

## SOIL SURVEY RESULTS

Interesting Statistics Announced by Government.

### Dwarf Kafir Corn Has Proved Profitable Farm Crop—Peruvian Alfalfa Valuable in Warm Climates Diseases of Potatoes.

During the year ending June 30, 1913, an area amounting to 52,609,600 acres was covered by soil surveys by the department of agriculture. Of this amount 21,210,880 acres were surveyed and mapped in detail. Parts of thirty-one states were included in this work and all sections of the country were represented. The remainder of the area surveyed was covered which took in a reconnaissance survey. The total area of which soil surveys have been made up to June 30, last, is 703,235 square miles.

### Dwarf Kafir Corn Has Proved a Profitable Farm Crop.

The department of agriculture announced that the dwarf kafir corn has been extensively distributed through federal states and commercial agencies and has proved to be a very desirable and profitable farm crop. Feterita has awakened much interest as a desirable type of white durra. Both faterita and dwarf kafir are adapted to harvesting with the ordinary grain header, which adds greatly to the value as crops for extensive farming.

The department has taken a prominent part in the campaign now being waged for the planting of pure and viable broom corn seed. Experiments with dwarf broom corn tend to prove that this crop is usually sown too thickly for best results.

### High Value of Sudan Grass.

Sudan grass has continued to demonstrate its high value for the semi-arid regions, and even in the humid regions has given exceedingly satisfactory results. Extensive experiments are being made with this grass and arrangements have been made so that sufficient seed will be grown for all demands.

Rhodes grass is continuing to show its high value for Florida and Gulf coast conditions. American-grown seed will be produced to meet the continued growing demands.

### Vetches.

Interest in the cultivation of vetches, especially the hairy vetch, continues to increase, and there is probably now a greater acreage grown than ever before. In many parts of the United States seed is now being grown successfully. One difficulty in the production of hairy-vetch seed, which ordinarily must be grown with a small grain crop, has been the separation of the seeds.

By means of the spiral seed separator, this can easily be accomplished, and these machines are now available to American farmers. There is reason to believe that within the near future sufficient American seed will be raised to meet the demands and probably reduce the price of seed much below what is at present asked. The department has recently introduced the purple vetch, which is especially promising, inasmuch as it yields as much hay and more seed per acre than the common vetch.

### Cowpeas.

The cowpea investigation, especially in breeding, has resulted in the production of a considerable number of exceedingly promising new varieties, some of which, especially from the view point of seed production, are apparently superior to any of the standard varieties.

### Alfalfa.

The breeding of improved varieties of alfalfa, especially hardy and drought-enduring strains, has developed new possibilities through the finding of forms of yellow-flowered Medicago falcata that produce new plants from true lateral roots. Certain of the forms that possess this

character are good forage types, and it is hoped that by hybridizing them with selected plants of common alfalfa an extremely vigorous strain will result.

As a result of the recent introduction of new roots of seed of Peruvian alfalfa, the chances of establishing this variety in the southwest are becoming extremely favorable. Peruvian alfalfa has so thoroughly demonstrated its value as a quick-growing strain for warm climates that little difficulty is anticipated in getting it thoroughly established as soon as the seed is placed on the market.

### Potato Diseases.

The appearance in a destructive way of several new diseases of potatoes in large producing areas has caused great alarm and heavy loss in certain of the important potato producing districts of the Rocky Mountain territory. Among these maladies, heretofore unknown in this country, are leaf-roll, known in Europe for a number of years, curly-dwarf, rosette, and the mosaic disease.

The attention of the pathologists in charge of this line of work has been devoted exclusively to a study of the causes and methods for controlling these troubles. As a result of the investigation a method has been worked out by which the resistance of the foliage of potato varieties or seedlings may be tested in the greenhouse during the winter which will greatly facilitate the work of potato breeding and will also furnish a method of determining whether seed potatoes are free from this disease. Recent investigations have proved that the dry-rot of potatoes, which has been destructive in certain regions, is not caused by *Fusarium*, as was previously supposed, but that this disease is due to other wound parasites.

### Date Ripening.

The work during the last year has proved beyond a doubt that the artificial ripening of dates such as the Degelet Noor may be carried on cheaply and efficiently merely by keeping the full-sized though immature fruit in a moist, warm condition. Fruit so ripened is cleaner and more attractive than that ripened on the tree. Thus the failure of the Degelet Noor to ripen on the tree as it does in some parts of the Sahara Desert, which at first seems a great drawback to date culture in California, turns out to be an actual advantage, permitting the ripening of the fruit more uniformly and more efficiently than is possible in the open air, where the conditions cannot be controlled.

### New Hybrid Substitute for the Lime.

A new hybrid, a substitute for the lime, fruited for the first time during the year. This is the limequat, obtained by crossing the West Indian lime with the kamquat. It has proved to be not only a very precocious but also exceedingly fruitful and hardy. It bears a very acid fruit, much like the West Indian lime in size and flavor. The tree, however, is much harder than the lime, having withstood the past three winters in extreme northern Florida where the lime can not be grown.

### Tobacco Investigations.

It has been found that a rotation in which special fertilizers are applied is of great importance in maintaining the character and burning qualities of the product. Investigations are made during the year in the Connecticut Valley, New York, Pennsylvania, Ohio, Kentucky, Tennessee, Maryland, Virginia and the Carolinas. In the last four states the most important problem is the restoration of the much depleted supply of vegetable matter in tobacco soils through the use of cover crops, which do not increase the nitrogen supply.

### Breeding Trotting Horses.

The only man who can breed trotting horses profitably is the man who is breeding on a large scale and who supplements his breeding with racing and sacrifices so-called "culs" or non-winners, at public sales; a dead letter to the breeder, as the auctions of the past few years have proven.

## CLEANED THE DOC'S BUGGY

Which Was Not What Boys Intended to Do, but That Was the End of the Adventure.

"I remember," said Uncle Josh, who had just finished a hearty dinner and was in the humor for telling a yarn, "I remember one balmy day in July when the other boys and I decided to steal old Doc Hoffum's horse and buggy and drive to the river to go swimming. Doc was visiting at our house that day, and it looked easy to us to drive two miles over to the river and get cooled off and then bring the horse and buggy back before the old man missed them.

"There were a good many of us and we were not dressed very fine. Slim, for example, was attired in a long linen duster that flopped out behind. The springs allowed us to bump pretty hard, there being so many passengers, but we got to the river safely.

"We had a bully swim, but Slick said he thought we ought to wash the buggy while we were there. The way to do it, he said was to run the buggy into the river.

"We unhitched the horse and proceeded to back the buggy into the water. But the buggy got away from us, and away it went, much further than we expected. We couldn't hold it and so it disappeared entirely. A couple of bubbles came up and that was all!

"While we were diving to locate the buggy the horse got away, and we all took after him. We chased him around a clump of trees, half of us on one side and half on the other to head him off. Both parties rounded the clump of trees at the same time and ran plump into a camp meeting, mostly women!

"We let the horse go then and by that time we had forgotten where we left the buggy."

"I suppose some one stole all your clothes while you were gone," suggested the man from Topeka.

"No," said Uncle Josh, "we found our clothes, and from their position on the bank we figured out where the buggy ought to be. One of the camp meeting people brought the horse back and we got a rope from him and dived around until we got the rope tied to the buggy. Then we got it out on the bank. That is the only time Doc Hoffum's buggy was ever clean!"

"Didn't it hurt the buggy?" asked the man from Topeka.

"Didn't harm a thing but the squeak. The bath utterly destroyed that. Old Doc Hoffum often wondered what had become of the squeak, for he missed it badly. The horse missed it, too. It was a good, soothing sound that the two of them were accustomed to doze by as they jogged over the road."

### Even Thing.

"Sir," began the man with the newspaper in his hand, as he turned to the man on his right, "this is an age of deception."

"I quite agree with you," was the reply.

"Nothing is what it seems to be."

"No, nothing."

"For instance, you have been trying for the last ten minutes to get bold of my watch. I wear a chain, and the natural inference is that there is a watch on the end of it."

"But there is no watch."

"No, sir. I wear the chain for an ornament. You have simply thrown away your time."

"And on your part," said the man who had failed, "you took this scarf pin for a real diamond, and have made no less than three trials to secure it."

"And it is not a diamond?"

"No, sir—only a dry goods store rhinestone, but I wear it for an ornament, and it serves my purposes. You have wasted your energies. It's an even thing, however, and let's go for that old duffer as he gets off the car and whack up on the boodle."

### One of Those Trifles.

John Miller Gregory, playwright, short story writer and editor of Town and Farm, was invited to Cincinnati recently to help organize a branch of the Drama League. A meeting of society women was called and Jack was called on to address the gathering. Jack, by the way, is not at all "high brow," and at one time was the proprietor of the Consolidated Shows of which he writes so entertainingly.

The chairman transfixed him with her lognette. "Do you know, me deah fellow," she drawled, "youah name has escaped me? You must pardon me, I'm suah, for forgetting youah name."

"Well," replied Jack with a smile, "the name of Gregory has been current almost since the time of Christ; it figures in the annals of the early Christian church—but one does sometimes forget those trifles, doesn't one?"—Chicago Inter Ocean.

### Diffusion.

Stella—Why were the Smiths divorced?

Bella—Incompatability; they were both fusionists.

# FARM AND ORCHARD

Notes and Instructions from Agricultural Colleges and Experiment Stations of Oregon and Washington, Specially Suitable to Pacific Coast Conditions

## Many Ways to Control

### Insect Pests On Farm

Oregon Agricultural College, Corvallis—Good farming methods are necessary to the complete success of insect control by spraying. Other very helpful factors are protection of birds and friendly insects, selection of resistant strains of plants, and co-operation among neighbors.

No matter how carefully spraying has been done during one season, a goodly number of pests are bound to escape destruction. These hold-overs are necessarily among the most hardy and prolific of the species, and propagation is very rapid among them. They take shelter in weed piles, brush heaps, litter and trash scraps, and odds and ends of last year's crops. Here they build their nests, deposit their eggs, and lay by for winter. Practically every scrap heap about the farm shelters a brood of pests that will let loose a swarm of destructive insects as the warm days of spring approach.

Knowing this, the careful farmer will rake these farm wastes and by-products into piles and light huge bonfires when the pleasant days of autumn have dried out the trash ready for burning.

Myriads of insects, eggs, nests and food stores will be destroyed in the burning. This scavenger work will add immensely to the appearance of the farm, will destroy vast stores of weeds and weed seed, favor good drainage, so that earlier plowing may be done the following spring, and wipe out prolific sources of disease germs. Notwithstanding these many advantages of cleaning up, the principal gain is in the reduction of the propagating force of insect pests so that the following season's crop of worms, bugs and beetles will be much smaller than it otherwise would have been, arrive later and find the crop stronger to resist them.

"A knowledge of the feeding habits and the life history of the pests is essential to successful growing methods," says Professor A. L. Lovett, assistant entomologist at the college. "With this knowledge, growers may look ahead and so manage their land and crops as to avoid the most serious losses. The careful rotation of crops; fall, winter and early spring plowing; clean cultivation; general cleaning up of roadways, fence corners, and trash about the field; the best time for planting; the proper use of fertilizers; the use of trap crops; and the frequent examination of young plants for insect pests; each in itself is a big step in the right direction for the control of insect pests.

"The use of insecticides, while essential to the highest production of truck and garden crops, is not a remedy for all troubles that arise from neglect and abuse. Having the crop in a clean, thrifty and growing condition is the first step."

Crop rotation is often essential because the ground itself becomes infested with the insects which devastate the crops. This is especially true of insects of the worm and caterpillar types. Often, by substituting some other crop, these pests will either be starved out or forced to leave.

Other insects, such as grasshoppers, deposit eggs in holes in the ground in early autumn, so that the next season's crop of pests can be destroyed by fall plowing. Where plowing is not feasible, as in a meadow or pasture, good results can be obtained by disking the field. If the grower knows the time of depositing eggs he can often do much to destroy them by some cultural methods that are at the same time helpful to the crop.

Clean cultivation will destroy the weeds which often harbor the pests, offering them shelter through the winter and facilities for successful propagation of the young. And clean cultivation means not only the eradication of weeds from among the cultivated plants, but also the cleaning up of weed patches in corners, fence rows, waste places and roadways.

With a knowledge of the time that a crop of insects destructive to certain plants is likely to appear, the grower can often plan to plant the crop either late enough to escape the insect invasion entirely, or early enough that the plants will have gained sufficient size and strength to resist it. If this cannot be done it may be profitable to substitute another crop, when the insects threaten to be unusually active. At any rate, the grower will be prepared to meet them in the most effective manner if he knows when they are likely to appear.

There is, according to Professor Lovett, a double advantage to be gained in the use of fertilizers. In the first place some of the valuable fertilizers have a distinct action in killing the insects or driving them away. The other value of the fertilizer is found in the fact that its wise use so strengthens the plants that they

are able to successfully weather the attacks of the insects.

The use of trap crops to entice the pests away from the more delicate plants is worthy of more attention than it has generally received. A knowledge of the insects' feeding habits will often enable the grower to plant a variety of grain or garden crops that will attract insects from the crops to be protected as well as produce a valuable crop of itself.

The life history of the most common and harmful truck and garden pests is simply and plainly given in College Bulletin No. 4, Extension series 2, called "Insect Pests of Truck and Garden Crops." This was prepared by Professor A. L. Lovett, for use of gardeners, truckers and school garden directors for the year 1914. Copies may be had free of cost by requesting them of Prof. R. D. Hetzel, Extension Director, Oregon Agricultural College, Corvallis, Or.

## Loganberry Growers Should

### Organize, Says Professor

Oregon Agricultural College, Corvallis—"It is just as necessary for the loganberry growers to organize as it was for the apple and prune men," says Professor C. I. Lewis, O. A. C. horticulturist. "It seems absolutely necessary that a certain period of organization, standardization, and co-operation shall be gone through with before the products are handled in a satisfactory manner and with profit to the producer.

"For years the apple men had no difficulty whatever in getting rid of all the fruit they could grow, but in 1912 they encountered many and serious difficulties. As a result there was a cry of over-production, but it is now known that over-production had little to do with it. During the last ten years we have grown 40 per cent fewer apples than in the previous ten years, while 125 per cent more apples were consumed in New York during the last ten years than in the previous ten.

"Something else was wrong. What was it? Merely this, the growers did not attend to the distribution of their product. They did not advertise nor educate the people to the possibilities of the apple, to know the different varieties and their best seasons for use.

"The prune men have gone through the same period of association, and co-operation and it is found upon looking into the history of the industry that the low prices and apparent over-production were due simply to a lack of standardization, to a lack of proper advertising, to a lack of co-operative methods, a lack of the spirit of working together.

The loganberry men may profit by the experience of the other fruit growers who have learned the value of organization and standardization. We should start in right now to standardize the loganberry products. Not a single dried loganberry that is not fit to eat should be sent out of the state. Canned goods must come up to the best standards. The same is true of jells and jams. And if we put a juice on the market let us put on one that we can stand behind.

"Preliminary steps have already been taken for the organization of loganberry growers. A committee of five, headed by Mr. Britt Aspinwall, has been selected to prepare a tentative constitution and by-laws and recommend districts of the state that are entitled to representation, to make recommendations for having a permanent loganberry association in the state.

"Many loganberry growers are apt to ask themselves what is the use of an association of this sort to me, and is it merely a scheme to get a few dollars out of me? There is in reality a tremendous amount of work to it and I would like to urge upon every grower in the state that he become interested in the loganberry association."

Fruit men should come to the aid of C. E. Whisler, who is representing their interests in the proposed national legislation at Washington, by writing him or their congressmen in favor of the standard box bill and against including apples and pears in cold storage measures. In order to be successful, Mr. Whisler must be able to make a showing before the committees in charge of the bills, says Professor Lewis, O. A. C. horticulturist.

The dairy demonstration train service came to a most successful end. By universal consent of farmers and the state press, the Agricultural college and the railway company have shown their interest in the most practical and helpful way that can be devised.

The short course students at O. A. C. have decided to present their appreciation fund to the committee on Student Loan fund.



Ninety Acres of Alfalfa on J. E. Long's Grand View Farm, Seven Miles Northeast of Wagner, Oklahoma.