

## Building a Stack to Shed Water

A Minute Description of an Art We Have Lost. By John Coonie

IN stacking grain the first requisite is clean, dry ground, and under no circumstance should a stack be built on silt or any kind Level ground is preferable to sloping, for there is always a tendency for a stack to settle down hill, when built on uneven ground.

Begin the stack in the same manner as building a round shock, setting the sheaves close together and as straight up as possible, gradually allowing the butts of the sheaves to slope outward, but even the outside row should be sufficiently upright that the grain cannot reach the ground and thus prevent any loss.

Round stacks are preferable to ricks, as, in case of rain, they are more easily protected from injury while in course of erection, and it is much easier for the pitcher to place the sheaves close to the stacker on a round stack than on the rick. A twenty feet in diameter and a ten-foot pole can be used to get the size of the foundation, or by walking around close to the butts of the sheaves twenty steps, a yard each, will be practically twenty feet in diameter.

### Work on the Knees.

Stacking should be done on the knees, a piece of old, heavy cloth being fastened over the knees to save the overalls and protect the skin. With the right size for the foundation secured, build the outside course, keeping the butts of the sheaves even with those on the ground, and with this course complete lay a second course, the butts of the sheaves to the hand of the outside course, all sheaves pressed closely together and firmly packed by the weight of the body on the knees.

Continue in like manner until the center of the stack is reached, packing it full and jamming on the sheaves with the feet to insure a high center in the stack when fully settled. A grain stack properly built should be like a saucer inverted, highest in the center and the slope to the outside, just as steep as it can be made and at the same time prevent the sheaves from slipping off the stack. In fact, with a well-built stack, the outside course of sheaves is only held in place by the inside rows of sheaves and in threshing when the inner courses are removed, the outside course will at times slip and fall from the stack. This is a sure indication of a well-built stack and should it rain continuously for a month a stack built in this manner will shed water equal to the best shingle roof.

After standing in the shock the butts of sheaves are slanting, this condition the result of the heads being pressed together and in laying the outside course of the body of the stack the long side of the sheaf should be laid towards the stacker, overlapping the short side of the preceding sheaf, thus insuring an even surface on the outside.

### The Head of the Stack.

When drawing in to make the head of the stack, the long side of the sheaf should be placed down and the short side on top, which aids materially in giving a slant on the head and assists in shedding rain.

For rapid work by the stacker and to prevent overstrutting, much will depend upon the ability and skill of the pitcher, as a good pitcher will toss every sheaf so that the butt will lie forward of the stacker, the bands close to his right hand, that the sheaf may be readily grasped, laid in place and the stacker crawling forward on his knees presses, the sheaf closely in place.

In stacking on a side hill after the foundation is laid, extra courses should be built on the low side of the stack to bring it above the level to allow for settling. Each one of these courses on the low side should be fol-

lowed by a full course on the entire stack as a binder. No rule can be given as to the number of extra courses required, this depending upon the slope of the ground, care being taken to keep the stack leaning somewhat up hill that when fully settled it will be standing practically plumb on the ground.

### Butte Not Generally Advisable.

While a slight bulge in the body of a stack when properly built gives a somewhat artistic appearance to the stack it is not essential, and too often it is a source of injury. With the heart of the stack kept flat and well rounded as it should be, from start to finish, there is always a tendency for the outside course to slip out, and too often when there is a swell in the stack, the heart has been kept too flat to prevent slipping, and when the stack settles the heads of the sheaves often tip over on a level with the butts, or perhaps tipping down, as an invitation for water to enter every time it rains. With the heart kept close together the sheaves packed closely together, there will be no tendency to spread out, without any effort to make a bulge, or swell, in the body of the stack, and care must be taken to keep the outside nearly plumb, with only a little swell, otherwise the stack will get too large to afford a steep head which is absolutely necessary to insure a dry stack, during a heavy, dashing rain.

The whole art of success in stacking is to keep the sheaves from start to finish, in as nearly an upright position from the outside to center, as it is possible to hold them from slipping off the stack altogether. It means work to build a stack in this manner and it is much easier to lay the sheaves loosely, keeping the stack about level instead of low on the side and high in the middle, and this fact is the main reason why so few farmers fail to succeed in building a grain stack that will shed water, while if the work is properly done water will not enter the stack when fully settled. It is better to have a steep head on a stack and a lower body than to have a high body and a flat head, but it is only by actual experience that the height of the body can be determined.

### Medium Height Preferable.

A medium height is preferable, as it is difficult to pitch sheaves to the top of a high stack for there are few men at the present time who can stand with their back to a stack and pitch a sheaf over their head in such manner that the stacker when finishing the stack can readily grasp it.

The stack should be finished by standing on a ladder and the foot should never be thrust into the head of the stack making holes for water to enter.

A good raking down with a steel garden rake from top to bottom after a few days' settling and early in the morning when the butts of the sheaves are damp with the night's dew will aid materially in shedding the heaviest rainfall.

This work will require a twenty-foot ladder on which to stand, the same as used in building the stack, and if a few forkfuls of long, green grass can be secured to top out the stack sheaves will be saved equally as well as those of straw or hay.

In the absence of straw or hay break a couple of sheaves, place on top as in capping a round shock, and secure by hangers to prevent their being blown away by a heavy wind. Stacks built as here indicated will turn water equal to a good roof, and if allowed to stand six weeks or two months before threshing the grain will have gone through the sweating process and be in far better condition than if threshed from the shock and the sweating is done in the bin.



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Type	Food Throat Sizes	Capacity Ton per Hour	Power Needed	Length of Cut	Speed
A	16" x 6 1/2"	16-25-20	25 H. P.	3/4" to 1 1/2"	500-700 M. F. M.
B	14" x 5 1/2"	12-16-15	20 "	3/4" to 1 1/2"	700-800 "
E	11" x 4 1/2"	10-12-10-15	15 "	3/4" to 1 1/2"	800-900 "
G	11" x 5"	8-10-8-10	10 "	3/4" to 1 1/2"	800-900 "
F	9" x 3"	3-6-4-6	7 "	1"	800-1000 "

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NOW, what you stop you have better cows ago? Have you got the production of your 4,500-lb. cow, do you rear you if you could put in 10 minutes you made the dairy reduce the cost of milk from 20 to 22 per cow producing the same much roughage and require as the other cow. A grain cost are practical. I will tell you briefly why I did it. I was forced to decrease the cost of milk by increasing the price to go out of the dairy business system of farming—or to

In the year 1898 my management of the home. At his death I had not 10 tons which had to be moved along smoothly. With a good dairy herd at that time, and now more so, I had a little, but as the price advanced, increasing the herd and, as the price of milk in proportion, the margin at the end of the year 1907 and tried to settle the business basis for the next 1200 or 1300 short of one

I assure you it was a serious obligation hanging over my head that I could avoid would change conditions. My head a little. After doing that, I said 10 cows. There are 16 men convert the products of milk income and a profit, if I could market for the crops I grow and handle that more soon be so much more. If one assumes more economically more efficient machine."

But over carefully, I decided January 1 would be the best cow. I knew that I was a very dairyman has. I got some that were not as good.

On the first day of January with each cow, and I am glad what I found after a year's best cow I owned at the produced 6,115 lbs. of milk each, and her average test since 1894 the cutter has

latter for every 20.7 lbs. labor cost and feed cost this

For the purpose of comparison that herd of 16 cows into one containing the best 4 cows. The 8 best cows in milk and 268 lbs. of 85 per cow averaged 192 cans of milk, a difference of 58 lbs. more what I would get from 16 cents a can would amount to the 8 cows of 4.

I want to show you what after ten years' work. I have been a lesson to me. I have to study and find out what