HOUSING AND CARE OF FARM MACHINERY

Greater Deterioration Due to Exposure Than to Wear From Use

IDLE SEASON 10½ MONTHS

Repairs, Painting, and Oiling Should be Attended to Before Storing for the Winter.

Although the average farm implement is used for but four to six weeks of the entire year, it is during the long period when not in use that the greatest loss occurs through deterioriation, according to J. E. Larson, extension agronomist at the Oregon Agricultural College. This loss, due to negligence in housing and caring for the machinery when not in use, is said to be so heavy that if known exactly it would be an eye-opener.

Preparation for Housing.

Before any machine or implement is stored for the winter it should be completely overhauled and inspected. All badly worn or broken parts needing repairing or mending should be removed, the necessary repairs made, and the parts readjusted. At this time, just after the operator has finished using the machine for the season, all principal defects will be known to him and repairs may be made with less trouble and expense than next year, when the machine is to be used again. If this is impossible because of the busy time of year the owner should have a shipping tag tied to the parts needing repairs, with a memorandum of just what is needed. Mr. Larsen urges farmers to try this plan, since it is much better than waiting till next season's work is at hand and all the details of repairs needed forgoten.

Before storing the machinery it should be thoroughly cleaned and all the working and wearing parts well greased. Other parts should be given a coat of paint wherever necessary. The polished parts of plows, disks, cultivator shovels and other tillage tools should be covered with a coating of axle grease. This is but a few moments work and besides saving the tool from waste by rusting out it will save many times the labor and trouble of applying the grease when the tools are put to use next season. This cleaning and greasing and painting should be done whether the machinery is to be housed or not. The coat of paint if applied when needed will mean a great saving. Machinery should never be allowed to check or crack for want of paint. The cost of paint and painting is but a trifle and means a great saving in the end.

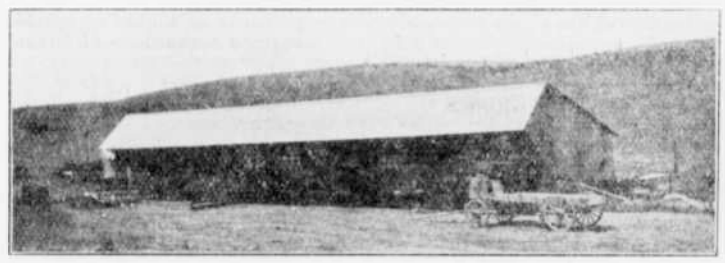
What Investigation Has Disclosed.

Numerous investigations upon this farm machinery question have brought out that the life of farm machinery depends a great deal on the owner. The same identical machine or implement will last twice as long with one man as it does with another. The difference in duration is in favor of the machinery that is housed. A binder that is properly sheltered and repaired will go out and do the season's cutting with little cost for repairs and scarcely any signs of deterioration from wear and tear. The same machine will still be running long after the poorly-cared-for machine has gone to the junk heap.

To economize on space for the binder, a number of its parts can be easily removed. By taking off the tongue and reel, it will go into a place where it would be impossible to get the binder in intact. The same is true of other implements, tongues, and accessory parts may be stored on cross-pieces overhead or taken into other buildings. Shovels, plow-shares, knives and other cutting parts may be properly greased and oiled and placed in a gunny sack and hung to the rafters of the machine shed or granary. This will get them well out of the way of moisture.

The Efficient Machine Shed.

The machinery should be housed at all hazards, and the house should answer certain requirements to be most efficient. First of all, it should have an overhead covering that will keep out all rain and snow. The sides should be inclosed also, to keep out rain and snow. With proper attention given the overhead protection, the shed floor should be looked after. It should be properly drained, so that no water will stand anywhere, under or around the machinery. If there



Efficient Farm Machinery Shed.

is any water or dampness under the machinery they will collect moisture and rust very badly. The wooden parts will gradually gather moisture and rot out. The doors should always be closed to keep the stock and poultry from getting to the machinery. How often have you seen machinery pulled up under a large tree or leaky shed? This is even worse than letting it stand entirely in the open. The machine that has been properly fitted for housing and stored in a dry shed will come out season after season to do good work and give little trouble. The saving that is made in the life of the machine by housing is obvious. Then, too, what it adds to the general appearance of the farm can hardly be estimated in dollars and cents.

The machine shed to be efficient need not be very expensive. The requisites of a good machine shed, however, are: There should be proper drainage to insure dry storage. There must be ample protection against sun, wind and moisture overhead. The location must be convenient, so as to be reached with all kinds of farm machinery. There must not be much waste space, and it must be so arranged that the different implements can be reached without any great inconvenience. Too many machine sheds are built long and narrow with end doors, and the implements you are after are always entirely hemmed in by other machines. A very convenient shed consists of a building of medium width, say 20 or 24 feet, the length being governed by the number of machines and implements to be stored. For storing all the implements, 20x32 feet is considered ample room on 160 acres of land. This would not include wagon, buggy or auto room. The shed need not be built very high, unless one desires storage room on the second floor. Eight feet to the eaves is enough. By making several doors along the sides instead of at the end, it is possible to reach almost any implement with very little shifting about. By a little careful planning sa as to have the implements arranged as they come out for the season's work, the trouble of getting at them will be greatly lessened.

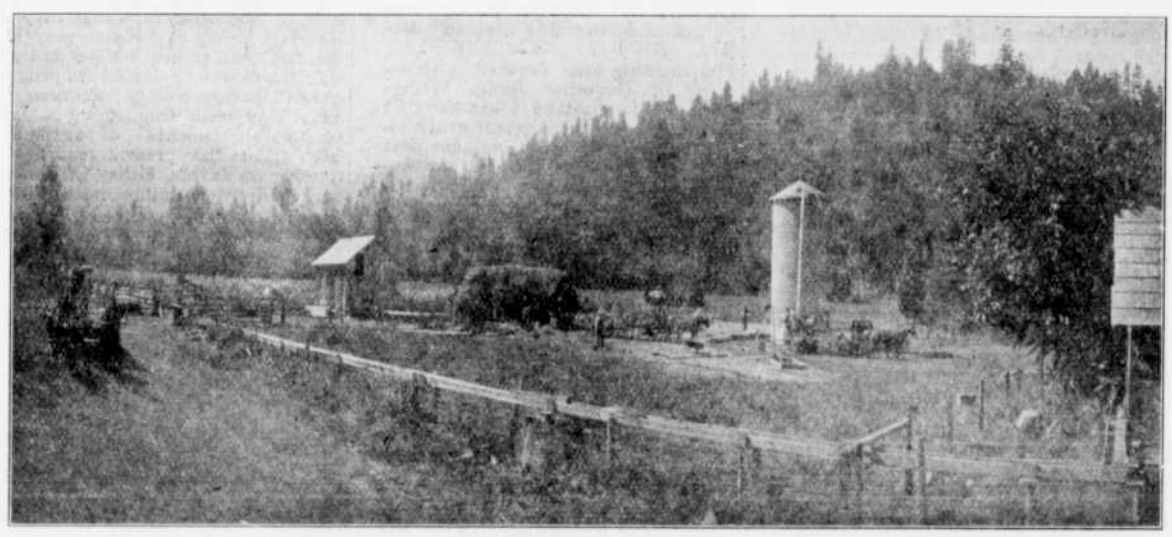
Care of the Thresher.

The deterioration in threshing outfits through lack of shelter and care is appalling. There are more threshing outfits that go to rack and ruin from this cause than are worn out through actual usage. A temporary and very efficient shed for a threshing machine can be built at a small cost and the saving will be obvious. Where the threshing machine has to stand out, it is very important that is be thoroughly cleaned after the season's work. Wherever there is a chance for chaff or dirt to lodge, the water will soak in and the wood and framework will soon rot out. All leather belts and canvas parts should be taken from the machine and stored in a dry place, and in a place free from rats and mice. A few of these rodents can do a great amount of damage in a very short time. Figure the csot of your machine and the per cent it earns on the investment and see if you cannot afford to shelter it well. The years that will be added to the life of it will offset the first cost many times over.

Time to House Machinery.

The proper time to house machinery is the minute that one is through using it. It pays even during the season to run the implements in during stormy weather. If, however, this hasn't been done, in the fall after fall plowing is done, set aside a day and round up all the machinery and house it properly. A self-binder in the barn lot, a hayrake in the meadow and cultivators and plows in every fence corner at once give the place a black eye. It is evident to the visitor or stranger that shiftless methods of farming are practiced.

The expense of machinery has steadily increased for a number of years past. The average life of the ordinary farm machine is not what it should be. The adjustments on the machine and the care of it should be just as thorough and painstaking as the adjustment of the harness and care of the horse. Each has a life to give, one animate and the other inanimate. Both will lose money for the man who does not give them proper care. The loss in farm machinery is just one of the big leaks on the farm. To stop it, house and care for the farm machinery.



Storing Ensilage on the Farm.

Wide Latitude in Feeding Silage

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forage into ensilage, and the bacterial action that causes ensilage to spoil when exposed to the air, may be controlled to a considerable extent by the feeder who understands the principles upon which they work. These chemical changes are explained by Professor Graves as follows:

Chemical Changes in Silage.

Soon after green corn is stored in the silo, fermentation starts and the temperature of the mass rises to a temperature of from 65 degrees F. to as high as 125 degrees F. The higher temperature is found only near the surface. Where the silage is properly packed and all air is excluded, the temperature rarely goes above 85 degrees F. This is the most favorable temperature for rapid fermentation, which stops the growth of undesirable bacteria. As a result of this fermentation, the sugar in the corn is changed into acids and some alcohol. The acids formed are chiefly lactic and acetic. Lactic acid is found in sour milk and acetic acid in vinegar. The acetic acid is of a volatile nature, and it is the evaporation of this acid that gives the silage its pungent odor. The production of these acids lasts from two to four weeks.

The chief function of these acids is that of a preservative. The acids prevent the growth of putrefactive bacteria, which would cause the silage to decay. The acid destroying and putrefactive bacteria require the presence of air. Hence, it is necessary to keep air from the silage. Silage that is kept air tight will keep indefinitely. Cases are known where silage has kept in good condition for five and six years. The exclusion of air can be obtained only by packing the silage very tightly in a silo with air tight walls.

Legume Silage.

When legumes, such as alfalfa, clover, vetch, and peas, are put into the silo, they should be ensiled with some such crop as corn, rye, or oats. The legumes alone do not contain enough sugar to afford the production of sufficient acid to prevent the high protein content of the legume from decaying. The corn, rye or oats, mixed with the legumes, would provide sugar for the production of sufficient acid to preserve both plants.

Value of Acids.

These silage acids not only preserve the silage, but probably partly digest the cellulose or fiber of the cell walls, causing the texture of the silage to become softer and rendering it more easily digested by the animal.

The acids of the silage act as an appetizer and a tonic, thus helping to keep the digestive tract healthy. This, together with the succulent nature of the silage, keeps the animal's bowels open and tends to give the animal a glossy coat and a pliant skin, such as the animal has when on good pasture, indicating that it is in the proper condition to make the maximum returns from its feed. In fact, silage lends to our winter ration that indefinanble property which causes cattle to be at their best when on good pasture.