

Growing and Harvesting Wheat by Hand

Although grain is still grown and harvested by hand in many parts of the world, in the United States this skill is practically lost. Having done just a bit of this myself, the thing that impresses me the most is how long it takes to do this by hand. Compare this to modern agricultural methods where just one man, aided by his machinery, can do the work of literally hundreds of men working with hand tools. Until one actually experiences both ways, it's hard to comprehend the strides we've made in agriculture during the last 120 years.

Land Preparation: If you are growing wheat on land that has previously been under cultivation this isn't relatively too big a job. Normally, all that's needed is to turn the dirt over with a shovel, then smooth it out with a rake. But if you are breaking up sod, or grass land, this can turn into a grueling ordeal. For example, I enlarged my garden last spring. Working as fast as I could with a shovel, I only turned over about 100 square feet per hour. After it has been turned over, it still needs to be gone back over and further cut up with a shovel then broken up with a rake. All of this is hard work. And since it's impossible to get in there and weed the grass out of the wheat as it grows, if you have an extra season, you could let it sit so you could get in there several times during the summer and kill the new grass. This might also be a good time to grow some 'green fertilizer' to be turned under after it grows. I fertilize mine with manure as there is plenty of it around where I live. Be careful how much you fertilize if you live in dry country, however, as the more fertilizer used, the faster the wheat will grow. If it grows like mad and uses up all the available water in the soil, it will die before it even has a chance to head out. It's better to have a short, stunted crop of wheat than tall, dead wheatgrass.

Planting: The old timers planted their wheat by 'broadcasting it.' They did this simply by throwing it in a fan shape by hand. How densely it needs to be seeded depends again on how much water is available for the crop. The drier the ground the lighter you want to seed it. This is because the denser the growing wheat, the quicker the available moisture in the ground will be used up. I live in wheat country. Around here, the farmers plant 1 1/4 to 1 1/2 bushels to the acre (that's 80-96 lbs). But to put it into more manageable terms for the guy who wants to do this on a small patch, lets say, 100 feet by 100 feet (10,000 square feet) that would come to 18-22 lbs of wheat. That also comes out to 7.5-9.0 grams of wheat per cubic yard. Perhaps we should mention farmers now only plant 'treated wheat.' This is wheat that has fungicides on it to prevent several bunt and smut funguses, which left unchecked, will eat the wheat right in their shells. The fungicides are stained red to prevent accidental poisoning. In fact, it's illegal here to plant seed that hasn't been treated as the government, and everyone else, for that matter, want to keep these dangerous diseases as eradicated as possible.

Using modern methods it could cost \$1.5 to 2 million in US dollars to purchase new the equipment necessary to farm a few square miles of land. As the cost of wheat drops in relation to inflation over the decades and as the cost of equipment continues to rise, it takes more and more volume to make a living at this. One farming lady told me, "There's a slim profit margin. Don't count on getting rich as a wheat farmer, rather it's a lifestyle. It's a great life and a good way to raise kids. There's always plenty for them to do." Because of the low price of wheat and the high cost of huge amounts of land and equipment, a person just about has to be born into a farming family to make this occupation possible in our modern society. Almost without exception, every wheat farmer I know is land and equipment rich, but cash poor.



A modern combine harvesting wheat



Fields of wheat in all directions as far as the eye can see.

Growing: The old timers tell me they then harrowed the wheat seed into the ground on their early farms. You can do the same thing by raking it in. Then all you have to do is wait and let nature take it's course. You should put water on it two or three times during the summer if you live in a dry climate and have the means to irrigate it. The wheat looks much like grass when it first sprouts, then continues to grow until it 'heads out.' Heading out means the wheat heads start developing on top of the plants. The plants turn yellow as they near harvest. You need to keep an eye on your field as you want to start the harvest after the kernels have fully dried but not wait any longer after this than you must. One never knows when a big wind storm, rain, hail, or snow will come and make harvesting your crop almost impossible and destroy the quality of your crop.

Cutting: The old timers used a scythe to cut their wheat. (Lehman's has several of them for about a hundred dollars. You can get a catalog for \$3 by calling 330-857-5757. Or, if you'd like to go directly to the source, please take a look at <http://www.scythesupply.com/>). I still don't have scything down pat. An old timer taught me. He makes it look effortless, and I guess it is for him. Instead of just swinging it, he also moves the scythe blade forward through the wheat. It's important to keep the scythe razor sharp or it won't do it's job.

Stooking. Grandpa taught me how to do this. He used the wheat plant itself to tie the stook together. This almost needs to be demonstrated, but what he did was take perhaps a 1 inch diameter pile of wheat, wrap the bottom end of the straw into a knot, then wrap the wheat around the stook and tie the wheat end of the straw into another knot.

Threshing: The stooks are now ready to be brought in from the field to where you are going to thresh them. This is done with a flail. I made mine from two large willows, about 1 1/2 inches in diameter. They are connected with a rope through holes drilled through their ends. Yes they look a lot like great big nunchakus. Mine were home made, and were not perfectly straight, but they still worked just great.

Take a stook, open it up on a large canvas tarp, and start beating the daylights out of it with the flail. I did this out on the grass so the flail wouldn't break the kernels or beat holes in the tarp which I expect it would have done had I threshed it on concrete. After the wheat is beat out of the straw fairly well, the next step is to pick up the straw and move it off to the side. Be careful you don't throw any heads of wheat away doing this. What you have left is a lot of straw mixed in with wheat at various stages of threshing. The easiest way I found to get the straw out of the wheat was to put it through a very coarse sieve. I used a webbed plastic in-basket which worked great. This also worked good for catching the wheat heads that needed to go back on the threshing floor to be beat out with the next stook.



At this point the wheat is full of chaff - the fibrous outer shell that surrounds each kernel of wheat on the head. You need a windy day, or a big fan to get rid of this. As the wind always blows where I live, I throw it up into the air like people have been doing for thousands of years. The wheat is a lot heavier than the chaff so it falls to the ground first. The chaff is blown away. I also did this on a big tarp so it wouldn't be so hard to collect the wheat. Finally, after lots of throwing, it was clean enough to suit me.

Yield: How much wheat did I get? About a quart per stook, and my stooks were small. How long did it take? Doing this by myself, I'd guess it took one to two hours per gallon of finished wheat. The farmers in our area are getting anywhere from 8 to 60 bushels of wheat per acre under a wide range of variables. These fluctuations include planting density, amount of rainfall or irrigation, amount and type of fertilizer used, average summer temperature, and weather extremes.