



Calculating Mowing Times and Productivity

The actual mowing time for different sized mower decks can be calculated by using this formula:

$$108.9 / (\text{mph} \times 0.9 \times \text{mower deck width in inches}) = \text{hours to mow one acre}$$

$$\text{hours to mow one acre} \times 60 \text{ minutes} = \text{minutes to mow one acre}$$

The factor 108.9 includes the acres per hour dimensions and a 10 percent time factor for turning at the end of swaths.

The mowing speed is the miles per hour rating at the recommended mowing gear or the usual ground speed (use 9/10 of the mower deck width to factor in overlapping swaths for a uniform mowing job).

Here's an example: if the normal, safe mowing speed of a 21" walk-behind is 3 mph, then multiply 3 x 18.9 inches (0.9 x 21") to get 56.7. Divide 108.9 by 56.7 and get the answer 1.9206 or 1.92 hrs. Multiply that by 60 minutes to get the answer of 115 minutes.

To mow an acre of lawn (assumed flat with no landscaping obstacles) with a 21" mower deck at 3 mph, it will take approximately **1 hour and 55 minutes**. At this rate you will only be able to mow about 4 acres in about an 8 hour day.

Now, using the same formula and variables as previously stated, here are some of the time advantages that **Encore Equipment** can offer in assisting you with increasing productivity and decreasing your mowing time.

A **36" WB mower** at 3.3 mph ground speed can mow one acre of turf in 61 minutes. That equates to about 8 acres in an average 8 hour working day.

A **48" WB mower** at 3.3 mph ground speed can mow one acre of turf in 46 minutes. That equates to about 11 acres in an average 8 hour working day.

A **60" WB mower** at 3.3 mph ground speed can mow one acre of turf in 37 minutes. That equates to about 13 acres in an average 8 hour working day.

A **Z42 zero-turn riding mower** at 6 mph (top speed is 7 mph) can mow one acre of turf in 29 min. (24 minutes at 7 mph). That equates to about 16 acres in an average 8 hour working day (20 acres at 7 mph).

A **Z52 zero-turn riding mower** at 6 mph (top speed is 7 mph) can mow one acre of turf in 23 min. (20 minutes at 7 mph). That equates to about 21 acres in an average 8 hour working day (24 acres at 7 mph).

A **61" zero-turn riding mower** at 6 mph (top speed is 7 mph) can mow one acre of turf in 20 min. (17 minutes at 7 mph). That equates to about 24 acres in an average 8 hour working day (28 acres at 7 mph).