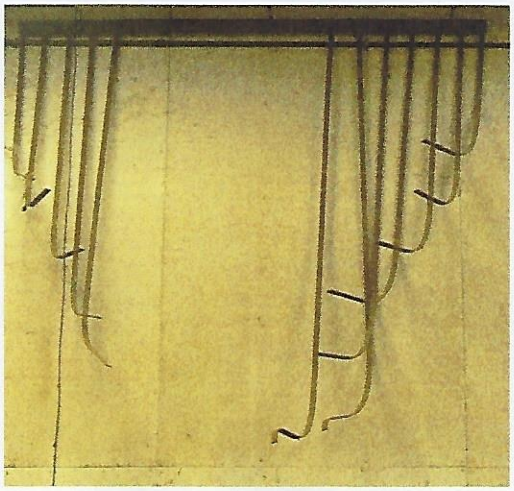
PART OF THE PAST
Harrisburg Area Museum
Issue 2019-4

SWATHERS, WINNROWERS AND COMBINES

Binders followed Reapers but I find little history of how we got winnrowers. I suppose they were the more or less obvious evolution from Binders. You just take off the binding part and adjust the draper a bit and you have a winnrower. When combines replaced the Binder/Thresher, most of the grass seed growers around here went to tractor mounted mowers and swathers. The mower swather was an attachment that fastened to the cutter bar. A 'female' swather is shown at right. Often two mowers were used in the same field. The first rig used this type of swather that leaves the swath in the center of the cut. The second mower would have a similar device except that tines as on the right would extend all the way across the cut to the left and about 2' beyond. This would roll the second cut right up next to the first so that the combine would pick up both swaths (14') at once. It worked...but not really well when the crop was badly lodged. The mowers were mounted directly on the tractor. Early models were bolted on with later ones hung on a 3 point hitch. I don't remember anything except 7' cutter bars.



A 'female' swather

We (Kizer & Son) never did depend on mowers for all our cutting. In 1940, when we abandoned the thresther for a combine, we bought a pull type Minneapolis Moline combine and a12' ground driven Minneapolis-Moline winnrower. It had a draper much like a Binder but it only went across the right 8' of the swath, leaving the 4' on the left for the grass to drop off onto the ground in a swath.. No mechanism to bind a bundle. No hydraulics. No variable speed. Just a simple bat reel which, after a few years we replaced with a "Love" reel. The Love Reel was manufactured in central Washington and had bats with wire fingers that were controlled by a cam so that the fingers always pointed down. Thusly, at the bottom of the rotation, the fingers would move nearly straight back across the sickle. Since production of rye grass in the early 40's was only 6-800#/acre it worked acceptably. As yields increased rapidly in the 40's with the use of nitrogen fertilizer, we kept modifying. In 1948 we bought a PTO driven Coop winnrower for $600, then a couple years later we added a second used one. These got us through until the self propelled ones came out. The self propelled ones worked far better than the pull type.

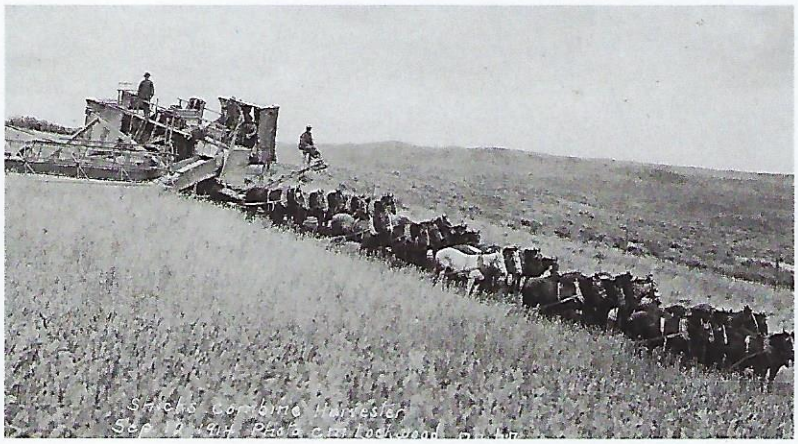
John Deere Rotary winnrower cutting alfalfa

This was partly due to the pull type not moving straight ahead under heavy cutting. The hitch on the winnrower was 3-4' to the left of the cutter bar. Under heavy load the outer end of the cutter bar would begin dragging back so that the guards did not enter the crop straight. This created even more load and more out of line movement. Plus the guards were loaded heavier on the left than the right. Self propelled eliminated that problem. Further refinement of the guards also helped. Now the 2000#+ yields are easily cut and laid in nice12-14-16' winnrows. The latest innovation is the rotary cutter bar. It uses the same principles as a rotary lawn mower with multiple rotary units across the cutting area. But with heavier components and MUCH more power. The factory model is designed for the big market which is hay. It is heavily modified for grass seed. When so modified and set up right they do an excellent job. Regular auger header winnrowers cut at around 4 MPH...the rotary works better at 10-12 MPH! And costs 'north of a quarter million' dollars!

The "wheat country" of Eastern Oregon/Washington transitioned a bit differently. They went from binders to 'headers'. These were similar to our winnrowers but left the swath in a different condition. It was then handled loose, as with hay, and hauled to a thresher where it was pitched into the machine. Then they extended the draper out to the left and raised it so that the grain could be loaded directly onto a flat bed wagon

for hauling to the thresher.

Someone had the idea that this was one process to many! So they attached the header directly to the thresher and created a combine. (It combined the header and the thresher.) Early models were ground driven and horse pulled with sometimes a team of 50 horses. It looks like they used a crew of 4...Two sack sewers, a driver and a machine operator. Such a machine was not practical in the small Willamette Valley fields. It was not until the internal combustion engine became commonplace and combines reduced in size that they were widely used in the Valley.



Arthur Schick combine. Eastern WA 1914

The Massey shown here is a pretty early model of the self propelled combines. It was powered by a Chrysler Industrial 6 cylinder flat head engine. Our first self propelled was a Coop and of very similar design and cost $5200. It had a John Deere draper pickup and a 60 bushel bulk tank that we extended to 120 bushel. It was preceded by a Minneapolis Moline pull type in 1940 and a second later model in 1947 that cost $2200. Current models such as the Case-IH at right cost in excess of $400,000. This Case-IH features an innovative design with a long, horizontal rotor that takes the place of both the cylinder and the straw walkers of yesteryear. It is especially good in grass seed where the light weight seed is difficult to shake out of the typically heavy straw loads. Almost all the manufacturers now offer some sort of rotary machine. Some use hydraulic motor drives so there are very few belts/chains. All have lots of sensors and cab controls of the threshing mechanism. A very much different machine than the early designs.

1946 Massey Harris Combine

Case/IH Rotary Combine in Rye Grass

1952 Coop Combine

In the mid 1980's we had bought a new self propelled combine and my Dad (Beryl Kizer...born 1902) rode a round with my son (Wayne...born 1960). At the end Dad commented to Wayne, "When I was your age I couldn't even DREAM of having anything like this. What is it that you can't even dream of that will be commonplace in 60 years?" Good question! Think about it a bit. You don't want to limit it to harvest equipment...

The Museum can not foresee the future. But we might be able to help you by showing what has been as compared by what is. So visit the Museum and be amazed by the past and challenged by the future. The normal hours are Tuesday, Thursday, Saturday 10:00 to 4:00. Winter hours (December and January) we are open only on Saturdays, 10-4.

The Museum was started in 1993 with Al and Iris Strutz being a major motivator. A good way to visit is to spent a couple hours in a quick overview to see what is available. Then come back later for a deeper study of exhibits that may be of particular interest. Best wishes for tomorrow... *Editor: Charlie Kizer*