

## Hay rakes for fire breaks – an equipment review of March 29, 2020

by Bill Kleiman, The Nature Conservancy at Nachusa Grasslands



At Nachusa Grasslands we have miles of fire breaks that are mowed once a year in the fall. We typically use a batwing mower and mow two to four passes with the mower and make them wide and mowed short. Often there is a stewardship lane as part of the fire break, so the mowing is to widen either side of the lane to have a very wide fire break. Have you noticed that fire breaks that seem wide are not so once the fire begins? I have.

When we mow prairie the biomass is still there on the break. What if we could get that vegetation off the fire break, or at least off to the side of the fire break?

This review will show three types of hay rakes we have tried over the years.

A few points on rakes before I get started:

- Raking a fire break makes it easier to control the fire line.
- All rakes move the hay to one side. To move it to the other side you drive the other direction.
- All rakes leave a windrow of hay. That is their function. If you have a hay baler you can bale it up and use it. We don't own a baler, instead, we use a tractor mounted PTO driven leaf blower to blow the windrows off the fire break. It works slick and I will show that on a different note.



...

Rake 1 of 3: A John Deere hay rake. It is simple with three rubber tires. One rear tire turns the rake shaft. The two handles above the front wheel raise and lower one side or the other of the rake. Watch these two short videos to see how they work on fire breaks:

<https://youtu.be/Lxadar4huas>

[https://youtu.be/Td\\_htZ5kTtI](https://youtu.be/Td_htZ5kTtI)

As you can see the rake moves quite a bit of mowed prairie off to the side. Used they go for \$1,000 to \$3,500. New they are at least \$7,000.

Pros:

Simple to run. Get to know it and it will work consistently, but likely require attention daily.

You can pull this with any size tractor, but also with

a pickup truck and sometimes a UTV for a short run.

Cons:

The rubber tines that move the hay get beat up from prairie ant mounds, rocks, stumps, fencerow humps. You can buy replacement tines in Farm stores or from JD.

The round metal hoops that these rubber tines spin "within" get bent from the ant mounds, etc. When the hoops bend it catches the spinning tines and locks them up, or breaks them off. They can be bent straight with some grunting. About every day you will be bending a few back straight.

The drive shaft that connects the tire to the rake has a highway mode. You disconnect the shaft and store it on a peg on the frame so you can now go tearing down the road to get to your worksite. But...that shaft can bounce off the mounting peg and slide off the rake with the shaft lost in the road ditch. So take some wire and affix it so it can't slide off.

It is hard to turn this rake around if you get in a tight dead end. It reverses worse than a hay wagon due to the front wheel turning. You disconnect it and grunt a bunch to turn it around or back it up. Reconnect and go.

If you come to an obstruction like a fence row the old ones raise up with hand cranks. You get off the tractor and crank both adjusters, drive past the obstruction, get off again and lower the rake, and get back on the tractor and proceed. What fun you are having. Some of the used ones have an hydraulic lift cylinder which is likely worth the expense.



Rake 2 of 3: Sitrex brand four wheel hay rake. \$1,700 for a new one.

Watch this short video of the rake in action: <https://youtu.be/15ExSPUMBLU>

Those four wheels simply turn as they make contact with the vegetation. They don't spin fast.

Pros:

Not expensive.

Does the job, but not as thorough as the other two. You might need to make a few passes to get the same amount of hay moved.

It stores pretty well in a shed or outside.

If you come to dead ends you can typically lift the rake all the way off the ground and reverse.

Cons:

It can be a puzzle to figure out how to get this running each year. The frame maneuvers about for transport or trying to rake to the other side. I painted hints on the frame to remind me how I had it set up. And I took photos.

The clips that hold the frame pivots can fall out and two of the four wheels will fall off.

Watch for pinching your fingers as you rotate the frame around as you puzzle how that thing is to be set up.

When you go through a gate you may need to rotate the frame.



Rake 3 of 3: Kubota RA1035. \$7,000 new.

This model is a 3-point hitch style with a PTO that spins the rake. In the photo above you can see that the rear rake tines are tilted back and up. As the tines rotate they turn down to move the hay to the driver side and then lift up towards the rear of the rake. Some carnival rides work like this.

We have used this one for only one season but we like it a lot.

Watch this video clip: <https://youtu.be/NoJa81pR18A>

Pros:

This rake moves the most hay. It is impressive. You can really move the thatch and mowed material to the side.

You can drive as slow as you wish because the PTO is turning the rake, not your wheels. Going slow on prairies is better as there are various obstructions you need to watch for that are not in a typical hay field.

This 3 point hitch model allows you to lift up the rake when you come to rough ground, a fencerow, etc.. Very convenient. The wheels are typically on the ground but you can transport with the rake in the air if you wish.

If you come to a dead end you can lift up the rake with the 3 point hitch and turn around.

The rake tines are long and I expect them to handle the abuse of vegetation tussocks of a prairie.

The gear box has a gear release for when you forget to raise the rake over that fencerow hump. You hear the gearbox going click, click, click, and then a bit later reconnecting to the rake.

This unit stores in a small space because the tines come off and are stored upright.

It takes very little horsepower to run this rake.

Cons:

This one cost \$6,500.

I need a few more seasons with this one to know about reliability.

SUMMARY:

Hay rakes are good to use on fire breaks. Look for my review note on PTO leaf blowers that we use to eliminate hay windrows.

End.