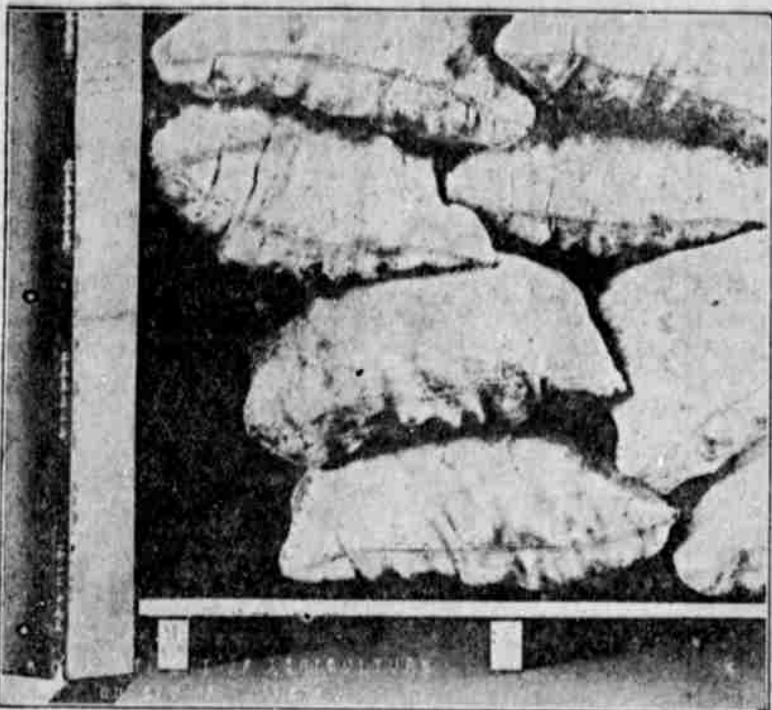


POTATOES SHIPPED IN WINTER NEED PROTECTION FROM FROST



False Floor in Potato Car, Showing Space for Circulation of Warm Air.

Most of the 413,000,000-bushel crop of potatoes harvested in the United States will be shipped by rail, and a large part of it will go in box cars at a time when the temperature is below freezing. These cars will remain exposed to the weather for days at a time, and even where refrigerator cars are used the frost will permeate the thick insulated walls. Experiences show that to ship potatoes successfully in winter artificial heat is necessary, and in sections where the most potatoes are shipped it has been found expedient to install stoves. Few railroads have yet come to the point of heating produce cars, although it is hoped that more will do so eventually.

Studied Car Heating.

At a time when the conservation of every ounce of food was vital the bureau of markets, United States Department of Agriculture, made a study of car-heating arrangements for potato shipments, and the method devised has been put into successful use. In using stoves in potato cars thorough distribution of heat is essential. The stove is placed in the middle of



Harvesting Potatoes.

the car, and unless special precautions are taken it will overheat the potatoes near the door, while those further away, especially on the floor, will fail to get heat and become frozen.

The most successful method is to build a false floor and walls with a bulkhead at each side of the stove so that the hot air may circulate freely all around the potatoes, returning under the false floor to the point of heating. It is necessary also to paper the entire interior of the car to prevent too rapid cooling of the circulating air.

Equipping the car in this way is somewhat expensive, but not in comparison to the value of the potatoes protected, especially when the

equipped car can be used several times as is the case under arrangements in Maine and other potato centers. The lumber required for a standard car is 5 1/2 by 36 feet, with doors 5 feet wide, is as follows:

12 pieces 2 by 4 inches by 14 ft. long.
8 pieces 2 by 6 inches by 16 feet long.
1,200 square feet of 1-inch lumber 16 feet long.
2,500 square feet of building paper.

Place seven-foot studding around the walls of the car about three feet apart with blocks behind so that there is a total air space of six inches at the end and an air space on the sides four inches at the top, spreading to six inches at the bottom. Flooring should be laid on top, by six stringers set up edgewise and run lengthwise of the car. It is important that the spaces should be left open at both ends so that there is perfect circulation of the warm air. The flooring and sides should be double, with building paper between the thicknesses.

Air Should Circulate Freely.

The spaces between the studding should be left open at the top and bottom. Do not make the mistake of nailing a strip across the end of the stringers toward the stove, as this will prevent warm air circulation.

A special fire door is necessary for the car, with a hole for the stovepipe. Railroads have special regulations for the placing and securing of the stove. The car should be heated for at least six hours before loading, and longer in extremely cold weather.

A suitable bulkhead is to be built on each side of the door, to be put in place as the potatoes are loaded. The sacks of potatoes should not be piled closer than eight inches to the ceiling as circulation of air is essential. The main principle of shipping potatoes safely in heated cars is to secure perfect circulation of air completely around the cargo. When the car is fitted up in the manner described here, the air flows over the top of the bulkheads which, of course, are left several inches from the ceiling. It circulates over the potatoes, the papered ceiling preventing too much cooling from the outside, and then comes down to the end of the car and back under the floor, some of the air currents also flowing down the sides between the studding.

As cars thus equipped come more into use, better arrangements are being made with railway companies for preserving the equipment. In Maine the potato cars with stoves are returned to shippers free of charge, and in western states the general rule is to return the lumber and stoves free. Even where full freight rates are charged on the return of the equipment, the expense is reasonable when compared with the loss which would occur from shipping in unprotected cars.

GRAIN ELEVATORS TO FILL ECONOMIC NEED

Plan of Farmers' Organization Must Be Sound.

Co-Operative Enterprise to Be Successful Requires Efficient Management—Three Distinct Forms in United States.

A co-operative elevator company, like any other business organization, must rest first upon some substantial economic need, say specialists of the United States Department of Agriculture in Department Bulletin 800 on organization of co-operative grain elevator companies. An organization may come into existence by means of propaganda and engendered to serve a political, fraternal or idealistic purpose, but unless some substantial benefit or service is secured to the community such organization eventually must fail. The value to the community of any enterprise or undertaking is measured in direct proportion to the need thereof.

The plan of organization must be sound. This means that something more is necessary than mere statements of the high purposes and aim of the association. It means a definite and practicable plan of action, a

plan which anticipates so far as it is possible to anticipate the practical problems and difficulties to be met in actual operations.

A co-operative enterprise in order to be successful must be conducted under efficient management and in accordance with a well-defined business policy. There has been too much tendency in the past to employ as managers men who are merely industrious and honest and who may not have that keen, discriminating judgment and tactful address so necessary in managerial positions.

In the United States three distinct forms of farmers' elevator organizations are found, namely, (1) joint stock companies and unincorporated societies; (2) ordinary private corporations of the capital-stock form; and (3) co-operative associations incorporated under special co-operative law.

GENERAL FARM NOTES

Crop rotation pays well.

Why not pay more attention to soil fertility?

Rats, long the farmer's enemy, are still with him.

Were you on the last field trip with your farm bureau?

The Kitchen Cabinet

(© 1929 Western Newspaper Union.)

The woman who undertakes the administration of a home without understanding it is on a par with a man who establishes a home without being able to support it.

SIMPLE DISHES.

A dessert which is new and most wholesome is found in the following:



Butterscotch Pudding.—Melt one cupful of brown sugar and two tablespoonfuls of butter over the fire and cook until melted and brown, but not burned. Pour over the mixture two cupfuls of hot milk and simmer ten minutes until all is dissolved. Meanwhile soak a one-inch slice of bread in cold water until soft, press out all the water and crumble into bits. Pour the milk, sugar and butter mixture over the bread and beat in the yolks of two eggs, a little salt and a small teaspoonful of vanilla. Pour into a buttered baking dish and bake in a pan of water twenty-five minutes. Beat the whites of the eggs until stiff, add two tablespoonfuls of powdered sugar, the juice of half a lemon, beat again. Spread over the pudding and brown in a moderate oven.

Apple Cake.—Line a deep pie plate with pastry. Mix together one-half cupful each of raisins and nuts, three-quarters of a cupful of sugar, one teaspoonful of cinnamon and sprinkle over the crust. On top of this arrange three greening apples, sliced rather thin. Pour over the apples one cupful of milk mixed with one egg; sprinkle the whole with two tablespoonfuls of sugar and a little more cinnamon and dot with bits of butter. Bake 45 minutes in a slow oven, reducing the heat toward the last.

Fried Apples and Onions.—Heat the frying pan, add one-third of a cupful of meat drippings and when hot turn in two pinches of sliced onions; cook gently adding one and one-half teaspoonfuls of salt and two tablespoonfuls of sugar; after ten minutes of cooking add three pinches of quartered tart apples. Cover and cook until the apples are tender. Serve hot as a garnish for broiled pork chops.

Cranberry Jelly.—Take one quart of cranberries, one pint of sugar and one cupful of water. Cook the berries in the water five or ten minutes, covered. When well broken with a pestle press the pulp through a strainer, a perforated one, not wire; stir in the sugar and when well mixed pour into a large mold or individual molds. Let stand until the next day.

Apple Sandwich.—Chop one large apple, and one-third of a cupful of raisins very fine. Butter thin slices of bread, spread with the mixture, sprinkle with a little lemon juice and cover with other slices.

Verily we men have problems to solve that would test a Solomon. If your wife is sick and you may she looks badly you have no tact. If you don't notice she is sick you are a heartless brute.—Wm. C. Hunter.

OLIVES AS FOOD.

A ripe olive yields twice as many calories, or heat units, as the green, and is nearly equivalent to bread, which we consider the staff of life. The ripe olive is little known in the greater part of the United States.



Those who become accustomed to it like it far better than the green olive, and it is more easily digested as well as more rich in food than the green olive. Ripe olives, because of their flavor, which is very delicate, are especially good in meat sauces, dressings and made dishes. A half-dozen ripe olives chopped fine and added to the giblet sauce to serve with roast chicken or turkey, is especially fine.

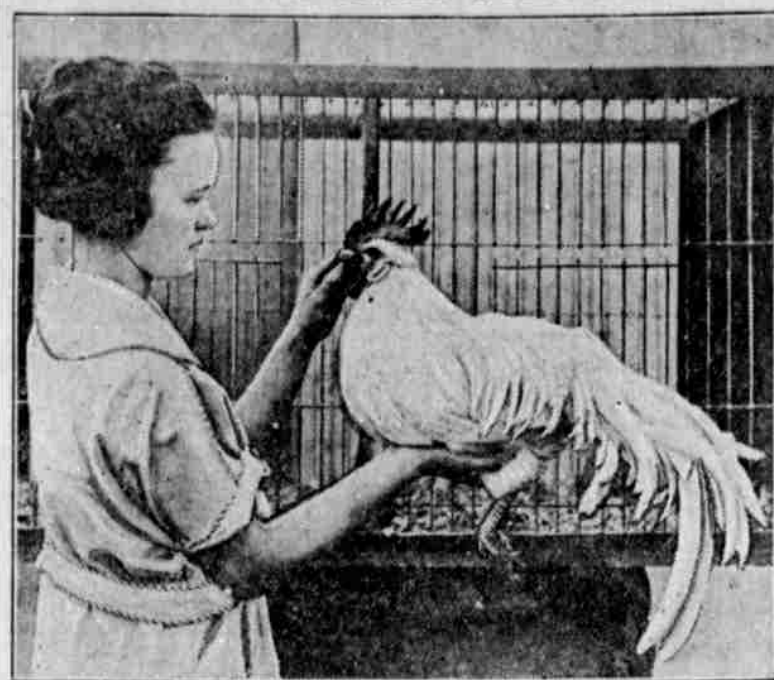
Olive Sauce.—Melt four tablespoonfuls of butter and a teaspoonful of chopped chives, and cook until softened. Remove the chives, add five tablespoonfuls of flour and a half-teaspoonful of salt with a few dashes of pepper; add two cupfuls of brown stock and cook until thick. Cut one dozen olives from the pits, cover with boiling water for five minutes, drain and add to the sauce. Serve with meat or game.

Hawaiian Salad.—Place a slice of pineapple on a leaf of lettuce. On it arrange alternate sections of orange and grapefruit. Between each piece place one-eighth section of a ripe olive. In the center of the pineapple place a ball made of cream cheese seasoned with mayonnaise, to hold it together. Sprinkle with paprika and serve with French dressing. The pineapple or other fruit juices may be used in place of the vinegar in the dressing. Pass mayonnaise for the salad.

Olive Salad.—Take four tart apples, one stalk of celery, or rather bunch, one-half cupful of walnut meats and three-fourths of a cupful of pitted olives, ripe. Cut the celery, apples and olives into julienne strips. Add the nuts, moisten with mayonnaise and serve in a nest of lettuce.

Heinie Maxwell

SPLENDID RESULTS OBTAINED BY BOYS AND GIRLS WITH CHICKENS



Poultry Club Member Making Up Her Mind Whether This Bird Is Good Enough to Exhibit.

One of the fine examples of profitable poultry club work is the case of Frances Easley, a Tennessee farm girl, who became a member of the boys' and girls' poultry club about two years ago. The first season she was very successful in hatching and rearing her chicks, and in addition to those which were sold she had a nice flock to carry her over and which she used as a breeding pen the following year. At the end of that time the following report was submitted:

Value of market poultry sold.....	\$12.52
27 pullets sold as breeders.....	47.50
17 settings of hatching eggs sold.....	22.05
On hand November 1:	
12 cockerels, valued at.....	\$24.00
112 pullets and cockerels, valued at.....	100.00
Won at county fair.....	2.00
Total.....	\$193.47

Frances spent for poultry equipment, eggs for hatching, feed, etc., a total of



Girl Member Feeding Her Flock.

\$128.75, leaving her a net profit for the year of \$81.66. Miss Frances has a very nice Shetland pony, and furthermore, a sense of independence that is only found in boys and girls who know the value of money as the result of having earned it through their own efforts.

Russel Monroe, a country boy of 14 years of age, raised 120 Golden and Silver Campines from 175 eggs. At the state fair he made six entries and won special for the best display, in

DUCK FANCIERS TOLD HOW TO BREED DUCKS

Leaflet Prepared by Bureau of Biological Survey.

Simple, Three-Sided Shack Is Quite Sufficient in Most Climates—Breeding Season Opens Rather Early in Spring.

Uncle Sam is the best friend the wild ducks have, and it follows that he has a warm spot in his heart for the wild-fowler, too. In the interests of both he has prepared a leaflet on the propagation of wild ducks which may be had from the bureau of biological survey, Department of Agriculture, by anyone who asks for it.

Mallards are the easiest to handle, with wood duck coming next. Black ducks need more space than either of these because they are more sensitive—a bit "wildier." Widgeon and teal need winter shelter. If grown in the North, to a greater extent than their cousins, but the provisions for shelter need not be elaborate. For most ducks and most climates a simple, three-sided shack is sufficient, though extreme cold weather should find the ducks housed in a tight building with plenty of litter on the floor.

Fresh infusions of wild blood must be introduced from time to time if the birds are to keep their wild conformation.

Wild duck eggs are usually hatched under hens, though they may be hatched in an incubator. Breeding stock of whatever species should be obtained in the fall so as to be settled in its quarters before the breeding season, which comes rather early in spring. The leaflet describes the care and feeding of the young birds at every stage in their development from the yellow fuzz of the duckling to the gleaming iridescent feathers of the mature bird.

addition to other prizes. In this exhibit he competed against three older breeders. Furthermore, he received the state championship loving cup and a free trip to the state fair for his excellent work as a club member.

Orbitt Miller, an Oklahoma boy, residing at Elk City, raised 285 chicks. At the end of his first club year he made a profit of \$336 over the cost of production through the sale of chickens and eggs sold for commercial as well as breeding purposes.

This Boy Favored Turkeys.
The activities of the poultry club members are not confined to chickens alone, as will be shown in the following report:

Dwight Carroll of Winchester, Jefferson county, Kansas, stands first in his state with respect to profits received from his year's work. Dwight makes the following statement: "When I entered the poultry club work I decided to raise turkeys. We had five turkey hens and I bought a tom. I set most of the eggs of the turkeys under chicken hens, but let the turkey hens keep a few eggs to hatch so that they would claim the little turkey when hatched. I kept the little ones shut up for a week and then let them go with the mother turkeys. Most of their feed was secured around the farm." Dwight records that he raised 56 turkeys to maturity. His total expenses amounted to \$20.60 while his total receipts amounted to \$261.40, leaving him a net profit of \$240.80.

Other Instances.
Numerous other instances can be cited showing what has been accomplished by club members, many of which have been as successful as those mentioned above. Many boys and girls have come to realize as a result of their poultry club work that all of the opportunities are not in the cities and towns. It has been demonstrated that to interest the boy or girl in farm life he or she must be made to realize and appreciate the opportunities to be secured on the farm by not being educated away from the farm. It is not surprising therefore, that we find developing as a result of this and other forms of club work hundreds of boys and girls who intend to make farming their life work.

ICE HARVESTED FROM PONDS

Saves Much Money to Milk Producers and Provides Wherewithal for Home Comforts.

Ice harvested from ponds on the farm saves many dollars a year to milk producers and provides the wherewithal for many home comforts. The United States Department of Agriculture, in Farmers' Bulletin 1078, which may be had upon request, tells how to build an icehouse in the slack fall season and how to store ice economically and securely. One and a half tons of ice properly stored will serve to cool the milk from one cow for a year and leave some for family purposes.

CHECK BROWN SPOT OF CORN

Careful Field Sanitation, Crop Rotation and Seed Selection Aids in Controlling.

Brown spot of corn is present throughout a large part of the corn-growing section east of the Rocky mountains. The disease is caused by a minute fungus parasite. Damage may amount to 10 per cent, but is lower in most sections. Careful field sanitation, crop rotation, and seed selection are recommended by the United States Department of Agriculture as an aid in controlling the disease.

POULTRY NOTES

Wherever possible, the geese on a farm should have free range.

There is a great cash difference between 300 quality birds and 300 of medium quality or worse.

There are six requirements for a good poultry house; fresh air, sunlight, dryness, no drafts, low cost and durability.

Daddy's Evening Fairy Tale

by MARY GRAHAM BONNER

TEGUS QUARREL.

"So many of the animals you know of now by name and by reputation, which means that we've heard what they do," said Daddy, "that you really have quite a large acquaintance among them."

"Yes," said Nick, "we know lots of birds and zooland animals we didn't know before and quite a lot of new facts about some of our old friends. The facts weren't new about them, but they were new to us."

"And we love to hear about all of the creatures of the animal and bird and fowl and insect worlds," he ended.

"All sorts of stories," said Nancy. "I think are nice. And so many of my friends say the same things, though many of them do have favorites. But when we hear all sorts of stories then every once in a while every one will have a favorite kind, whereas if we just had one sort of story they might please a few people but everyone would not stand so much chance of being pleased."

"Well," said Daddy, "I'm glad you both like all kinds, for then we keep up with the news of so many different creatures, and while you're hearing about a number of the zooland animals whose stories I have heard that the Tegus family wish you to know of their quarrels, and of their special quarrel they had yesterday."

"Daddy, dear," said Nancy, "we'd love to hear about them, only we don't at all know who the Tegus family are



What Is This?

or what they are, or whether they have two legs or four, or wings or fins or what!"

"I'm sure I never heard of them," said Nick.

"They thought perhaps you never had and so they wanted to be sure to introduce themselves to you."

"They are lizards, very large lizards. They grow as long as children grow tall, that is, before children become grown-up or full-grown boys and girls. They are very strong and they come from the tropical districts of South America."

"They can hurry along very quickly and they are most powerful as well as most quick!"

"They are great eaters, too, and they love raw meat. They will eat eggs, too, and they break the shells at one end and then drink up the rest of the egg, reaching out their wide, fork-shaped tongues for it."

"Well, as I said, they wanted you to hear of one of their best quarrels which they had yesterday. They are so quarrelsome that only big lizards can be kept with them, for they would hurt smaller lizards when they were having one of their quarrels."

"They enjoy quarreling and find it about as easy to do as anything they have ever tried in their lives to do."

"We're great old lizards to quarrel," they said, "and of a nice afternoon what could be nicer than a good quarrel?"

"Nothing could be nicer," the others said, and so they all set to quarreling, that is, after another moment or two. "Of course they couldn't quarrel in this way. They couldn't all agree about the quarrel! In order to have a nice quarrel they had to disagree."

"And they did!"

"Mrs. Tegus said: 'What is this I hear about a quarrel? Can't a body have a little nap of an afternoon quietly without everyone around making a fuss?'

"Of course she was eager for a quarrel, but it had to be a good quarrel and by being quarrelsome with the others she helped to make a really good one."

"You're too lazy," one of the others said.

"I'm not," she answered. "And so they went on, all beginning to say things to each other and to quarrel for all they were worth, for then they felt so perfectly at home and natural!"

Tested.

"There isn't much I don't know about the English language," boasted the long-haired man in the club.

"I'll test you," replied a friend. "I'll dictate a paragraph to you."

With an assured air the boaster seized his pencil, but his jaw dropped as he heard the following: "As Hugh Hughes was hewing a yule log from a yew tree, a man dressed in clothes of a dark hue came up to Hugh and said, 'Have you seen my eyes?' 'If you will wait until I hew this yew tree I will go with you any where' in Europe to look for your eyes, said Hughes."