

Keeping Apples for Daily Use.

The question is often asked, What is the best way to keep apples for common family use? We have found central shelves in an apartment set off or devoted to this purpose the most convenient. The apples are spread on these shelves only a few inches deep, so that they may be readily examined or picked over as fast as decay commences on any specimens.

It is very important that the apples be kept as cool as practicable after gathering in autumn and before the freezing weather of winter arrives. For this purpose they are placed on the floor of an out-house facing the north, and allowed to remain there till about the time that freezing weather commences, when they are removed to the shelves of the fruit room, in the basement of the house. This fruit room (which is about ten feet wide and thirty long) is separated from the rest of the basement by an eight inch brick wall, and has a cement bottom to keep the air dry enough. Windows for ventilation are hung on hinges, so that they may be opened or closed to any desired degree, for the regulation of the temperature by the thermometer. The nearer this temperature is to freezing, the better the fruit will keep. When the weather is warm outside, the windows are closed to exclude the warm air; when colder, they are opened sufficiently to admit cool air and keep down the temperature.

The apples being thinly spread on the shelves, any decaying specimens are readily detected and removed, care being taken not to disturb or tumble over the sound apples which remain. An examination every few weeks during winter and spring will keep the supply clear of rotten apples.

Among the advantages of this mode are the readiness with which the specimens which will not keep are separated from the others, and only long keepers allowed to remain. When fruit is kept headed up in barrels, which is a common mode, this selection and separation cannot be made, and, while they are kept excluded from the air so long as all remain sound, the commencement of decay in a few specimens soon spoils all the rest.

A little practice will enable the attendant to remove these specimens which will not keep, even before decay begins; and by going over the shelves several times during the winter and spring, none but sound long keepers are left.

As warm weather approaches, and it becomes more difficult to keep the apartment so cold as may be desirable for the fruit, a portion of the soundest and hardest are selected and placed in shallow boxes and shoved under the lower shelf, on the bottom of the cellar. The cold cellar bottom keeps them at a low temperature, and the shelf above serves as a cover to prevent air currents. In this way we have fresh specimens of such fruits as the Baldwin and Rhode Island Greening at the middle of June, and sometimes kept fine, hard, fresh Greenings into the middle of July.

The three leading requisites for success are—1. Placing the apples in a cool out-house in Autumn till freezing weather. 2. Removal of decaying specimens from the shelves. 3. Keeping the temperature as low as practicable without freezing, by a proper adjustment of the hanging windows.—*Country Gentleman.*

Sulphur for Grapes and Peaches.

A very intelligent fruit grower lately told us that, reflecting the grapes always seem to flourish on soils of volcanic origin, he assumed it was attributable to the sulphur present, and determined to try that substance as a fertilizer for them, which he did with very satisfactory results. Encouraged by this, he made a mixture of lime, salt and sulphur, and applied it to his peach trees with surprisingly good effect. *American Farmer.*

If you want to grow chestnut trees, the fruit must be planted as soon as it is perfectly ripe, and while it is in its fresh state. If a few trees only are wanted, plant the chestnuts about three inches deep, just where it is desired to have the trees to stand permanently. They do better not to be transplanted, and sometimes will not grow. When they reach a proper height, the stems can be grafted with any better sorts attainable. But it requires a careful hand to graft the chestnut to insure its growth. When fairly started the young tree pushes ahead rapidly, and often takes one by surprise in the earliness of its bearing. Waste places where the land cannot be used for crops will do for this tree.

Protecting Plants with Paper.

We are only beginning to learn the manifold uses of paper. Already it is being largely and successfully employed as a building material, and now it is recommended as a winter protection for plants, shrubs, vines, box, &c. The New York *Tribune* speaks very highly of the utility of the strong paper flour sacks now so common, and advises that when emptied of the bread-making powder, they be all carefully laid away and kept for hoods wherewith to cover the more tender pets of the garden on the approach of winter. If the color of the paper bag is not liked, it can be made to suit by applying a coat of white-wash, toned to any desired tint with ochre or lampblack. This is not the season of year exactly for dressing plants with paper hoods, but it is a good time to begin laying up the store for use next winter. In view of the opinion held by many the chief damage is done to the tenderer occupants of the garden during the transition from winter to spring, it might not be amiss even yet to have recourse to these paper dresses, as a precaution better late than never.

FERTILIZING FOR FRUIT.—Animal manures promote vegetation, but mineral fertilizers are essential to secure the finest crops of fruit. If you apply two quarts of coarse bone meal to each vine, spreading it over the surface of the soil for a radius of say five feet, you will doubtless have more and better grapes. Unleached wood-ashes, and peat from a reclaimed swamp, may be used to great advantage in a vineyard, and salt as well is highly beneficial. Use any of all of the above in very early spring, and merely incorporate with the surface soil by means of a hoe.

Entomology.**Damages by the Chinch Bug.**

The following communication, contributed to the *Prairie Farmer* by C. Thomas, State Entomologist, Illinois, is of very great interest to agriculturists, illustrating the great losses caused by insects. "The estimates," he remarks, "are large, in fact, astounding, when compared with the agency by which the loss is caused. It is true the loss is not wholly attributable to the chinch bugs, but partly to the very dry weather here of last year."

REPLY BY THE MEMBERS OF THE FARMERS' AND FRUIT GROWERS' ASSOCIATION, BELLEVILLE, ILLINOIS, TO A CIRCULAR FROM THE STATE ENTOMOLOGIST:—

1st question.—Did the chinch bug do any damage to crops in your county last year?

Yes. To all crops, including wheat, corn, oats and hay, corn being damaged at least sixty per cent.

2nd question.—Has it appeared any previous season within ten years, and if so, when?

It has been in the county for forty years, visiting different sections, principally the southern, but the greatest loss has been sustained within the past three years, since which time its depredations have been general.

3rd question.—Did more than one brood appear last year? If so, give the dates at which each was seen.

It is believed that there are two broods, the first appearing in June, the other in the early part of August; but investigations have not been so careful as to make our statement positive.

4th question.—What remedies and what preventative measures, if any, have been used, and what the result?

No general efforts have been made to exterminate the pest, or prevent its ravages, unless burning the stubble fields, and, in some few instances, the sowing of strips of oats by the sides of the corn may be regarded as such, and some good has no doubt resulted from both.

5th question.—Give an approximate estimate of the amount of damage done by them in your county in 1874.

In estimating the damage done during the year 1874, that was increased by the unusually dry and hot weather, it would be safe to say that wheat

was damaged 20-100, corn 60-100, oats 50-100, and hay 20-100, making a total of \$1,725,000.

6th question.—State what you can in regard to their migrations.

In regard to their migrations, it may be said that they are seen in the first warm days of spring, generally on the wing, as if seeking suitable food, after coming from their places of concealment and protection during the winter. Another migration occurs soon after the wheat is cut off, when they enter the oat, and especially the corn fields, preying upon them until the fall, when they are again seen in the air in their flight to the woods, looking for suitable winter quarters or coverts under the brush and trash in the fields or fence corners.

In conclusion, I would say that, besides the chinch bug, the ravages of the army worm, especially in new meadows this last spring, were very severe, injuring wheat, oats and corn, with enough of the Colorado potato bug to give annoyance to the planter, and doing damage to the crop, unless picked off and destroyed.

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Description of the Army Worm.

The army worm which has attracted a great deal of attention in certain portions of the United States, New Brunswick and Nova Scotia, is so little known outside the ranks of the naturalists that a description of it will be acceptable to all who have read the accounts of its late ravages.

It belongs to the order *Noctua*, genus *Leucania*, and is known in Great Britain, where fifteen different species have been found. It figures in Newman's "British Moths," and Hayworth names it *K. unipuncta* from the single white spot which appears on each of its upper wings. It is familiarly known as the American Wainscot Moth.

The perfect insect will, within a fortnight, be found in abundance in those localities recently subjected to the unwelcome visitation of the crawling and devouring armies, and it may be readily recognized by reference to the following description from the *American Entomologist*:—

"The eggs hatch during the early part of May in the latitude of South Illinois and Missouri, and the young worms may feed by millions in a meadow without attracting attention; but when they have become nearly full grown and have stripped bare the fields in which they were born, they are forced, from necessity, to travel in search of fresh fields, and it is at such times they first attract general attention. A curious instinct leads them to travel in vast armies, and, as they are now exceedingly voracious, devouring more during the last three or four days of their worm life than they had done during the whole of their previous existence, they are apt to strip the leaves from the blades of grass or grain on their way. On the other hand, they are attacked by at least five different parasites, and, when we understand how persistent these last are in their attacks, and how thoroughly they accomplish their murderous work, we cease to wonder at the almost total annihilation of the army worm the year following its appearance in such hosts. Furthermore, there may be influences at work, other than parasitic, which causes an increase or decrease in the number of this pest. It is a significant fact that almost all great army worm years have been unusually wet, with the preceding year unusually dry, as Dr. Fitch has proved by record.

"The army worm, like other insects, hatches from an egg, and this egg is apparently deposited by the parent moth at the base of perennial grass stalks. The worm varies but little from the time it hatches to the time when it is full grown. Some specimens are a shade darker than others, but on many thousands of specimens examined, we have found the markings the same. When full fed, which is generally about four weeks from the hatching, it descends into the ground, where it forms a hollow, oval chamber, and changes to a shiny, mahogany-colored chrysalis. Sometimes it scarcely penetrates the surface, but forms a rude cocoon under what dry herbage there happens to be on the ground. Thus the worms vanish, and it is sudden disappearance is as mysterious to those who have no knowledge of natural history, as was their abrupt advent.

"After remaining in the chrysalis state about a week, the perfect moth appears. The general color of the moth is light reddish brown, or fawn color, and it is principally characterized by, and receives its name from a white spot near the centre of the fore wings, there being also a dusky, oblique line running inwardly from the tips."