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## SHOCK CORN FOR SILAGE

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Every fall numbers of farmers are delayed in getting their silos completed and find it necessary to cut their corn and shock it before the silo is ready to use in order that the corn may not become too ripe. Other farmers are interested in refilling their silos after its contents have been fed out. Both instances require that shock corn be put into the silo if the silo is used. The Missouri Experiment Station has investigated the possibility of using shock corn for silage. During the fall and winter of 1913-14, three small silos were filled with corn fodder at different dates and with varying amounts of water. Visits were also made to ten or twelve farmers who were using silage made of shock corn and samples were procured for analysis.

The opinions of the men who had used silage made of shock corn may be summarized as follows:

1. It is a satisfactory feed and animals find it more palatable and appear to do better on it than when fed shock corn.
2. Silage made in this way is not equal to that made by putting corn into the silo at the proper stage.
3. Refilling a silo in the middle of the winter with corn fodder prevents the loss in feeding value which occurs, especially towards spring, when fodder is left in the shock.
4. It is more convenient to feed from the silo than from the shock.

5. Cattle eat more of the stalk when it is in the form of silage, thus conserving a large amount of feed which, as shock corn, would be wasted.

One Missouri farmer says, "I would recommend putting shock corn in the silo any time up to February believing it to be much more valuable as silage than when fed to cattle from the shock. I prefer putting in silo at the proper stage, however."

Another says, "Where enough water was added there was practically no waste. When practical to refill we prefer to do so rather than to feed the corn fodder in the ordinary manner. All things considered we find it more expensive and the feed not quite as good as when the silo is filled from the field at the proper time although superior to the dry shock corn."

Another farmer writes, "We filled a silo in the middle of the winter. Supplied the water with a hose in the silo. Water was taken up rapidly. Silage became very hot in 24 hours. The silage was in fine condition when fed. Stock ate the silage practically as well as fresh corn silage. Better to fill one silo three times than to build two or three, especially on account of the greater facility in getting help."

Another farmer who built his silo after the corn was cut and filled it from the shock reports that the silage was in good condition and palatable, but not as good as when put in at the proper time. Stock ate the silage almost as freely as they did that made in the ordinary way.

Another farmer who clearly added too little water says, "The silage was good at first but got drier and drier toward the bottom. I do not like dry fodder silage."

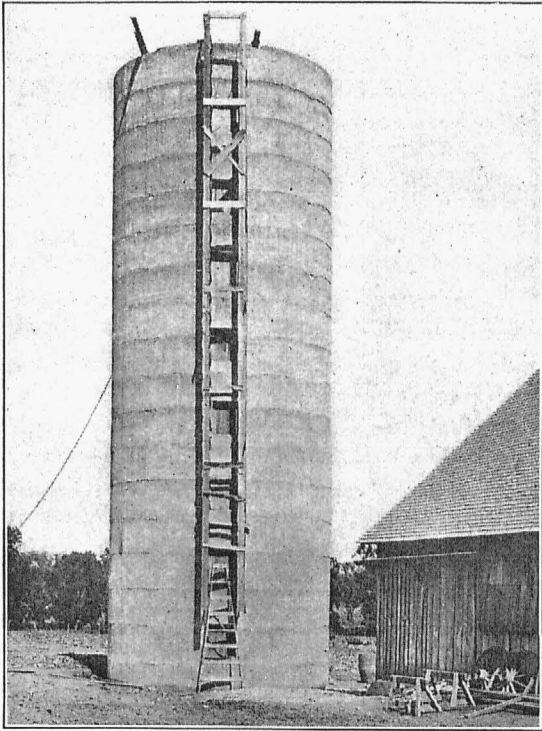
**Amount of Water to Add.**—It is doubtful if the putting of dry corn fodder into the silo will ever become a general practice on account of the large amount of water which is required to put it in proper condition. On the majority of farms it is entirely out of the question to consider putting the dry corn into the silo because of not having an abundant and convenient water supply. The studies made at the Missouri Agricultural Experiment Station with different amounts of water show that with corn which has stood in the field until thoroughly dried about a ton of water must be added for each ton of corn fodder in order to get good results. This amount of water gives the silage about the normal composition found when corn is put into the silo at the right stage. If, on account of the wet weather, the fodder is damp at the time of filling the silo, the amount of water may be reduced

a little but if this amount is much less than equal parts with the fodder used, more or less mould will develop in the silage. Failure to add enough water was the most common fault found with the silage made from corn fodder in the ten or twelve silos visited. The water deficiency was determined by finding the actual amount of water in the silage by chemical methods. In every case of mouldy silage, it was found that the amount of water was too low. The silage that was considered the best for feeding purposes and which was giving the most satisfaction to the owner contained as much water as would be found where equal parts of water and corn fodder were mixed together. The experiments at this station made by filling small silos with fodder to which different amounts of water had been added, showed the same results. Too much water makes the silage of poorer quality. It seems desirable to use just about one ton of water to a ton of dry fodder. It is evident that it is not altogether an easy matter to get the right amount of water. Ordinarily there is not great danger of getting too much water. In order to get enough it is necessary to have a water supply system which will furnish it abundantly and rapidly.

**How to Add Water.**—Another difficulty in putting dry corn into the silo is to get the corn and the water thoroughly and properly mixed. It is not possible to add a sufficient amount of water and blow it into the silo with the blower. Neither is it possible to get the silage properly wet if the fodder is run into the silo dry and then the water added from the top. Where this was done in some of the silos investigated it was found that the water had run through the silage in channels leaving the other parts perfectly dry. One silo contained six feet of water in the bottom at one time although a good share of the silage near the top was dry. The water had been poured on the top of the silage. The only way to add the water uniformly seems to be to spray or sprinkle it over the surface evenly in the silo as the dry fodder is put in. It is practical to add a portion of the water to the corn at the cutter but ordinarily not more than a third of it can be put in in this way. In adding water it should be found out by actual trial how much water is going in. It is not possible to specify any certain size of stream as the amount of water delivered through a pipe or hose depends upon the pressure as well as the size of the pipe. It is well to measure the amount of water that runs out of the pipe used in a minute or a certain number of minutes and figure from this as to how much is being added per ton of corn fodder.

## SUMMARY.

To sum the matter up, it may be said that putting dry corn in the silo makes satisfactory feed but not as good as silage from corn put in at the proper stage. It is not a practical thing to do except on farms where a water system makes it possible to add the necessary amount of water and to do it rapidly as the corn goes in. The amount of water to be added should be approximately equal pound for pound to the dry fodder put in.



A Concrete Silo Built According to Plans Furnished by the Missouri College of Agriculture. Dimensions, 16x51 feet; cost, \$375.