

# Lawn Mower Selection for North Dakota Homeowners

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Regular lawn mowing is a necessity for home-owners with any turfgrass area. Up until 1991, essentially all lawn mowers available for purchase by homeowners were rotaries that either had side discharge chutes or bagging attachments. In many cases it was difficult in fact, to purchase a rotary mower without a catch bag attachment as standard equipment.

With the concern about limiting yard waste becoming an issue nationally, lawn mower manufacturer's developed recycling mowers. Recycling mowers are especially designed to hold the grass clippings longer and chop them finer before blowing them back into the turfgrass canopy.

Returning grass clippings to the lawn offers two advantages: nutrients are returned to the soil, thereby reducing the need to use fertilizers, and the chore of bagging the clippings is eliminated, allowing the mower operator to complete the chore faster. Turf mowed with the new mulching mowers has grass that has nearly the same swept or vacuumed appearance as when the turf surface was mowed with bagging attachments.

A wide selection of newer mower models and types are available; some are push mowers while others are self-propelled. Some models only have the capability to mulch the clippings, while others are adaptable for bag attachments or simply chute discharge. For riding mowers, mulching decks are available that can replace the original equipment.

Mulching mowers are generally 25 to 40 percent more expensive than conventional rotary mowers. Most of the less expensive mulchers start at \$300 and go up from there. In turfgrass experiments conducted in Fargo and Carrington, mulching mowers were used and evaluated for ability to cut through Kentucky bluegrass, tall fescue and other grass species. Self-propelled and push models were used, each with 21-inch cutting swath. The turf areas were mowed weekly at the maximum height of 3 inches. Some weeks the ideal amount of grass was removed on some species, which is 1 inch, while other weeks, because of the heavy rainfall early in the season, 2 to 4 inches had to be removed. In all instances the mowers were capable of handling the greater height, but the turf area needed double mowing to completely break up clumps of mowed grass.

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## What To Look For in a Mulching Mower

Mulching mowers generally have engines with greater power than conventional side-discharge models. Most are either 4 or 5 horsepower, which usually provides more than enough power to handle even the tall grass. In self-propelled models, some power is diverted to the wheels and may cause the engine to lug excessively when attempting to mow grass that is taller than usual. In the self-propelled model tested, the mower could be converted to push mode to concentrate the power at the rotary blade and allow a slower pace that the machine could handle.

A mulching mower will have a doughnut shaped deck and a multipitch blade. The outer section of the blade pulls the grass up in a vacuum created by the high speed rotations and cuts it. The air currents inside the deck then keep the clippings swirling around long enough to be chopped into fine pieces. Finally, the blade's inner curve creates enough air pressure to force the small clippings into the turf where they can decompose.

Once the basic mulchers on the market have been identified, then look for other details to consider to lessen the drudgery of the mowing chore:

**Starter cord location** -- is it conveniently located and easily pulled? A trade-off here may be necessary that is, one that is easily pulled and starts on the first or second pull, compared with one that is located ideally and takes six or more pulls to get it started. Most models have cords located so that the operator has to bend down to pull the cord for starting. In this case, the engine should turn over easily and start on the first or second pull.

**Handle** -- most mowers have adjustable handles to account for variation in height among individual operators. Check to be sure the handle is going to adjust to the operator's height comfortably. A big difference in reducing fatigue in mowing is the presence of foam rubber or rubber covers on the handle to take some of the shock and

vibration out of the user's hands. It is worth a small difference in price to pay for this little convenience.

**Servicing** -- If the mower is going to be serviced 100 percent by a local mower service outlet, then the problem of servicing isn't the owner's. But if the homeowner is going to service the mower -- change the oil and remove the blade for sharpening or replacement, check to be sure the details attending to these functions are convenient or expect to put up with some frustration.

The mowers used on the NDSU plots required having the blade sharpening three times per season in order to get a good cut, especially when the grass was tall. Also, unlike the side discharge or bagger mowers, the mulching mowers needed to be kept clean under the deck in order for them to function properly as mulchers. This means that the underside should be regularly cleaned with water or air pressure to allow for proper air and grass clipping circulation.

Many times the grass had to be mowed when it was both wet and tall, something less than ideal for either the mower or grass. When this happens, the grass should be raked or swept up after the first mowing, then re-mowed at a right angle to the first cut. Generally, no further clean-up is required after the second cut under these conditions.

**Safety** All models on the market have to conform to safety standards for power mowers. This is accomplished by a deadman control that stops the engine and blade as soon as the handle is released. All mowers have a safety flap at the rear of their deck, but it should not drag heavily when the mower is pulled backward.

All safety features installed by the manufacturer should be kept in place or should never be disengaged by the owner.

**Size** Most homeowners will require nothing more than a 19- to 22-inch walk-behind mower to mow a lawn area of between one-quarter acre and one-half acre. If the property is the larger area, it would be worth the investment to get a self-propelled model, as the task of mowing would not be as fatiguing as a push type.

Riding mowers are best suited for larger properties that are without steep hills. What is gained in mowing volume is usually lost in maneuverability; storage is also more of a problem with these models as well. Opt for air-filled tires, rather than hard rubber ones, the difference in comfort and safety is well worth any price difference.

Garden tractors with a mowing attachment have the versatility of doubling as snowplows, are able to haul garden attachments and can cut larger swaths than push-type mowers and many riding mowers. A good feature with these is lower back support on the seat and hydrostatic drive in the transmission for smoother and easier operation.

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## Summary

Like automobiles, mowers in the 1990s come in an array of models with accessories that can add significantly to the price. Use of mulching mowers will require a closer vigilance on turf height than side discharge or bagger models. Cool season grasses are best mowed at 2.5 to 3.0 inches in height, usually the highest setting on homeowner models. In the spring, mowing may have to be every five days instead of once per week in order to maintain a high qualitative appearance. Increasing daylength, fertilization practices and irrigation regimes all impact the rate of top growth of turfgrass.

Side discharge and bagger models will not require the 4 to 5 horsepower engines that are needed by mulcher mowers. When grass is removed in a bagger model, nutrients are also removed, disposal becomes a concern and the task takes longer. Side discharge mowers will mow through tall grass easier than either the mulcher or bagger models. Some mowers are convertible -- mulcher, bagger and discharger. Expect to pay a premium price for these if they are self-propelled.

Since mowing is the most frequent chore carried on between May and October throughout most of North Dakota, the proper selection should be one that will match the homeowner's qualitative expectations, time allowance and role in maintaining environmental quality. Pick the mower that is designed for the type of mowing that will be carried out on the property. Pay for features that are going to be needed or used. Look for comfort, safety and dependability in the price range desired.

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