

Single axle, multiple tasks

Why a walk-behind tractor was the right machine for our small farm

by Jane Fowler

We all know how the introduction of the tractor in the early 1900s revolutionized agriculture around the world. By the 1930s the working horse had largely been put out to pasture, and tractors became a common sight on farms across Northern America. Many farms grew bigger, with larger open spaces to accommodate tractors. But for farmers and homesteaders still working small parcels of land, often divided by rivers or woodlots, and

sometimes with rocky ground and steep gradients, there was a need for a small, maneuverable machine. It wasn't long before companies started to offer two-wheeled tractors – compact, walk-behind machines capable of powering a wide range of implements.

Walk-behind tractors are used worldwide by small-scale farmers, horticulturists, landscapers, and home gardeners. They can be seen climbing steep, rocky inclines to transport fruit from the olive groves and vineyards

of Southern Europe. In Asia they can be found pumping water out of paddy fields and threshing rice. Here in Canada you're more likely to see them used for working the soil or mowing.

ONE ROBUST MACHINE

Back in 2010, as newbie homesteaders with a couple of acres to farm, we were in need of a mower, a garden tiller, and possibly a way to clear the snow from our driveway. But buying and maintaining three or more engines,



John Fowler, the author's husband, tills one-handed with the 11-horsepower walk-behind tractor that serves as the farm's workhorse. (Jane Fowler photos)

each capable of only one task, with a relatively short lifespan, didn't seem like a smart idea. The concept of purchasing, storing, and maintaining just one robust machine – capable of tilling our fields in the morning, and then mowing our grass in the afternoon – had a huge appeal. Add in a rotary plow, and we would be able to build our raised beds. Rather than retiring it in the winter, we would put it to use clearing the inevitable snow drifts in front of our barn doors. We were sold on the idea of a walk-behind tractor.

Like many small farmers, our shopping forays are shadowed with cost restraints, so we were not in the market for a new machine. We were lucky to locate a used BCS-Ferrari 340, the largest model in the Ferrari 300 series of single-axle tractors from this manufacturer. It has four forward and three reverse gears, making it possible to find the correct speed for the task at hand. With its reinforced transmission, allowing it to be fitted with a wide range of heavy-duty attachments, this model is a true multi-tasking power unit. Supplied to us with a double set of wheels, making it possible to alter the track width and ground clearance, it has become the workhorse of our farm.

Sporting an Acme 11-horsepower engine and including a tiller, flail mower, cut-off saw, and chipper, all delivered to our door, the machine came with a price tag of \$5,000, which seemed favorable. We have since added a snow blower, making winters far easier to handle. (We have a long driveway in from the highway.)

RAISED BEDS

The tiller was immediately put to work preparing vegetable beds. We found it easy to maneuver, making efficient use of space. To form our raised beds, we borrowed a rotary plow from a neighboring farmer. This attachment has a vertical shaft with four spiral blades turning at approximately 250 RPM. It cuts into the soil and centrifugally discharges it to the side. The horizontal movement of the blades through the soil causes little



A snowblower attachment makes the BCS tractor useful year-round. Maintaining one machine instead of several is a distinct advantage.



There's just one PTO (power take-off) coupling on the machine, but reversible handle-bars allow for the operation of front or rear implements.

or no hard-panning. By walking up each side in opposite directions, it is possible to create a deep bed of fluffy soil ready for planting. Each year it takes just a few hours to prepare the ground. It's good to know that the tractor causes very little compaction, which is essential with our clay soil.

One of the features that attracted us to our homestead was having an acre of wild blueberries right on our doorstep, but it quickly became apparent that we were losing the berries to brush and alders. We didn't want to use herbicides, and we were nervous of burning the fields so close to our home, but we needed a way to control the weeds and encourage new growth of berries. The flail mower attachment has proven itself to be a wonderful alternative, capable of cutting down and pulverizing alders and other brush four to five feet tall. Every second or third year we mow the berries close to the ground, and each year they have rewarded us with thicker growth and higher yields. By rotating the areas that we mow each year, we are ensured a bounty of blueberries every summer.

TWO WHEELS OR FOUR?

There will inevitably be some jobs that can be better done with a compact four-wheeled tractor, but for anyone farming a few acres, the two-wheeled

type offers certain advantages.

For one thing, it turns on a dime, enabling you to make the most efficient use of small spaces. And instead of getting a stiff neck from constantly looking behind you from the driver's

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seat, you will be up-close to the soil, where you can see what's happening as you prepare the ground.

With its narrow width, a walk-behind tractor makes it easy to prepare individual beds for succession cropping. With the flail mower, a single pass can reduce a six-foot tall cover crop to two-inch pieces, left evenly distributed across the swath. For anyone needing to cut hay in small quantities, a sickle bar mower would be an invaluable tool.

A conventional compact tractor

without implements can set you back somewhere in the region of \$15,000, while a walk-behind model is closer to \$3,000. Factor in the proportionally lower price of implements, and the two-wheel option starts to look very attractive to the small-scale farmer.

The two best-known brands of single-axle tractors available in North America are BCS and Grillo – both manufactured in Italy, with the durability necessary for agricultural use. Numerous implements are available for all manner of tasks, from working soil, to mowing, to wood splitting and stump grinding. Looking for a seeder, a chipper, or a generator? Yep, there are attachments for those tasks also. The list is too long to include here. Suffice it to say, if you need it they probably make it.

REVERSIBLE HANDLEBARS

Walk-behind tractors feature reversible handlebars, allowing the machine to be operated from either side of the engine. This means you can use either a front- or a rear-mounted attachment, even though there is only one PTO (power take-off). Mowers are front mounted so that you cut the grass or brush before you run over it, while tillers and plows are rear mounted, preventing the engine from compacting the soil after tilling.

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Models are available in various widths, with engines of various sizes made by manufacturers such as Honda, Subaru, and Kohler. The buyer also has the choice of gas or diesel. The latter should last two or three times longer, typically provides better fuel efficiency, and also gives you the option of using biodiesel. However, the diesel engine will be noisier, heavier, and harder to start in the winter, and it will come with a higher price tag than its gas counterpart.

How much land can a walk-behind tractor handle? Theoretically, as much

as you have time for. That said, it's best suited for tilling a maximum of one to three acres, maybe broken up into sections. The top mowing speed is anywhere up to two miles per hour, depending on the model, which most people would find too slow for anything more than an acre or two.

Bear in mind, when choosing a model, who will be using the machine and the type of implements you want to use. A bigger engine is capable of powering a larger range of implements. A wider machine will cover more ground with each pass, but it will be

a lot heavier. Ours is one of the larger ones, and while I have no difficulty tilling our level gardens and fields, I find it a beast to use as a flail mower on sloping ground. While my husband and sons use it easily, I usually feel like I've had a session in the gym after an afternoon of mowing blueberries. But hey, it's far better than a gym membership – and it's the only Ferrari I'll ever have in the barn.

(Jane Fowler operates Blueberry Hills Farm with her husband, John Fowler, in Bear River, N.S.) ●



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