

The article below was posted on farmonline Stock Journal in Australia. For more information on Sponge Weed wipers please call 800.333-4503 or visit www.smucker.net



Weed wipers provide viable control option

WEED wiping is a relatively new concept of non-selective weed control for use late in the growing season. It is based on the principle of wiping (or brushing) a non-selective herbicide directly onto unwanted tall weed plants that stand above crops and pastures.

Wick wipers, as they were then called, first became available in the 1980s, but never sold in marketable quantities.

They had poor chemical regulation systems that in many cases restricted the chemical application to target plants. Chemical delivery to the wick was by gravity feed and because of the lack of feed regulation or control, the wicks suffered problems of chemical starvation in heavy infestation work when chemical replenishment to the wick was not quick enough or sufficient.

Dirt and dust blocking the pores of the wick preventing sufficient chemical transfer to the unwanted plants was another problem.

In some instances, because of the lack of regulation and control, wicks became over-saturated, causing chemical to drip onto the crop or pasture.

Generally speaking, early "wick wipers" were considered to have limited working widths to hold appeal for broadacre application.

But since those early units, their design has changed dramatically.

Now called weed wipers, most provide accurate regulation of the herbicide placement and application rate, and are available in working widths that make them suitable for broadacre crop and pasture work.

The weed wipers available today can generally be divided into about five categories:

- * Sponge wipers
- * Rotary/roller (covered with upholstery or carpet material).
- * Rope wipers
- * Brush
- * PVC piping and canvas

One of the newer weed wipers to Australia, is the Smucker sponge imported from the US by Minlaton farmer and South Australian Advisory Board of Agriculture member Michael Richards.

This machine consists of a sponge that can either be gravity or pressure-fed with diluted herbicide, depending on its working width.

The chemical mix comes out of the sponge only when it comes into contact with plants, affecting only the touched plants, and using only low volumes of herbicide.

PIRSA field crop consultants Malcolm Johnson and Peter Hooper, writing in the PIRSA Rural Solutions 2002-2003 Crop Harvest Report, say weed wiping has created an array of advantages for farming systems.

It has provided an additional option for weed control that avoids using selective herbicides "in exchange for low-cost, drift free, non-selective herbicide".

"Herbicide resistance is a crucial issue for current management systems," they said.

"The greater the number of options that can be utilized in a season, the greater the chance of avoiding resistance."

They say the sponge weed wiper has already found an important role for ryegrass control in lentils.

"Ryegrass in lentil crops, treated with the sponge weed wiper, presents an excellent example of controlling ryegrass, given lentil susceptibility to desiccation or windrowing, while at the same time providing an excellent resistant ryegrass strategy," they said.

They claim the sponge weed wiper had also been successfully used in pastures and for summer weed control and has potential for use in vetch crops and lodged pea crops.

And where there is a height difference of about 18cm between the target weed and the crop, weed wiping can be added to the non-selective management strategy list.





WIPE PASTURE WEEDS OUT OF YOUR LIFE

The full economic benefit of controlling problem weeds such as Canada thistle, buckbrush and pasture sage in hay and pasture land, still has to be penciled out. But if you can selectively control these weeds for less than \$2 per acre, that may make a lot more sense than plowing and reseeding.

By Lee Hart

Grant Klaiber and John Kalbhen aren't letting buckbrush and Canada thistle become a thorn in the side of their grazing program. These south-central Alberta ranchers are using some relatively new application equipment to knock back the most stubborn weeds.

Once the weeds are in retreat, desirable forages can usually re-establish and provide effective competition. Instead of spending \$150 to \$200 per acre to rework pasture stands, or \$30 or \$40 per acre for other types of treatment, they're getting the job done for less than \$2 per acre in chemical cost.

Klaiber and Kalbhen, who ranch near Strathmore, east of Calgary, are weed wiping these days. They're using an applicator that is pulled over standing weeds, wiping their leaves and stems with herbicide. Desirable grasses and legumes underneath the weeds aren't touched.

The rig looks a little strange, Klaiber admits. The machine they bought and use is the Smucker Super Sponge® Weed Wiper. It's a 30' boom carried on a frame supported by bicycle-type tires and pulled behind an ATV quad. The unit easily folds for road transport.

The spray solution, in this case Roundup®, is carried in a 5-gallon tank mounted on the applicator frame. Chemical is distributed to a heavy duty sponge, protected by netting, running the full width of the boom. Boom height can be adjusted to catch standing weeds but pass over grasses. As the unit is pulled across a field, the sponge, moist with herbicide solution, wipes against target weeds.

Klaiber treated 160 acres of pasture with a heavy Canada thistle infestation in a couple evenings of weed wiping.

The beauty of weed wiping is that you apply herbicide only to the target weeds,

explains Jim Laslo, County of Wheatland ag fieldman. As well, because the herbicide is applied through direct contact, a broad-spectrum systemic product such as a glyphosate can be used without damaging the forage crop.

Laslo worked with Klaiber and Kalbhen on the weed control project. They wanted to see if weed wiping was practical in pastures.

As part of this county project, the producers tested 3 weed wiping systems - the Vogels Wick Weeder and Sumetek Weed Wiper, in addition to the Smucker machine. Smucker is manufactured in Harrisburg, Oregon; Vogels by Paul and Marian Vogels of Kippen, Ont.; and Sumetek by Winfield Manufacturing of Winfield, Alta.

While each system had its pros and cons, Klaiber and Kalbhen preferred the Smucker unit for their specific operations. Instead of a sponge, the Sumetek machine uses carpet material that holds much less chemical. And its small wheels weren't suited to rough ground. Similarly, the Vogels model required more adjustments to control chemical flow; the wick was hard to change and drain; and wheels were also too small for rough ground.

But everyone has his own preferences, Laslo points out. The project was less a consumer rating of application equipment than a test to see if wiping was a practical method of weed control in pasture.

The economics of weed wiping sure panned out for Klaiber and Kalbhen. Since chemical is applied only to weeds that are touched, a small amount goes a long way.

Aerial spraying of a 320 acre pasture of weeds would have cost Klaiber about \$9,600 or \$30 per acre. He estimates farming up a heavily-infested pasture and reseeding would cost between \$150 and \$200 per acre in chemical cost, field work

and lost production. Weed wiping a 160 acre field heavily infested with Canada thistle, on the other hand, cost \$186 for the chemical or about \$1.16 per acre.

As well, Klaiber invested 2 evenings of spraying time, and the 30' Smucker weed wiper cost about \$3,500. He and Kalbhen shared that cost, however. "It's the type of machine farmers can easily own jointly," says Klaiber. "It's not something you need every day. Scheduling between owners shouldn't be difficult."

Is weed wiping effective? "It's not a one-shot solution," explains Klaiber. "You're probably looking at a 3-year project to eliminate weed patches." Some pastures, he notes, might have the odd plant scattered about, while others could have patches ranging from a few acres to 100 or 200 acres.

The farmers timed their chemical treatments to hit weeds such as Canada thistle, buckbrush and pasture sage as they were in early to late bud. At that stage, weeds are storing nutrients and readily transfer glyphosate to their roots.

While one pass might kill the tallest weeds (Kalbhen estimates perhaps 95% control the first year), there's usually a new flush the following year. Canada thistle is particularly stubborn since it reproduces by sending up new shoots from its massive root network.

A second and third treatment of weed patches may be needed in subsequent years, points out Laslo. But reduced weed cover stimulates forage growth, and that in turn should help control weed regrowth.

While the weed wiper does an excellent job, Kalbhen says it's not the total answer to controlling pasture weeds. He has one field with a heavy infestation of sage, but the weed is shorter than the grass and legumes. Wiping won't work there. He'll perhaps have to look at hiring a custom applicator to spray that field.



A heavy patch of Canada thistle on Klaiber's pasture starting to turn brown after being treated with the weed wiper



Another typical patch of weeds needing to be treated



A patch of western snowberry or buckbrush turning brown after treatment with the weed wiper

Contact info for South Australia:

Michael Richards
SA TOPCROP Team Chairman
PO Box 14
Minlaton SA 5575
Ph 0427547052
Email richardsm@bigpond.com.au

Another article featuring Michael Richards

Smucker comes out on top

13 Mar, 2003 08:30 PM

DAMAGE to his lentils a couple of years ago from crop-topping too early led Minlaton farmer and South Australian Advisory Board of Agriculture member Michael Richards into the management strategy of weed wiping.

"The idea of using weed wipers for broadacre weed control was first floated to me by our local crop consultant Trevor Dillion," he said.

"While representing the Agricultural Bureau of SA on an overseas visit to the US and Paris in 2001, I took the opportunity to check out several types of weed wipers.

"The unit that impressed me the most was the Smucker Sponge Wiper from the US.

"Information I viewed suggested sponge wipers apply higher rates of chemical with less dripping than some types of weed wipers."

Mr Richards says his objective in importing the Smucker is to promote weed wiping through the use of proven equipment.

"Once the weed wiping concept is accepted, the performance of alternative or more cost-effective weed wiping equipment can be evaluated," he said.

Mr Richards finds conditions for using weed wipers are ideal when there is a 150mm height difference between the target weed and the crop.

"I have found the sponge wipers are best operated at 11-15 kilometres an hour," he said.

"The sponge wipers allow low rates of herbicides to be applied directly to target weeds, while at the same time minimising spray drift and herbicide residual problems."

Mr Richards says the demand for weed wipers has been extremely strong with thousands of hectares being wiped in SA and Victoria last year.

"We have sold complete units as well as sponge kits to farmers who have made up their own booms," he said

He says a good weed wiper requires good ground-following ability, on-the-go height control and a suspended boom.

On his Australian version of the Smucker, he has altered the tap layout and chemical delivery system to make operation simpler.

"We are now feeding the sponges with a 12 volt pump and we are planning to install hydraulic height adjustability on the boom outrigger wheels on our larger booms to improve ground following," Mr Richards said.

He says the Smucker weed wiper is proving itself in a wide range of applications other than just weed control in lentil crops.

"Farmers in SA and Victoria are using the Smucker over pastures, under centre pivots, and over clover seed crops - they are absolutely magic in the control of wild turnip and radish infestations," he said.

"I also see a major use for weed wiping in orchards and vineyards."

Pig Weed Problems?

Here are the results
from this independent
study by:



Controlling Round-up resistant PigWeed (Palmer Amaranth) in Round-up ready crops

- Resistant pigweed has become a huge issue in round-up ready peanuts, cotton and soybeans. And the only way to control them up to now has been costly, and labor intensive hand removal.
- Recently in Georgia Gramoxone by Syngenta has been labeled for use in wipers for controlling Pigweed in peanuts.
- The objective of any wiper would be to put an adequate amount of product to kill the pigweed and yet reduce any damage to the crop below.
- This study conducted by Dr. Eric Prostko (weed scientist at the U of GA) evaluates the effectiveness of both a carpet and sponge applicator.
- In the conclusion you will see that both methods are effective. We encourage farmers to consider the cost comparisons and benefits of each method. Then implement a weed control program that brings the best results at a minimal cost.



CarpetWiper vs. Sponge Wiper

50% Solution of Gramoxone Inteon
3.1 MPH, 20" Applicator Height
AMAPA = 36-86" tall, 66" avg.



NTC

Carpet Wiper

Sponge Wiper

PIG-07-10
9/21/10
29 DAT



To watch a video of Dr. Prostko's pigweed presentation visit www.smucker.net for more info on sponge wipers call 800-333-4503



Cost Evaluation: For more details and current prices please visit www.smucker.net

See the results!



- Applicator Cost:** Cost for the wiper equipment varies, based upon the method (pull-type, front mount, 3 pt., kit) In each version the Sponge Wiper cost is **significantly lower** than an equivalent Carpet Wiper)
- Material Cost:** Because you are applying the material direct to the target weed you will use significantly less material. Use is also determined based upon how heavy the weeds are. Some Farmers have used around 1 quart per acre. Cost per acre on a carpet wiper vs. sponge wiper will not be different. (Gramoxone is a product offered by Syngenta... [link to fact page for Gramoxone](#))
- Crop Damage from Drip Cost:** Both methods require the operator to control the flow of chemical to the applicator, due to various weed infestation levels. According to the weed scientist at the Univ. of GA the carpet applicator was harder to see when it was dripping. Therefore in theory only, the reason for 5% more weed kill in the Bio mass evaluation...the weeds below the 20" height were potentially killed with drip from the carpet wiper. No matter what conclusion you make...the Pigweed (AMAPA) over 20" in height had 99% control with both methods
- Total width potential:** Capet wiper widths range from 6 to 50 feet. Sponge wipers range from 5 to 120 feet and can be attached to ATV, Tractors, and self propelled sprayers.

Conclusion: Sponge wipers are less expensive, as effective, and can cover more acres in less time

Wipe out Weeds

Pump Fed



Weed Wipers

**Before
and
After
Photos**

Watch Farmer Video testimonies at www.smucker.net



Resistant Pigweed in Soybeans
Using 50% Gramoxone

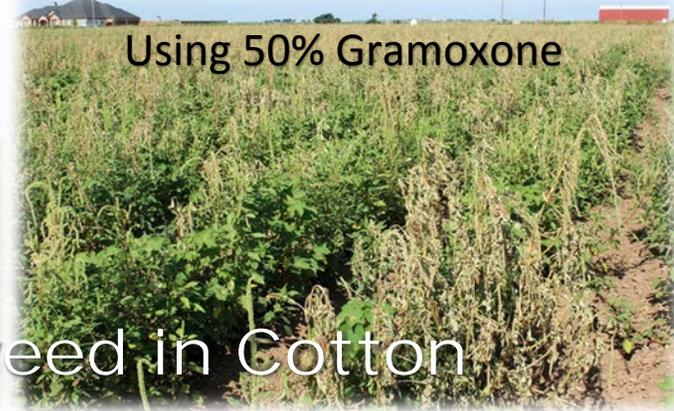


Using 33% Round-up

Rye in Wheat



Resistant Pigweed in Cotton



Using 50% Gramoxone



Pasture weeds like
Johnsongrass, thistle,
burdock and smut grass

Using 33% Round-up



Shattercane in Milo



Using 33% Round-up



Thistle in clover

Using 33% Round-up

If you have taller growing weeds in your crops or pastures...sponge wipers are the most effective and economical solution