancy one year, would scarcely pass for No. 2 prime the next.

Another fact worth consideration. A sample on examination in the seed laboratory of the Kansas Agricultural College may be 98 or 99 per cent pure and still be unfit for use because it contains a few seeds of some bad weed, such as dodder, Russian thistle, or quackgrass. One-half of 1 per cent of dodder in an alfalfa sample means about 500 seeds to the pound, or at least one seed to every square yard, which surely is more than any one cares to sow on valuable farm land.

The point is here: The farmers of the state are not availing themselves of the privilege of having seed examined before they sow it, but are using a great deal of locally grown seed which, as it comes from the threshing machine, often contains large quantities of weed seeds and trash. Such seed can be fairly well cleaned with a fanning mill, but the safest way is to get really clean seed from some other locality or from a reputable seed house. Even when this has been done it is best to send a sample, say a good handful, to the seed testing laboratory at Manhattan to be examined. A report will be made, free, on the amount of impurities present, and on the germinating power of the seed. Examinations of this sort have been made for residents of the state since 1905. There can be little doubt that thousands of dollars have been saved by advice given against the use of impure seed. Pure seed is more expensive, to be sure, but so are weeds.



D. H. ROSE, Assistant Professor of Botany at K. S. A. C.

and used it. This is a common practice everywhere, as is well known, and results in seeding down the farm land of the state to weeds more thoroughly every year.

Samples of seed such as are here discussed have been examined in the seed laboratory of the Kansas Agricultural College and have been found to contain large quantities of weed seeds. In alfalfa the most common are foxtail, crabgrass, pigweed, lambs-quarter, Russian thistle, buckhorn and dodder; in English blue grass, cheat; and in bromegrass, quackgrass and cheat. Quackgrass is a bad weed which causes immense losses to the farmers of the Dakotas, Minnesota, Nebraska and Iowa every year and is gradually spreading over Kansas.

If the seeds mentioned, any or all of them, are present in a sample to the extent of 10 per cent it means that for every nine bushels of alfalfa or clover or bromegrass sown there is also sown one bushel of weedseed. The weeds which come from these seeds require just as much room as the reap crop, often more, and rob the soil of moisture and plant food. It may make the matter clearer if some figures are given as to the actual number of weedseeds sown on a square foot when impure seed is used. Five per cent of foxtail in an alfalfa sample means 45,000 foxtail seeds to the pound of the mixed seed. If such seed is sown at the rate of 15 pounds to the acre, there will be

## URGES THE FARMERS TO GROW POTATOES

It is all very well for scientists to study and delve and dig for the ultimate salvation of the farmer in the dry land belt, but first tell him—and do it quickly—what to grow that will bring in money. The sooner this is done the sooner the farmers, constitutionally skeptical, will respond.

"The farmer isn't concerned about fertility," says Professor W. M. Jardine of the Kansas State Agricultural College. "What he wants is a living and he wants it now. We must help him to get it. Show him how to do something now; tell him how to feed his family, first, and then he will be in position to take up and study the problems we have discussed. The thing to do for him is to show him how to store up every drop of moisture to grow crops and produce money. We can do that in short order and with few words."

Before Professor Jardine's appointment as head of the agronomy department in the Kansas Agricultural College, he started exceedingly valuable potato experiments for the United States department of agriculture in the dry lands region. These experiments began three or four years ago at three stations in North Dakota, at Akron, Colorado and Nephi, Utah.

About 25 varieties of potatoes were used they were planted in every conceivable way. In three years the returns were from almost nothing to 300 bushels an acre. On five farms the yield averaged 100 bushels, marketable. Here, in brief, are Professor

For seed, use selected tubers, hand picked. If not too large plant single tubers having only one or two eyes. If large, cut in halves. Two eyes are better than six in seed potatoes.

Plant in rows three feet apart, and 20 to 24 inches apart in the rows, four inches deep; subsiding is fairly satisfactory.

Use these varieties: Early Potosky, Irish Cobbler and Early Ohio.

"These varieties are not the largest yielders, I admit," Professor Jardine said, "but they are the earliest and, therefore, the most advisable because the farmer may need the money."

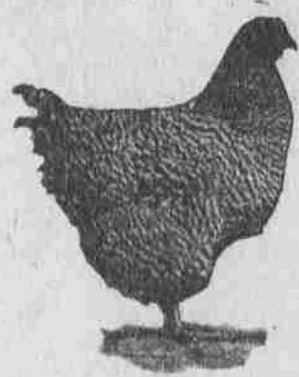
Why should not potatoes be a good crop to grow on fallow land—land which, otherwise, would be idle for the year? That's the question.

"Why not plant 50 or 100 acres?" Professor Jardine inquired. "Why not, anyway, have crops two years in three? Wouldn't many a dry land farmer like to have \$100 an acre from his fallow? Wouldn't he be delighted to get \$50? Mind, now, I don't recommend you to drop wheat in favor of potatoes, but here is a scheme that may tide over many families while they are waiting the result of a scientific test of systems we advise."

Only three crops in the dry land are making money, Professor Jardine declared: Wheat, milo and flax. Why not add another and increase the income? The farmer who thinks he will grow rich on one crop is much mistaken, he said. Potatoes could be planted in the low, waste places where grain can not be sowed. They would prove to be the farmer's friend.

The improvement of crops by breeding and selection is primarily the work of the experiment station, and the experiment station should be the source and first distributor of well-bred seed, but the amount of seed supplied by the experiment station is necessarily small and the farmers who secure the better seed must grow it carefully and keep it pure and continue the distribution in order that great and rapid benefit may result from the work of the experiment station. The permanent improvement of crops rests with the farmers who shall continue the growing and distribution of improved seed.

# WE JUST MUST HAVE YOUR CHICKENS AND TURKEYS



An order has just been received for another car of chickens and turkeys. We will hold the turkey market up to 11c and the chicken market at 6c until this order is filled, which will probably be until Wednesday, Dec. 27th. We advise you to sell now as the poultry market will undoubtedly go off after New Years.

## Liberal Cold Storage Co.

One Block West of the Enterprise

Phone 292

## COMFORTS AT COST PRICE

You don't need to freeze these cold nights for lack of bedding. We are heavily overloaded on comforts, and they are the Chas. A. Maish Pure Laminated Cotten Down, all guaranteed to be absolutely pure and sanitary. Regular prices and reductions are as follows:

Regular price \$ 1.25, Cut Price \$ .98

"	"	1.50,	"	"	1.15
"	"	2.00,	"	"	1.48
"	"	2.50,	"	"	1.98
"	"	3.00,	"	"	2.39
"	"	3.50,	"	"	2.85

This should be very acceptable bargains at this season of the year, and you should lay in your supply while you can have the advantage of this saving. These especially at these prices are no more expensive than many others of inferior makes.



The Democrat Wishes Everybody a Merry Christmas and a Happy New Year.