

Evolving Landscape of Lawn Mowers

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Table of contents:

Executive Summary	3
Looking Back: A Timeline of Lawn Mower History	4
Emerging Market Trends	4
Electric and Battery powered options	4
Robotics and automation	5
Environmental Societal and Regulatory Trends	5
Ban on Gas Powered Lawn Mowers	5
Limits on water usage	6
Demand for Lawn Mowing Services	6
Market Analysis	7
Market Leaders	7
Market Segments	8
Regional Market Analysis and Growth	9
Looking Forward	11
Market and Growth Trends	11
Recommendations	11
Sources	13

Executive Summary

The global lawn mower market is on a strong growth trajectory and is projected to exceed \$40 billion in value in the next decade. In this landscape we will examine the emerging trends in technology, regulatory changes and societal norms, and offer projections for what this may mean for the lawn mower industry. This is an industry with a rich history of change and disruption, and we project it will continue to see growth and rapid change over the next ten years.

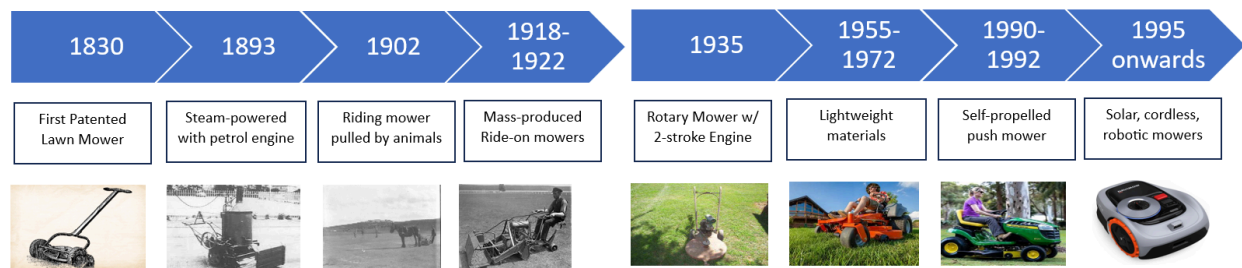
What is driving this transformation? Electric and battery powered mowers are growing as environmental concerns push consumers away from gas powered models. These quieter and cleaner machines are reshaping how we think about lawn care. Robotic mowers are also hitting the scene. These mowers use GPS and remote control tech to make lawn maintenance easy for consumers. Consumers are most interested in options that offer obstacle avoidance, mobile app connectivity and other convenience features.

The lawn mower landscape is rich with competition. A handful of power players dominate the market, fueling the race for new features and product innovation. In spite of the competitive landscape, emerging regional segments may leave room for new products.

The lawn mower industry is a strong bet for companies that want to turn innovation and change into growth for their business. There are new technologies on the scene today, some of which have already been proven out in the market, some of which can still be iterated upon. The market is projected to grow dramatically in the next decade, and while it is a very competitive landscape there is room for the business to fill emerging niches in the residential market.

Looking Back: A Timeline of Lawn Mower History

In 1830, the first mechanical lawn mower was patented. Since then, we've seen the advent of steam powered mowers, gas engines, mass production, the invention of the two stroke motor lawn mower in the 1900's and, a revolution, the riding mower was introduced in 1918, late in the 20th century, the lawn mower evolved into the machines we are familiar with today, with a focus on lightweight materials and more powerful engines. We didn't get a riding mower that users would recognize in today's world until around the 1950s. By the 90s, the self propelled push mower was gaining popularity. This race to advancement continues today with robotics, cordless mowers, new engine types, and more.



Since the beginning of the industry, there's been a continuous pursuit of efficiency and innovation in lawn mower development, from mechanical devices to modern robotic and green designs.

Emerging Market Trends

Electric and Battery powered options

One key driver of change is the shift toward electric and battery powered lawn mowers. Consumers are moving away from gas powered mowers as environmental awareness grows in society. Lower emissions, quieter operation, and reduced maintenance and overhead are appetizing features for modern consumers.. This trend is most evident in the U.S., where demand for eco-friendly mowers is growing.

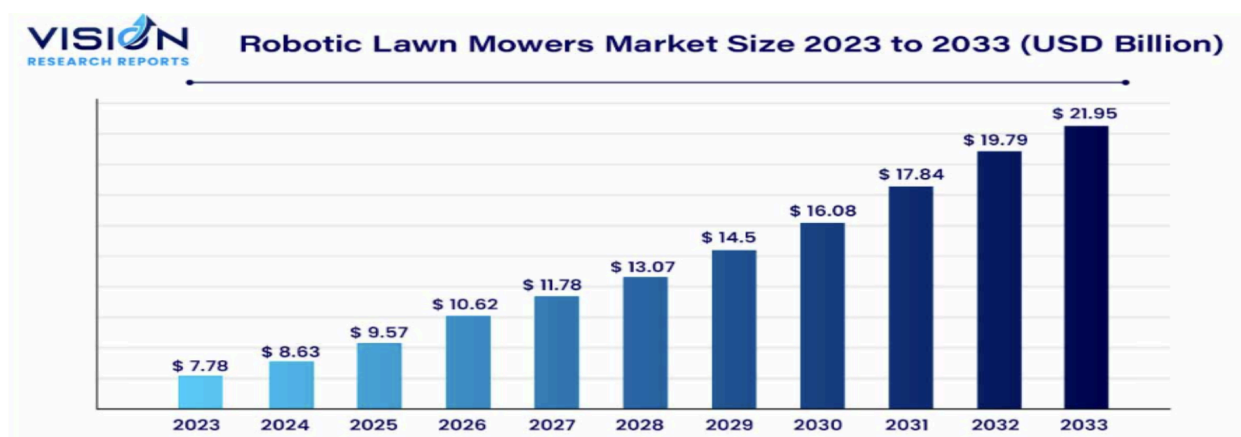
Advancements in battery technology are part of what is driving this change as well. We predict that advancements in battery technology that yeild longer battery life and faster more efficient charging will only accellorate this trend.

Robotics and automation

Robotic mowers have burst onto the scene and continue to grow their share of the market. These models are appealing because of the convenience they offer, and the handy complimentary features including GPS and remote control via mobile apps.

Manufacturers enhance their products with features like smartphone connectivity, GPS, and obstacle awareness. These advancements improve usability and offer more precise lawn care.

The robotic lawn mower market is expected to more than double its share of the market size by 2033. It is the fastest growing product segment.



Environmental Societal and Regulatory Trends

The lawn care industry is seeing transformation driven by environmental concerns, changing societal norms, and new environmental regulations.

Ban on Gas Powered Lawn Mowers

In 2024 California introduced a new Green Lawn Care Law. It prohibits the sale of new gas powered lawn mowers. This law aims to reduce carbon emissions and encourage the adoption of environmentally friendly alternatives. As other states consider similar regulations, we predict that manufacturers and retailers will see increased demand for electric and robotic mowers.

Limits on water usage

Water conservation efforts are intensifying in drought prone regions like California and parts of Texas. Cities like Round Rock, Texas, are implementing year round restrictions on outdoor water use. Not only will these measures directly impact lawn mower sales, but they will also serve to

raise awareness about the limitations of artificial lawns in absorbing water into the soil for long term drought prevention, which may have positive impacts on the industry.



A drought tolerant yard in Los Angeles, CA

Demand for Lawn Mowing Services

Nearly 40% of households in the U.S. now hire professional lawn mowing help. This may contribute to the increasing adoption of electric, robotic lawn mowers, which address environmental concerns and labor shortages.

Market Analysis

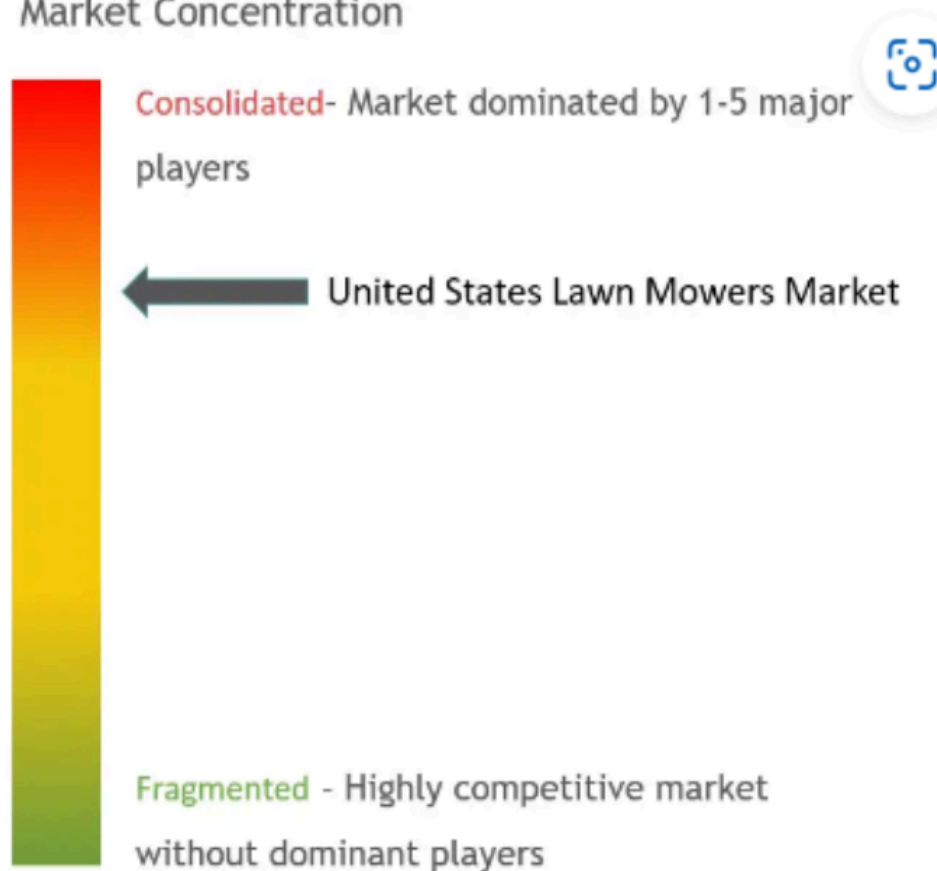
Market Leaders

There are five top companies in this market

- **Deere & Company** A giant competitor with diverse range of products and incredible global reputation. Deere & Co is diversified into markets including residential, industrial, and agriculture
- **The Toro Company** With a focus on endurance and performance, Toro is a key player in the sports and fields market. Its partnership with Lowe's further strengthens its distribution and customer reach
- **Kubota Corporation** Positioned as a go to brand for homeowners looking for high quality, professional grade mowing experiences, Kubota caters to the premium segment of the market
- **Stanley Black and Decker** B&D is known for their focus on the customer experience of their products. You can find their products in your local hardware store, grocery, even department stores. This is a brand that inspires loyalty among consumers.
- **American Honda Motor Company** A standout for its reliability and fuel efficient engines, Honda offers a variety of lawn mowers and power equipment. Also notable: Honda has incredible global reach.

It's a consolidated market, although there are several successful smaller players, the top companies rely on brand recognition and large scale partnerships with companies like Lowes to earn and advantage. These companies leverage strong brand reputations, extensive distribution networks, and cutting edge technology to maintain their lead. Even so, intense competition within the market has spurred innovation, leading to better, more sustainable products.

Market Concentration

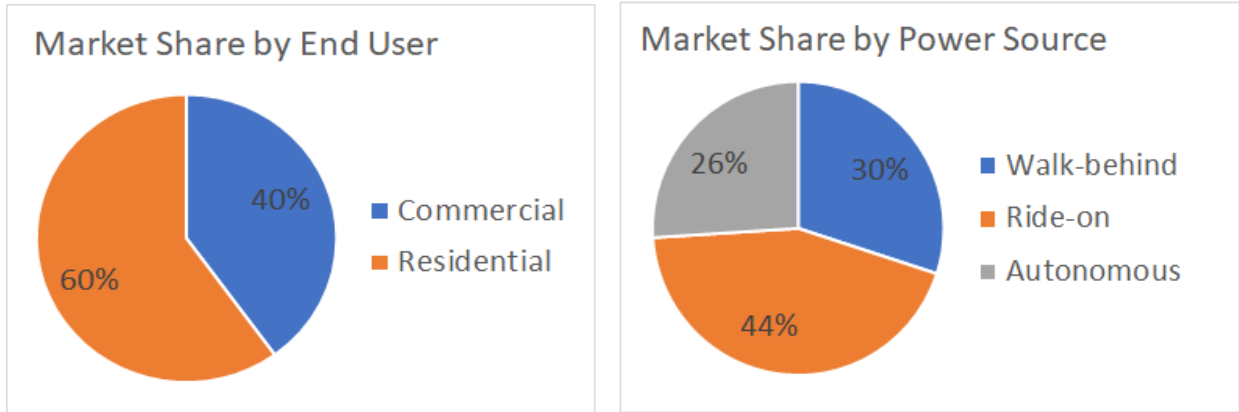


The top 5 players in the market share a lot of common strengths and weaknesses. When researching them we found common themes. They are all strong on quality, reliability and durability, but we see some gaps when it comes to energy efficiency and price. This leaves room for smaller competitors to find niche markets.

Residential users play a significant role in the growing demand for lawn mowers. Lifestyle changes and the rise of remote work are impacting this market. Manufacturers targeting individual homeowners are finding opportunities to meet their needs with unique product offers customized to their needs.

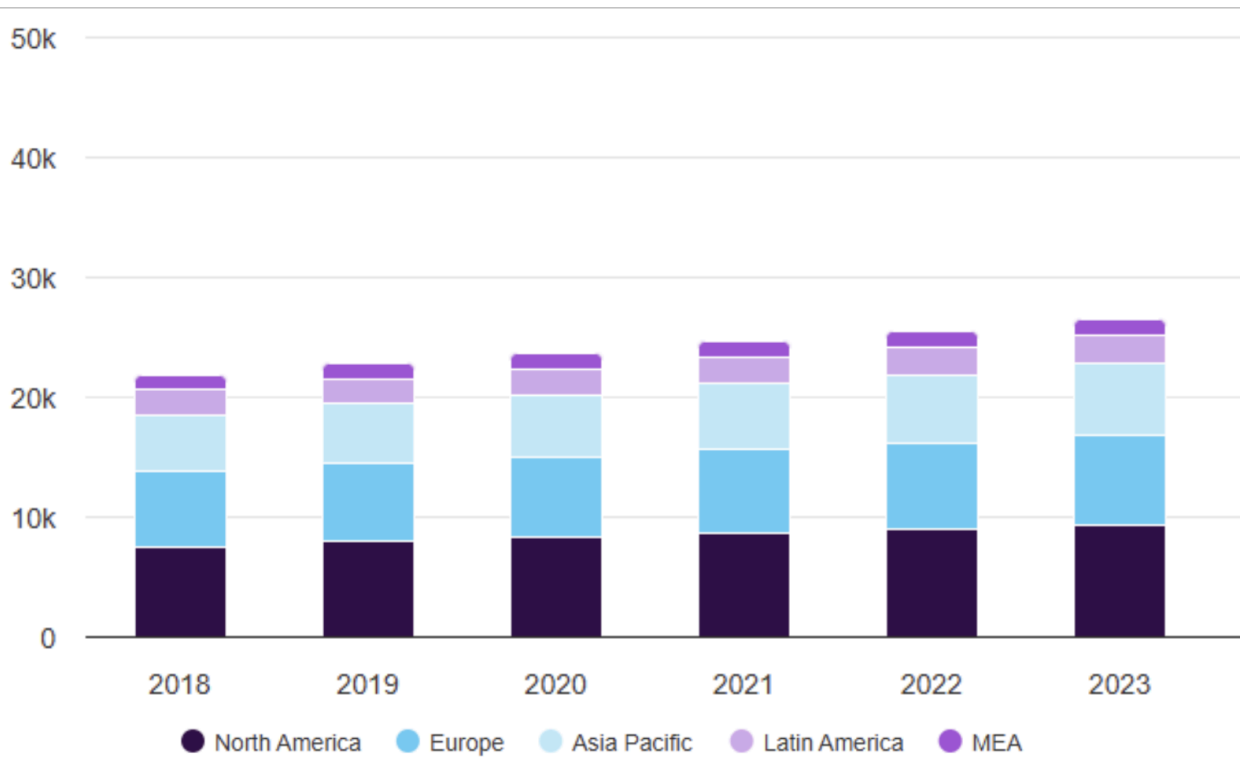
Market Segments

- The market is expected to grow at a compound annual growth rate (CAGR) of 6.0% from 2023 to 2030
- It is expected to reach over 40 billion USD by 2030
- The residential segment holds around half of the market, valued at 16 Billion USD



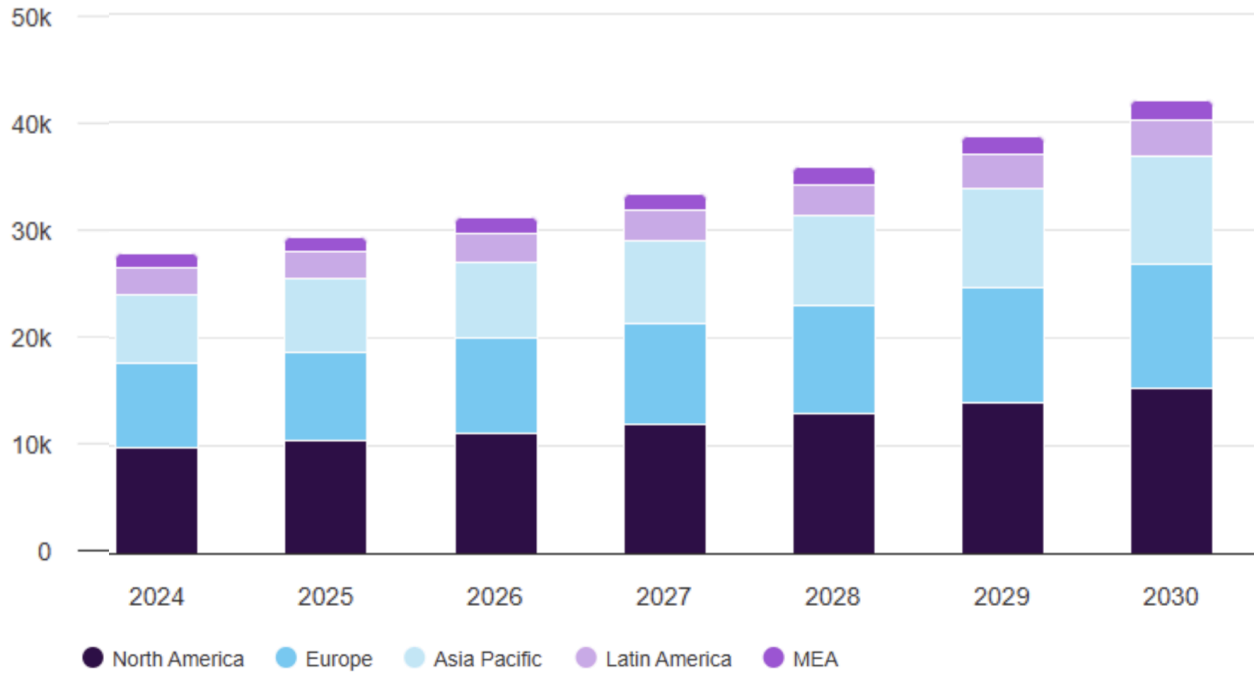
Regional Market Analysis and Growth

- The global market value is estimated at \$25-30B
- The US Market size is 39% of the global market, with an annual growth rate of 7.1%
- Asia Pacific region is expected to see the highest CAGR of 8.28%



2018-2023 market segments

Regionally, the U.S. remains the largest market for lawn mowers, reflecting strong consumer interest in outdoor maintenance. Still, Asia is seeing rapid growth in the market because of urbanization and construction, presenting new opportunities for expansion.



Projected regional market growth

Looking Forward

Market and Growth Trends

The lawn mower industry, already worth billions, is expected to grow dramatically through 2030.

- Regional Growth:
 - The U.S. is the largest market in the landscape, with a CAGR of 7.1%
 - Asia is growing even faster, and is likely to surpass other markets with a CAGR of 8.28%
- Consumer Preferences:
 - Electric lawn mowers are gaining popularity as consumers become more interested in eco-friendly solutions. We also see a shift towards convenience as a large portion of the market hires out their lawn care, or has already adopted robotic options.
- Technological innovation:
 - Robotic mowers with advanced features like obstacle avoidance and navigation are gaining in popularity.
 - Smart connectivity with GPS, IOT sensors, and remote controls for user convenience are becoming more widely available.
 - Advanced applications, such as smart scheduling, route optimization, and controlling lawn mowers with a mobile app, are also newly available.

Recommendations

We recommend that lawn mower manufacturers should adopt the following strategies to succeed in the growing market:

- Target the U.S. Residential Market:
 - Focus on the growing robotic lawn mowers market, which is gaining interest among consumers looking for convenience
- Alternative Power Sources
 - Focus on robotic mowers with solar charging capability
- Extend multifunctionality to robotic mowers
 - Mowers for seeding, spraying fertilizer, weed killer
- Enhance Smart Features
 - Build a competitive advantage through advanced autonomous features like smart connectivity and advanced autonomous features, possibly with AI
- Utilize data to highlight opportunities for cross selling
 - Incorporate AI analysis to recognize grass types and recommend complementary products, upgrades, or services (e.g., Fertilizers, irrigation systems, etc.)

The lawn mower market is evolving rapidly, as it always has. This evolution is driven by consumer demand for sustainability, ease of use, and cutting edge technology. Companies that prioritize innovation, expand into high growth segments, and address environmental concerns will be positioned well to lead this dynamic market.

Sources

Dutta, P. P., Baruah, A., Konwar, A., & Kumar, V. (n.d.). A Technical Review of Lawn Mower Technology. ADBU-Journal of Engineering Technology.

MarketsandMarkets. (2023, September). Artificial Turf Market by Material Type (Nylon, Polypropylene, Polyethylene), Filament Type (Monofilament, Multi-Filament), End-Use Industry (Building & Construction, Automotive, Artificial Grass), and Region - Global Forecast to 2028. MarketsandMarkets. Retrieved November 26, 2024, from <https://www.marketsandmarkets.com/Market-Reports/artificial-turf-market-121486580.html>

Unknown. California's Green Lawn Care Law: What You Need to Know. Retrieved November 26, 2024, from <https://www.gardendesign.com/california/lawn-care-law/>

Grand View Research. (n.d.). Commercial Lawn Mower Market Size & Growth Report, 2030. Grand View Research.

Straits Research. (n.d.). Lawn Mower Market : Global Analysis and Forecast 2024-2030. Straits Research. Retrieved November 26, 2024, from <https://straitsresearch.com/report/lawn-mower-market/>

Precedence Research. (n.d.). Lawn Mowers Market Size US\$ 56.3 Billion by 2032. Precedence Research. Retrieved November 26, 2024, from <https://www.precedenceresearch.com/lawn-mowers-market>

Grand View Research. (n.d.). Lawn Mowers Market Size, Share And Growth Report, 2030. Grand View Research. Retrieved November 26, 2024, from <https://www.grandviewresearch.com/industry-analysis/lawn-mowers-market>

SCAG. (n.d.). The Difference Between Residential and Commercial Lawn Mowers - SCAG Australia. SCAG Power Equipment. Retrieved November 26, 2024, from <https://www.scagaustralia.com.au/blog/the-difference-between-residential-and-commercial-lawn-mowers/>

Credence Research. (n.d.). U.S. Lawn Mower Market Size, Growth & Forecast 2032. Credence Research. Retrieved November 26, 2024, from <https://www.credenceresearch.com/report/us-lawn-mower-market>

Fact.MR. (2019, August). Lawn Mowers Market Size, Share and Statistics - 2034. Fact.MR. Retrieved November 26, 2024, from <https://www.factmr.com/report/3900/lawn-mowers-market>

Allied Market Research. (n.d.). Lawn Mowers Market Size, Trends, Growth, Forecast till 2030. Allied Market Research. Retrieved November 26, 2024, from <https://www.alliedmarketresearch.com/lawn-mowers-market-A11077>

New Jersey to ban the sale of new gas-powered cars by 2035. <https://www.teslarati.com/new-jersey-gas-car-ban-2035/>