

Farmers' Fortnight in Arizona. By Dorr Kimball.

PRACTICAL SCHOOLING.

PETER PORTER lives just outside of the town of Light, in Southern Arizona. He is trying to make his 160 acres yield him an income. The soil is adobe soil; wet it and mix it and then let it bake in the sun and you can make a first-rate building material; put some vegetable material with it and a little water and in it you can raise pretty good crops.

One day last January Peter (no, he is not known as "Arizona Pcte" even among his intimates.) Peter, I say, received in his twice-a-week R.F.D. mail a letter from the State University at Tucson. "Pack up your bedding," it told him, "and come to the university for a two weeks' visit. We have a new dormitory just being completed and no students in it yet. We have a bed in there for you and meals will be served in the university dining-hall. During 'Farmers' Fortnight' the teachers of the Agricultural Department will tell you and show you all they have found out about raising good crops—at least as much as they can in four lectures a day. They have found out some mighty valuable things. Since your good tax money has paid their salaries you are entitled to know what they have discovered."

Well, February is a comparatively quiet month in Arizona. Spring is just starting and most farmers can get off for two weeks without being missed from headquarters.

So Peter Porter made up his blanket roll and set off for Tucson to turn student for two weeks and let the State's hired men tell him what they know about farming.

And in Tucson when he sat down to dinner in the spick and span dining-hall with the students of the State University he found four score other farmers who had heeded the call and likewise turned student for a fortnight. The woman farmer was there, too, and hardly a county of the State but had its good representation.

Now it wasn't your dry college professor's lecture that Peter Porter heard—no, not by a long shot. These agricultural professors are just real farmers plus. Any of them can handle a hoe or run a mower or milk a cow with the best hand you can select. But then, too, they can talk in fine English, and wield the chalk in effective illustration. When they were talking about a plow they had the habit of calling it a plow—not "an agricultural implement for altering the juxtaposition of superimposed strata of the earth's surface," nor did they call it "that thing you hitch to a horse which turns over the field." No, sir, these college professors knew both tillage and talk, cabbages and conversation, ensilage and English.

The classroom lectures by the Agricultural Department professors were given four times a day in doses of one hour and a half, and then in the evenings an entertaining talk or athletic games by the students furnished the programme.

So the farmers went to school, but it wasn't the usual school lecture hour the professors had to deal with by any means.

"The way to get gophers out of your alfalfa," said Prof. Forbes (the head of the Arizona Experiment Station,) "is to give that neighbor's boy with a .22 rifle a cent apiece for each gopher killed in your field."

"Hear, hear," came back from a gray-haired farmer, "one cent isn't the price. My father gave me 5 cents for gophers in my day—that's how I got my start."

"Now, honestly," asked a dairyman from near Phoenix, during Prof. Fowler's lecture on "Dairy Breeds of Cattle," "don't you think Holstein milk better for babies than Jersey milk?"

"Well," answered the professor, "if I was a baby I would choose Jersey milk every time."

"When you are planning your homesite," said Prof. Thornber in a talk on "Ornamentation on the Farm," "have a driveway that leads first of all to the house—don't have it go to the barn or the pig sty first—but have it head directly for the home. And have a good entrance from the thoroughfare. Many farm-home entrances say to one approaching from the road: 'You had better keep out of here—beware the dog, he is fierce.' Have an entrance that seems to say: 'Come right in, real glad to see you.'"

"How do you get rid of the alfalfa moth?" asked one farmer of Director Forbes, who had been telling about alfalfa manage-

ment. "Well, you don't have to," was the answer, and then the professor explained. The alfalfa moth has an enemy—another insect. When a new crop of caterpillars is hatched out this hostile insect has the interesting habit of laying its eggs on the back of the neck of the alfalfa moth caterpillar. When these eggs are hatched the new worms crawl into the body of the caterpillar and make him so uncomfortable that he dies, and enough of them thus die to keep the supply harmless.

"When you have good machinery, take decent care of it," admonished Prof. McOmie. "Don't do as one farmer did—buy a fine new McCormick reaper and, beginning at the outside of your grain, reap it all and leave your machine in the center of the field till the next crop, then reap the new crop by starting where you were, in the center of the field and work your way out."

"The difference between the savage and the civilized man," remarked Director Forbes, in his talk on "Farm Accounts," "is that the civilized man keeps records. Many farmers," he added with a smile, "are still in the savage stage." And then he went on to explain a simple scheme by which the whole story, agricultural and financial, could be accurately kept for thirty-two diverse operations on a general farm for a twelvemonth, using but a fistful of properly-prepared cards.

Put an ordinary navy bean in your mouth and keep it there for an hour and you will find the skin has shriveled, indicating it has absorbed moisture and is getting ready to germinate. But Prof. Clothier has been experimenting with some other kinds of beans that do better than this. Among the Papago Indians in 1909 he found a quick-growing bean which apparently needed no water, produced four times as big crops as the Mexican pink bean and when cooked made nearly half again as many quarts as "navies." Put one of these dry Tepary beans in your mouth and in a minute it will shrivel, showing that it is ready to do business at an instant's notice.

Director Forbes tried out the Tepary at the Yuma experiment field and with irrigation got a yield of 2370 pounds per acre. The plant breeder of the station, G. F. Freeman, got busy on the different varieties of the Tepary and found no less than forty-seven, and then wrote up the whole bean story in Bulletin 68 of the University of Arizona Agricultural Experiment Station.

"The farmer," said President Wilde in his address on the relation of farmers to education, "should be the best educated member of the community. For what other class has the government done so much in higher education and at practically no cost to the farmer?"

"Where is there a better place to raise a boy than on the farm? There he learns to love animal friends. There is a chance for the seclusion of family life. There a lad can be chums with his dad. His small round of chores teach him industry, and if he is given a plot of ground to do with as he likes he will develop into a business man without urging.

"It's the mother who sends the boy to college—nine times out of ten. The father sees in his husky lad a mighty profitable farm hand, but that shouldn't keep him from letting that boy become an expert farmer. A boy's college course should be part of the farm budget expenses and the investment will usually bring big returns. Oh, yes, a boy must have money to go to college. Some smart men have gone to college and earned their way, too; but nowadays to take full work in school requires all one's time, and to earn a living at the same time will mean either poor work in school, a longer course, or impaired physical strength."

There is one thing these professors in agriculture at Arizona do that professors as a rule do not do. That is, they go outside their own limited subject and know their speciality in all relations to the farming industry. If you ask the average college professor of mathematics some point about book-keeping he will probably tell you that that doesn't fall within the scope of his department, but you ask Prof. Fowler at the end of his lecture on "Judging Dairy Cattle," how much the average farmer should pay for a good cow and he will answer something like this: "If you are not experienced in handling cows get a \$50 to \$70 animal and learn how to take care of her. Then if your land is worth \$200 an acre you had better get a couple of pure-breds as

soon as you have learned to take the right kind of care of them."

Or take the lecture on types of engines and pumps. Prof. Enger explained the way an engine works both in theory and in practice. He had his charts showing plotted curves of efficiency as well as diagrams of theoretical power control. But what Peter Porter wanted to know was whether or not it would pay him to pump water fifty feet to irrigate his land, and if so, what kind of outfit to get and at what cost? Did the professor answer: "That is purely a commercial problem, and you must consult the manufacturers on that point?" Not much. The superintendent of the university pumping plant was put on the stand and asked to give figures for power used, water lifted and types of pumps, till Peter Porter knew the whole thing from beginning to end.

These men are keen students of book learning, but they can also take off their coats and demonstrate the truth of their learning with a shovel or planter. Theirs is the doctrine of facts and farmers and not fancies and fiction. They are interested in crops, not contentions; in harvests, not hot air.

How broad-minded these modern farming professors are can be judged from Prof. Forbes's talk on primitive methods of farming in Arizona, in which he gave generous praise to the prehistoric farmers of the region and advised all to learn from them the main essentials of successful agriculture.

Everything in Arizona is different. It gets hot in summer, and even in winter at noon you can work in your shirt sleeves, but at night your pump is liable to freeze up.

You can build your house out of your back yard and then raise crops on what is left.

There are only a few rivers in Arizona, and these mostly run underground. Students of concrete mixing are told to go to the bed of a stream and sift out sand and gravel and they never get wet at the job.

You think of a desert as sandy waste, but the desert in Arizona means lots of green, for you can't get a patch of ground anywhere that creosote or mesquite won't grow.

A thousand years ago or more there were farmers in Arizona. They did the impossible and produced crops. Where there was no water they secured some. Where the season between frost and burning summer heat was too short to mature a crop they harvested their crop just the same.

Marvelous indeed was their ingenuity driven by the grim necessity of beating Nature at her own game or perishing from starvation.

These prehistoric farmers were irrigators and their trenches today mark out systems of water conveyance which can give pointers to your college-bred engineers. Any Indian in those days could dig an irrigation trench and give it just enough fall to produce a slight flow in the water. How did he do this without a level or other instrument? Simply by letting the water follow him in the trench. If the water followed him it was a good ditch, but if it failed to follow him he went deeper. Thus in one basin which Uncle Sam has lately reclaimed by irrigation, the trenches of primitive farmers were found to have been laid out with as much precision and with as good contours as those proposed by government engineers.

We still have to take off our hat to the Papagos when it comes to water conservation. In Arizona (so they say,) where there is no water, you have to take mighty good care of what you get. The Papago squaw hangs her water jug on a pole in the breeze so that there is always a cool drink at hand. But this olla drips—very slowly—and the thrifty housewife plants a dozen onions where the drip falls into the ground and incloses the spot with a few sticks.

Out on the flood plains of the lower Colorado they get a little water. But along comes the nice hot sun and that soil is soon dried out. But does your clever Moki call Mother Nature names and let it go at that? Not he. He digs a hole as deep as his arm and down his seeds go in the bottom of that hole where the moisture stays awhile. When his harvest is ripe he has a field in which corn comes about to his knees and which erupts yellow pumpkins in all directions. Yes, sir, your Indian knows something about a hole in the ground.

Once in Arizona they had a rain, but it came just six weeks before the frost. Now

your good Indian had some seven-week crops, but how could he match these with the six-week season Nature had put up to him. No, the answer isn't that he didn't—for he had to, so he did. One week before that rain he got out his seeds and took them down to his one lone spring. He dug a fistful of mud out of the bed and poked a seed in the center of the ball. These balls he planted. Now those seeds felt nice and damp, had fine wet mud about them, so just naturally thought that the rain had come and started germination. Before the mud about those seeds dried out along came the rain for sure, but with a week's start the six-week season was plenty for a good crop.

If you are trying to raise anything in Arizona you want to be particular that your seeds are of a family that have been properly introduced in that State. Social etiquette among plants is punctilious, and a fine lot of seeds that do nicely in Virginia or Maine get an unpleasant setback in Arizona. Seven-week corn and beans of a highly specialized variety get on famously in the State, but all newcomers have to be tried out. Some ordinary summer plants get burned up under Arizona's hot sun and some winter plants don't get a long-enough season to do well.

With two weeks of schooling Peter Porter goes back to his quarter section. As he turns his horse in at his driveway he resolves to clear out those two boulders he had placed either side of the entrance and put in a couple of low tamarisk bushes—this will give a more welcome appearance. The first words he gives his wife are that she must have a rose garden right outside the side door—some of those hardy roses that you just can't make quit blooming. He sees his plow left alongside of his fence where he left it when last used and resolves to have it soon in that new tool shed he is going to build from the plans he has in his pocket.

"Have you any light flannel?" he asks his wife at milking time. "I'm going to rig our milk can with a strainer."

He observes his open pit of manure drying in the sun and remembers he must get that covered, for a quarter of the value of his fertilizer is flying away. He notices now that his mesquite fence posts are rotting badly and must soon be replaced, and remembers that now he knows how to make concrete posts at no more cost which will last longer.

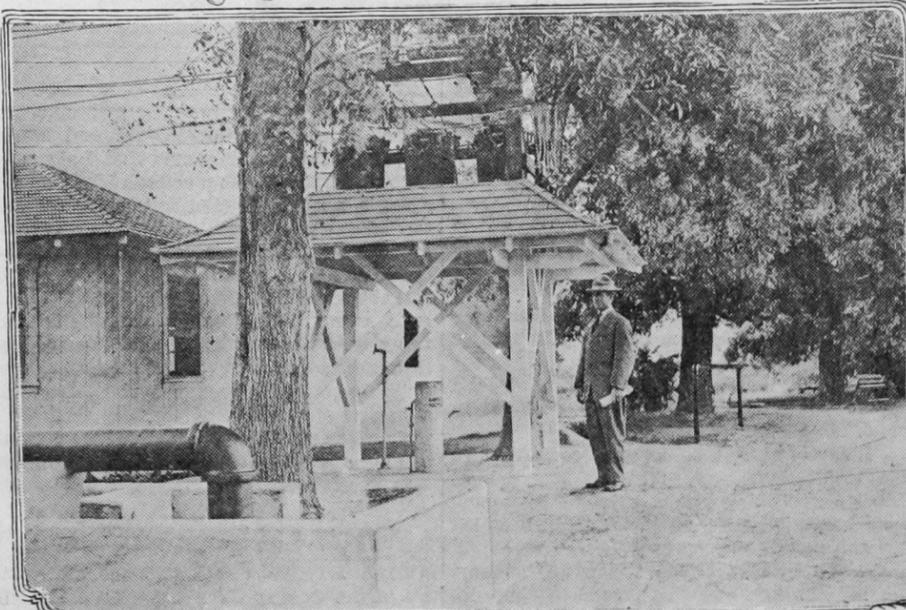
And so he sees his whole farm with new eyes, and the possibilities of his farm will shortly become realities. He is now mixing concrete with culture, manure with mathematics, soils with science and agriculture with ability.

Damages for Feelings.

The Court of Appeals of New York: "A common carrier is liable in damages to a passenger for an injury to his feelings caused by the insulting language of its employee, upon the ground of a breach of its contract, which obligates it not only to transport the passenger, but to accord to him respectful and courteous treatment, and to protect him from insult from strangers and its own employees. Among the elements of damages in such a case and which may be considered in determining their amount are the humiliation and injury to his feelings suffered by him, not, however, including any injury to his character resulting therefrom and he is entitled to recover compensatory damages only, not including punitive or exemplary damages."

Flaubert at Chenonceaux.

[Journal des Debats:] Flaubert was invited to Chenonceaux to write a poem on the Fontaine du Rocher, one of the old wonders of the chateau, a fountain in the park, which Mme. Pelouze intended to restore. "When he departed Flaubert gave his hostess a kind of six-page libretto, wherein were recorded the transformations of water, from the spring which Moses made to spring from the rock to the water of St. Galmier, from the deluge to public fountains, from the passage of the Red Sea and the water of Jordan to the fountain of Petrarch and eau de cologne." It is to be regretted that this great jeu d'esprit of Flaubert's is lost to us. Flaubert seems to have wearied somewhat of the refinements of the chateau, for he often spent the day in the game-keeper's cottage, living upon cabbage soup.



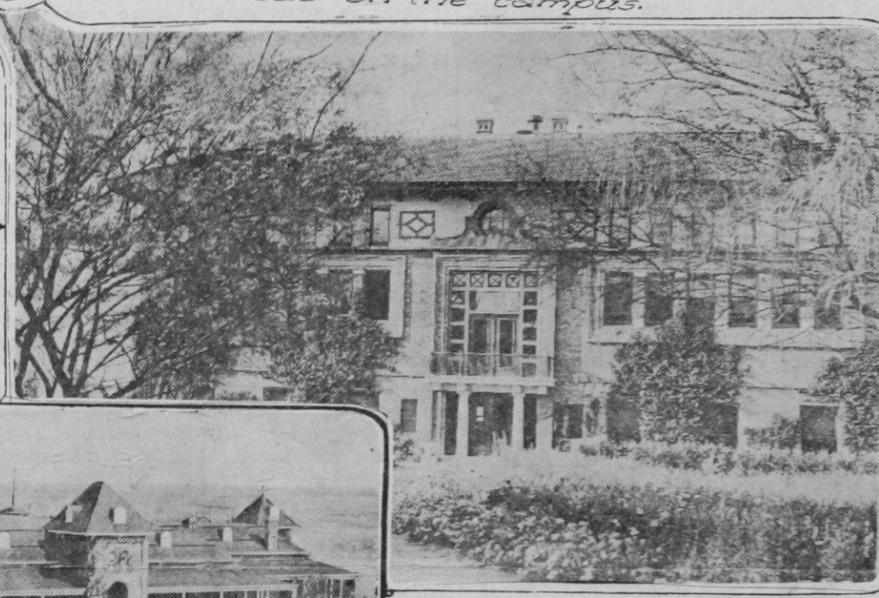
Prof Fowler a judge of livestock



Co-eds on the campus.



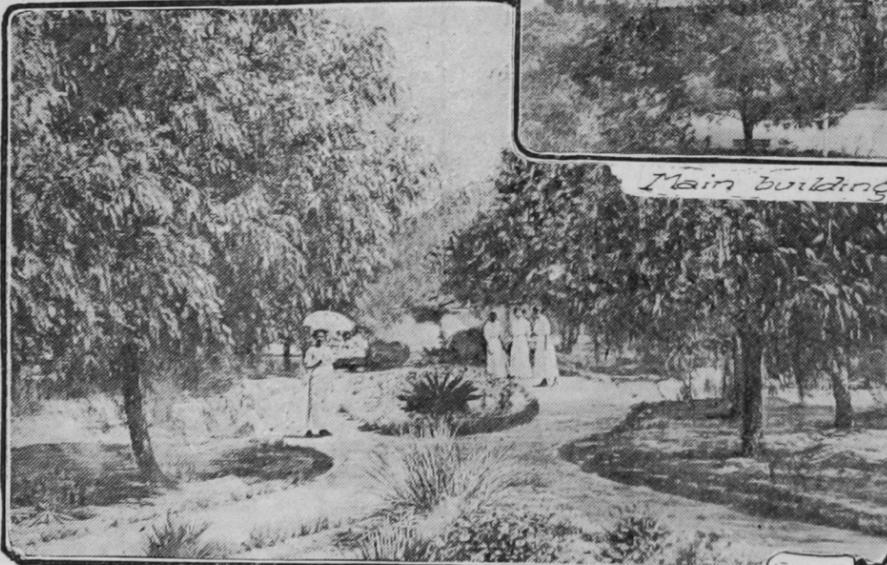
Home of President White.



The university library.



Main building, Arizona university.



"Desert with a college education."



Arizona's future farmers.



Making concrete pipe under direction of Prof. Smith.



Farmer students.