

FARM AND ORCHARD

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

Field Mice and Clover.

"Field mice are one of the few species of mammals which, under our present day conditions, may increase in numbers until they assume the proportions of a plague," says A. L. Lovett, assistant entomologist of the Oregon Agricultural College Experiment Station. "Asia and Europe have been more subject to these outbreaks; often vast areas, including from a few thousand acres to whole provinces have been devastated by these small rodents. Serious outbreaks in the United States are comparatively rare and extend over limited areas."

"The short-tailed field mice are very prolific. There are from 2 to 6 litters during the year; the number of young per litter varying from 4 to 12, with an average of about 6. The young from the early litters are believed to breed before fall."

"Generally speaking, local conditions in an infested district are favorable to the increase of the mice. Their favorite location seems to be the damp areas bordering on small streams or irrigation ditches. Here they live, thrive and multiply in more or less well defined colonies, eventually overrunning the adjacent fields. They are gregarious in habit and move in colonies, which, in successive years, amount to hordes. Usually they clean up a definite area, then move on to adjacent fields, leaving havoc in their wake."

"Clover and alfalfa fields afford an abnormal food supply and the rate of increase here is especially rapid. During the summer season the soil becomes honeycombed with their holes, and by fall their injury is quite marked. The winter injury is even more severe, as they feed at this time on the crowns and roots. Fields are often rendered unprofitable and may be killed out entirely. Ordinarily a season of excessive abundance is followed by a period of comparative depression."

"Nearly all root crops may be attacked, such as potatoes, beets, carrots and others. Fruit and shade trees are also sometimes killed or severely set back by the feeding of these mice on the roots."

"During a serious outbreak or plague of field mice, it is seemingly impossible to suppress the pest successfully. This is due partly to ignorance of proper methods of procedure and lack of cooperation. Treating the pest before it has assumed the proportions of a plague is urged. Whole communities included in the infested area should assiduously cooperate with one another to hold in suppression a pest that has the possibility of becoming a wholesale plague."

"Fatal bacterial diseases to be introduced in a prepared food have been proposed. This treatment will work where conditions are right, but is too expensive for general usage."

"Hawks, owls, crows, gulls and herons, among the birds, and skunks and weasels among the mammals prey continuously and effectively on field mice. These valuable allies should receive protection and encouragement."

"Poisons seem by far the most practical means of dealing with field mice. A single treatment of properly mixed and carefully applied poison will give a death percentage of from 85 to 95."

"To poison clover hay, chop 30 pounds of clean, fresh clover (or alfalfa) hay into about 2-inch lengths. place in a large metal vessel and dampen with 3 gals. of fresh water."

Dissolve 1 ounce of strychnia sulphate in 2 gals. of water by heating slowly in a closed vessel. Sprinkle over dampened hay and mix well.

"To poison green clover, heat 1 oz. of strychnia sulphate in half a gallon of water until dissolved. Add this to one gallon of fresh, cold water. Chop 45 pounds of fresh, green clover (or alfalfa) into 2-inch lengths. Sprinkle slowly with solution and mix well."

"To poison crushed wheat, dissolve 1 ounce of strychnia sulphate in 2 gals. of water. Sprinkle this solution over 60 lbs. of crushed wheat. Mix well in a metal vessel. If this material is to be retained for several days, add 2 tablespoonsfuls of borax to prevent fermentation."

"The clover hay is best during the winter. A small pinch or teaspoonful is sufficient. Place at the mouth, or even better, down in the runway of the burrow. The green material is preferable in the summer, but is hard to apply over large areas. The fields should be treated in the evenings for best results."

"The crushed grain may be used any time. A teaspoonful is sufficient for several burrows. If exposed, this bait may prove attractive to certain birds. The crushed grain is far superior to the whole wheat."

"After treating the field it should be brush-dragged. This obliterates the holes so that a second treatment includes only the newly-opened, occupied burrows. A single treatment

costs, including labor, from 30 to 40 cents an acre."

"A small number of crows will feed on the poisoned, dead mice and die. There seems no practical way to prevent this loss."

What Does It Cost to Raise Kale?

At the request of Prof. F. L. Kent, of the dairy department of the Oregon Agricultural college, a prominent Benton County farmer prepared the following statement of the cost of producing kale.

"We figured 20 cents an hour for a man and one horse to cultivate," he says. "We took what we considered an average row of kale and cut and weighed it for our average yield to the plant. We have kept time on several occasions while gathering to feed. On this we base our cost a ton for gathering."

"I think you will find our estimate very moderate on the weight of plants, for we deducted two pounds from each plant for fear we might not have made a fair estimate in choosing the plants for the weighing. The estimate does not include rental value of land nor value of the manure before application."

The 2300 plants, averaging in weight 16 lbs., made 32,200 lbs., or 16.1 tons. They were grown on a half acre of black clay loam. For fertilization it took two men and one team 16 hours, equal to \$10; for plowing, a man and team 2 hours, \$1; for harrowing and cross-harrowing 2 hours, 80 cents; clod mashing 2 hours, 80 cents; re-plowing 2 hours, \$1; harrowing and cross-harrowing again 2 hours, 80 cents; twice again disking and cross-disking, 4 hours, \$1.60; clod-mashing again 2 hours, 80 cents.

The plants cost \$1, and transplanting 20 hours, \$4. Cultivation four times, each time taking 2 hours, was 10 hours, costing \$3. Hoeing twice, 10 hours each time, made 20 hours, or \$4. Pulling the weeds once took 4 hours, costing 80 cents, and harvesting took 36 hours, costing \$7.20. This made a total of \$37.70 for the cost of raising the 16.1 tons, or \$2.34 as a total cost to the ton.

Different Ways of Preserving Eggs

"Eggs may be preserved for several months by different methods," says Prof. James Dryden, of the poultry department of the Oregon Agricultural college. "If put up right in the spring they may be kept till the following fall or winter. They will not be as good, however, as fresh-laid eggs."

"A method that will preserve the original quality of the eggs for an indefinite period has not yet been discovered. By cold storage eggs are put up in large quantities during the spring season when prices are low, but where it is desired to preserve a small quantity for home use the cold storage method is not practicable."

"Eggs intended for storage should be fresh and clean. March or April eggs will keep better than May or June eggs. The sooner they are put into storage after being laid the better they will keep."

The Lime Method. Dissolve a pound of lime in five gallons of water. The water should be boiled previously to sterilize it, and then cooled. Stir thoroughly, and let settle. Then pour off the clear liquid into a wooden or earthen jar or tub.

Fill with eggs to within an inch of the top of the liquid. This will allow for evaporation. The liquid should not be allowed to get lower than the top of the eggs. When the vessel is filled with eggs, cover it with coarse muslin or factory, over which spread a paste of lime to exclude the air."

The Water-Glass Method.

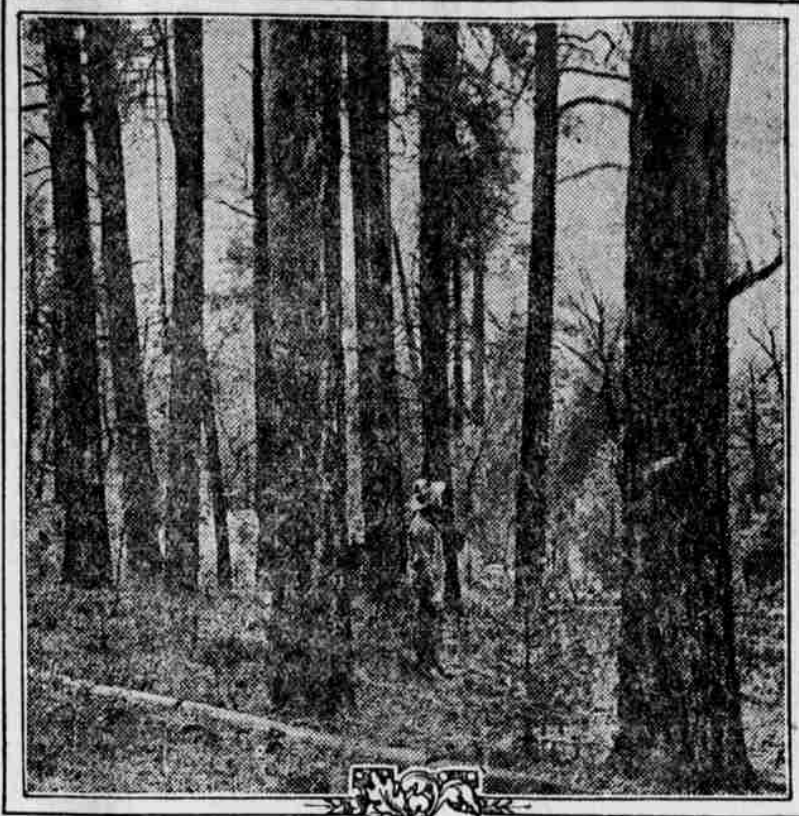
"Water-glass (sodium silicate) may be purchased at the drug stores. Use the liquid form and the commercial grade in the proportions of one part water-glass to eight parts water. Use earthen jars or wooden tubs or barrels that are perfectly clean, and store in a clean, cool place. The material used will cost about a cent for each dozen eggs stored."

Growing Big Tomato Crops.

Strong, stalky, transplanted tomato plants are essential in order that the fruit may set and begin ripening during July and August when the days are longest and weather warm. Clay soil is best for heavy crops. Clover sod plowed under and the field re-plowed before planting makes a good field for tomatoes. Use from 10 to 15 loads of stable manure per acre, harrowed in, and supplemented with from 400 to 600 pounds of fertilizer applied in the row.

By the above methods I have produced 200 bushels, or 36 tons, of tomatoes per acre. I can recommend the Improved Trophy and Stone varieties. Proper selection and sowing of seed will quickly improve any variety.—W. W. Tracy in Farm and Home.

Big Timber in Arizona



SCENE IN NATIONAL PARK

THE forests of Arizona, as yet practically untouched, are among the most important in the west. Approximately 15,000,000 acres, one-fifth of the state, is timberland, most of which lies in the highly elevated sections north and east of a line extending across the state diagonally bisecting the opposite northwestern and southeastern boundary corners.

Conifers or cone-bearing trees are the predominant growths, the broad-leaved species being few in number and of minor importance. The yellow pine, the Arizona white pine, the limber or Rocky mountain white pine, the bristle cone pine, the Englemann spruce, the Douglas fir, the red fir, the white or silver fir, the pinyon, the red cedar or juniper, the oak and the aspen are the principal tree families represented.

The ubiquitous yellow pine is by far the most numerous and important economically, forming 95 per cent. of the merchantable timber supply. It is by nature a cliff dweller, flourishing best on the high mountain slopes between 6,500 and 8,500 feet above sea level. Of Arizona's forest trees it is the noblest. Viewed at full maturity in its native haunts it is good to look upon; its flawless cylindrical trunk towering 150 feet into the crystal blue, its outspreading top tossing, dancing, sighing gleefully in the amber sunlight like a thing intoxicated with the nectar of heaven.

Indigenous to about the same soil conditions and altitudinal limitations as the yellow pine, and ranking next in importance for their timber in the order named, are the Douglas fir, Englemann spruce and white fir. Their scarcity, however, makes them unappreciable factors in the trade in Arizona. By reason of the softness of their fiber or their desert or Alpine characteristics the other trees named, excepting the limber or Rocky mountain white pine and the oak, which are utilized in some instances, are relatively unimportant from the lumberman's standpoint.

Billions of Feet. An accurate estimate of the standing timber in Arizona is a very difficult matter to determine further than the fact that it reaches formidable proportions, running into billions of feet, board measure, worth in the various manners in which it may be turned to account hundreds of millions of dollars and constituting, in the aggregate, a resource that in the fullness of time will contribute to the welfare of the state beyond the most rosy dreams of the times.

Title to this sylvan Golconda is vested in the United States government, which through the forest service is proving a wise landlord in that its varied resources are being administered in a manner that will benefit the largest number of users along all lines where no serious or irreparable injury is liable to result. Where there is no danger of extermination, or where no damage to streams or vegetation may follow, the ripe timber is offered for sale to the highest reputable bidder, under conditions designed to prevent monopoly of the lumber supply and to maintain the continuity of the forests. On account of the lack of adequate transportation facilities adjacent to the best timbered sections sales have not been practical to any great extent. Mills at Flagstaff and Williams, and two or three other places near at hand, have been in operation for a number of years and have, except possibly in one

or two instances, depended largely on the national forests for their timber supply.

There being no navigable streams of any consequence in the forests of Arizona where the logs can be floated down to the mills at comparatively small expense, the lumber concerns must needs construct lines of rail and operate trains of their own into the sections to be logged, the daily capacities of the mills being such that less substantial means of transportation are inadequate. As a rule these roads extend several miles into the forest tapping the primeval sections. When these are sufficiently cut over the track is taken up and put down elsewhere. At certain desirable locations along the route and at the outer terminus of the road, the lumber camps are situated where the loggers are domiciled.

Primitive Occupation. No part of the lumberman's occupation is more interesting and primitive perhaps than that of getting out the logs in the woods. A trip to one of the camps where this part of the business may be witnessed is a novel spectacle, especially so when one makes the trip on a logging train. The felling of the trees, the cutting of the trunks into logs, the clearing away of the brush is done with the same tools, the ax and saw, the same expenditure of physical strength, expended by the pioneer home builder in stripping away the magnificent hardwoods that fell beneath his sturdy stroke in the group of states carved out of the territory between the Alleghenies and the Mississippi river.

The roads upon which the unsawed timber is transported from the forests to the mills are railways, though differing from others of their kind in that they were built for no purposes other than freight logging. One must perforce ride on the framework of the cars or on the tender of the engine, which is scarcely a hardship to him who feels the lure of the outdoors. Before all else permission for the ride must be obtained from the mill owners or manager. Out into the clearings one is borne over hills and valleys once instinct with arborescent life, now denuded and overstrewn with the littering of the slaughtered trees that fell to the mailed hand of the lord of creation. Finally a shrill blast of the engine announces the arrival at the camp, which consists of four or five large ungainly structures and a number of smaller ones, all built of rough pine lumber, more substantial buildings being impracticable as the place at best will be occupied but temporarily while the sections contiguous thereto are being cut over. It is in settlements of this character that the "lumber-jacks," the men employed in the camps, live and have their being month in and month out. Overshadowing always by day and by night is the solemn grandeur of the forest. Each morning the loggers go forth to their work of destruction; each setting sun looks down on a larger treeless waste. Now and then the more convivial of the number repair to the neighboring towns to pass away the time, looking not disdainfully, the while, on the flowing bowl.

Queer. "Some of these printed receipts," said Mrs. Lapelling, "are very puzzling. What can you make of this one, for instance, as a wash for the hands? 'Glycerin, forty parts; carbolic acid, one part; vinegar, quantum suffragit.'"

Raises the Dough Better!

25c

Pound Can All Grocers

SAVE \$1.50 On This FINE HAT

The "Challenge"—a style the best dealers will soon be showing at \$3 and \$3.50. You get it from us for \$2, prepaid, because we deliver to you direct from our factory by parcel post and save you the middleman's profit. Your money back if not satisfactory. Made from fine fur felt in light tan, black, pearl gray and tobacco brown, beautifully trimmed and finished. Style in every line, wear in every fibre. Order now—state size and color, and enclose \$2. Write for style sheet "P," showing other models, free. One-Price Hat Co., Danbury, Conn.

WORMS

cause much annoyance to children and great anxiety to parents.

The presence of worms is recognized by these common symptoms: itching nose, unsatisfied appetite, offensive breath and colic pains.

DR. PEERY'S VERMIFUGE "DEAD SHOT"

Cleanses the system of worms in a very few hours

Sausage Patties. For sausage cakes use cold pork. It is best to use some of the fat also and add equal portions of fresh ground round steak. Two cupfuls of the ground pork and beef as directed, one teaspoonful of minced onion, one-eighth teaspoonful of mixed sausage herbs or powdered sage, one-fourth teaspoonful of salt, a good sprinkling of paprika or pepper, yolk of one egg and a little flour as needed.

Mix all ingredients very thoroughly with a fork in a bowl. With floured hands take up enough to form round cakes a little larger than a dollar and one inch thick. If mixture is too moist a little flour can be worked in. This depends on the size of yolk and consistency of meat. When formed dip each in a little flour and fry in good drippings or a little lard and butter.

Wasn't Shocked. "I saw you and your husband at the play last night, Mrs. Wedgcomb. How did you like it?" "I'm sorry we wasted our money on it. Several people told me I would be shocked, but I wasn't."—Chicago Record-Herald.

ONLY ONE "BROMO QUININE" that is LAXATIVE BROMO QUININE. Look for the signature of E. W. GROVE. Cures a Cold in One Day, Cures Grip in Two Days. 25c.

Christianity in India. In South India alone there are today fully 1,000 Christian college graduates, leaders in the life of Christian communities. Of the 25,000 students in higher educational institutions 5,493 are in Christian colleges.

Loyalty an Essential. Loyalty is one of the most important essentials to business success. We place this ahead of brains, ability or experience. While these are not only important, but absolutely necessary to secure the greatest success in one's chosen work, yet without loyalty of the absolutely dependable kind the employee's chance is greatly minimized.

Adopt English Language. A fact illustrating the superior culture of Christian college graduates in India is seen in the report that in the presidency of Madras English is spoken by one Hindu in every 132, one Moslem of every 157, but by one Christian of every 15.

That's the Question. "Here is a story of a Chicago woman who says that present marriage laws make woman the slave of man," said the square-jawed matron as she looked up from the newspaper. "Why don't they enforce the law, then?" meekly asked Mr. Henpecke.—Buffalo Express.

Not for Him. "Some day," remarked the nice old gentleman, "you may be president of the United States." "Mebbe," replied the son of the very big business man, "but if they want me they will have to raise the salary."

"Onto" and "Aren't I?" The word "onto" is defended by the New York Times, and the phrase "Aren't I?" by the Evening Post. Truly, Henry J. Raymond and William Cullen Bryant have been dead a long time.

Wealth Second After Character. My prayer to the gods is that, if possible, we may have wealth also in abundance, but that at all events we may maintain our character of being trustworthy and truthful.—Demosthenes