

**Electric Tractor Market by Propulsion (Battery, Hybrid & Hydrogen), Capacity (<50, 51-100 & >100kWh), Chemistry (LFP & NMC), Hybrid Tractor (<50, 51-100 & >100HP), Function (Agriculture, Utility & Industrial) and Region - Global Forecast to 2030**

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**Report description:**

The electric tractor market is estimated to grow from USD 0.7 billion in 2024 to USD 3.4 billion by 2030, at a CAGR of 28.3%. The increasing demand for precision agriculture, stringent emission norms and regulations, development in battery technology, and customized electric tractors used in greenhouses, vineyards, & dairy applications will drive the electric tractors market in coming years. In addition, OEMs are showcasing their prototypes for hybrid, hydrogen, and electric tractors, creating a lucrative environment for the widespread adoption of electric tractors globally.

"The 51-100 HP hybrid electric tractor segment would be the fastest-growing market."

Hybrid tractors with 51-100 HP power output have a wide range of offerings, efficiency, and versatility, which makes them ideal for small to medium-sized farms and diverse agricultural tasks. These hybrids integrate diesel engines with electric power systems, reducing fuel consumption and emissions while maintaining performance. Hybrid tractors are commonly used in the Americas and Europe to cater to mixed farming and livestock operations, aligning with sustainability goals and regulatory requirements. Mixed farming involves various tasks such as fieldwork, planting, harvesting, and livestock management, where 51-100 HP hybrid tractors offer the versatility needed to perform these tasks efficiently, making them ideal for mixed farming operations where flexibility is essential.

Mixed farming is widespread in North America, particularly in regions with a temperate climate conducive to crop cultivation and livestock grazing. States like Iowa, Nebraska, & Kansas, known for their corn and soybean production alongside beef and dairy farming, are prime markets for 51-100 HP hybrid tractors. Also, some European countries, like France, Germany, and the UK, have a long history of mixed farming practices. Europe also has some major vital players who are into manufacturing hybrid tractors

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named Landini, AUGA, Steyr, Antonio Carraro, HAV, and International Tractors Limited, who are continuously innovating and introducing advanced hybrid tractors tailored to the needs of European farmers. For instance, companies like Antonio Carraro launched the TTR 7600 Infinity, a wide-track, reversible drive tractor with a hybrid mechanical-hydrostatic transmission. It has a 75 HP Kohler turbo STAGE 5, 4-cylinder engine, 16V, and 2482 cc. Also, Landini showcased the REX4 Electra at EIMA 2021 in October 2021. This hybrid electric tractor had a nominal output of 50kW (67HP). Adding further, an Indian company named HAV also launched its three models, S1 Series 45, S1 Series 50, and S1 Series 55, hybrid electric tractors in August 2021. This vehicle reduces emissions to some extent and increases fuel efficiency.

Moreover, advancements in battery technology and electric drivetrain systems drive the growth of hybrid electric tractors in this segment. These examples showcase the growing interest and investment in hybrid electric tractor technology, paving the way for a more sustainable future in agriculture.

"<50 kWh battery capacity segment holds the second largest market in the electric tractor market."

Electric tractors with battery capacities below 50 kWh are often designed for light to moderate-duty applications, such as landscaping, small-scale farming, and specialty crop production. These tractors are typically used on smaller farms, orchards, vineyards, and urban agriculture settings where compact size and maneuverability are prioritized. While they have limited range and power compared to larger models, they offer agility and ease of use. Furthermore, electric tractors in this battery capacity range often come at a lower price, making them more accessible to small-scale farmers.

India, China, and the US hold smaller farming lands, which have a significant demand for compact and affordable agricultural machinery tailored to the needs of small-scale farmers. <50 kWh electric tractors offer an ideal solution, providing maneuverability and lower upfront costs compared to larger models, thus aligning well with the scale and requirements of smallholder operations. OEMs from this region have launched some electric tractor models. For instance, Escot Kubota launched FT25G, a 25 HP electric tractor for small farms, in August 2020. Soletrac e25G Gear, a 25HP electric tractor, offers versatility and eco-friendliness at an accessible price point and power.

The infrastructure for fast-charging high-capacity batteries in rural areas, where these tractors are primarily used, still needs to be improved. Smaller batteries can be charged using existing infrastructure, making them a more feasible option in the current landscape. Hence, the <51 kWh battery capacity segment in electric tractors will rapidly expand due to its optimal power range, technological advancements, and supportive regulatory environment.

"Asia Pacific is the second largest electric tractor market globally."

The Asia Pacific region is emerging as a significant driver of the electric tractor market, fueled by several factors. Firstly, the region's rapidly expanding agricultural sector, particularly in countries like India and China, presents a substantial market opportunity for electric tractors. Moreover, government initiatives and policies aimed at promoting electric vehicles and reducing carbon emissions are providing a significant impetus to the electric tractor market in the Asia Pacific region. Countries like India and China will start giving subsidies, incentives, and tax breaks in coming years to encourage the electric tractors. .

China has also witnessed a surge in electric tractor production, with several domestic manufacturers entering the market. Companies like YTO Group and Foton Lovol are developing and launching new electric tractor models. Some recent developments in the Asia Pacific region for electric and hydrogen tractors showcase the exploration of hydrogen fuel cell technology from key players in the Asia Pacific region. For instance, TAFE, an Indian tractor manufacturer, unveiled a concept hydrogen tractor at the Agritechnica trade fair in 2023, held in Hannover, Germany. This tractor is still in the early stages of development. Still, it highlights the growing interest in hydrogen-powered agricultural equipment and showcases the potential to reduce emissions in the farming sector. Also, Chinese companies like Sinohytec and Weichai Power are developing and testing hydrogen tractor prototypes.

Moreover, Jiangsu Yueda Intelligent Agricultural Equipment Co, Ltd also showcased their electric tractor model YL254-ET, a battery electric tractor priced around USD 13,000 - 14,000. Kubota Corporation (Japan) has also released a prototype of a fuel cell tractor in 2023 and launch the world's first hydrogen-powered fuel cell tractor in 2025. The medium to large tractors will have 50 to 100 horsepower. Some of the primary industry players from the Asia-Pacific region include Yanmar Holdings Co. Ltd, YTO Group, Kubota Corporation, TAFE, ITL, Sonalika, HAV, and AutoNXT Automation Pvt Ltd. Overall, the Asia-Pacific region presents a promising future for the electric tractor market due to a combination of growing demand, supportive government policies and increasing awareness of sustainable practices. However, overcoming challenges like affordability and infrastructure development

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will be vital for widespread adoption in the region.

The break-up of the profile of primary participants in the automotive smart antenna market:

By Companies: OEMs - 80%, Tier 1 - 20%

By Designation: Directors- 20%, C-Level Executives - 50%, Manager level - 30%

By Region: North America - 20%, Europe - 30%, APAC - 40%, and Rest of the World - 10%

Global players dominate the electric tractor market and comprise several regional players. The key players in the electric tractor market are Kubota Corporation (Japan), Soletrac (US), AGCO Corporation (US), CNH Industries NV (Netherlands), and Escorts Kubota Limited (India).

Research Coverage:

The Electric tractor market by Propulsion (Battery Electric, Hybrid Electric, Hydrogen), By Battery Chemistry (Lithium Iron Phosphate (LFP), Lithium nickel manganese cobalt oxides (LI-NMC), Others), Hybrid Electric Tractor Market, By Power Output (<50 HP, 51-100 HP, and >100 HP), By Battery Capacity (<50 KWh, 51-100 KWh, and >100 KWh), By Function (Agriculture & Forestry, Utility, and Industrial), By Region (Asia Pacific, Europe, and Americas).

The report's scope covers detailed information regarding the major factors influencing the growth of the electric tractor market. A detailed analysis of the key industry players has provided insights into their business overview, products, key strategies, contracts, partnerships, agreements, new product launches, mergers and acquisitions, recession impact, and recent electric tractor market developments.

Key Benefits of Buying the Report:

The report will help the market leaders/new entrants with information on the closest approximations of the revenue numbers for the overall electric tractor market and the sub-segments. This report will help stakeholders understand the competitive landscape and gain insights to position their businesses better and plan suitable go-to-market strategies. The report also helps stakeholders understand the market pulse and provides information on key market drivers, restraints, challenges, and opportunities.

The report provides insights on the following pointers:

?□Analysis of key drivers (Government stringent emission norms and regulations, and Incentives on EV tractors and finance credits), restraints (Technological and operational challenges), opportunities (Emergence of hydrogen fuel-powered electric tractors, integration of OEMs with battery manufacturers, and use of electric tractors in the greenhouse), and challenges (High cost of electric tractors) influencing the growth of the electric tractor market.

?□Product Development/Innovation: Detailed insights on upcoming technologies and new products launched in the electric tractor market.

?□Market Development: Comprehensive market information - the report analyses the authentication and brand protection market across varied regions.

?□Market Diversification: Exhaustive information about new products & services, untapped geographies, recent developments, and investments in the electric tractor market.

?□Competitive Assessment: In-depth assessment of market shares, growth strategies, and service offerings of leading players like Kubota Corporation (Japan), Soletrac (US), AGCO Corporation (US), CNH Industries NV (Netherlands), and Escorts Kubota Limited (India) among others in the electric tractor market.

## Table of Contents:

1□INTRODUCTION□24

1.1□STUDY OBJECTIVES□24

1.2□MARKET DEFINITION□24

1.2.1□INCLUSIONS AND EXCLUSIONS□25

TABLE 1□INCLUSIONS AND EXCLUSIONS□25

1.3□STUDY SCOPE□25

FIGURE 1□MARKET SEGMENTATION□25

1.3.1□REGIONS COVERED□26

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1.3.2	YEARS CONSIDERED	26
1.4	CURRENCY CONSIDERED	26
TABLE 2	CURRENCY EXCHANGE RATES	27
1.5	UNIT CONSIDERED	27
1.6	STAKEHOLDERS	27
2	RESEARCH METHODOLOGY	28
2.1	RESEARCH DATA	28
FIGURE 2	RESEARCH DESIGN	28
FIGURE 3	RESEARCH PROCESS FLOW	29
2.2	SECONDARY DATA	29
2.2.1	SECONDARY SOURCES REFERRED TO FOR ESTIMATING ELECTRIC TRACTOR SALES	30
2.2.2	KEY DATA FROM SECONDARY SOURCES	31
2.3	PRIMARY DATA	32
FIGURE 4	BREAKDOWN OF PRIMARY INTERVIEWS	32
2.3.1	SAMPLING TECHNIQUES AND DATA COLLECTION METHODS	33
2.3.1.1	Primary participants	33
2.4	MARKET SIZE ESTIMATION	34
FIGURE 5	HYPOTHESIS BUILDING	34
2.4.1	BOTTOM-UP APPROACH	35
FIGURE 6	BOTTOM-UP APPROACH	35
2.4.2	TOP-DOWN APPROACH	36
FIGURE 7	TOP-DOWN APPROACH	36
2.5	FACTOR ANALYSIS	36
2.6	RECESSION IMPACT ANALYSIS	37
2.7	DATA TRIANGULATION	38
FIGURE 8	DATA TRIANGULATION	38
2.8	RESEARCH ASSUMPTIONS AND RISK ASSESSMENT	39
TABLE 3	RESEARCH ASSUMPTIONS AND RISK ASSESSMENT	39
2.9	RESEARCH LIMITATIONS	40
3	EXECUTIVE SUMMARY	41
3.1	REPORT SUMMARY	41
3.2	INTRODUCTION	41
FIGURE 9	EUROPE TO HOLD LARGEST MARKET SHARE FOR ELECTRIC TRACTORS DURING FORECAST PERIOD	43
4	PREMIUM INSIGHTS	44
4.1	ATTRACTIVE OPPORTUNITIES FOR PLAYERS IN ELECTRIC TRACTOR MARKET	44
FIGURE 10	ADVANCEMENTS IN BATTERY TECHNOLOGY TO DRIVE MARKET	44
4.2	ELECTRIC TRACTOR MARKET, BY PROPULSION	44
FIGURE 11	BATTERY ELECTRIC SEGMENT TO ACQUIRE MAXIMUM MARKET SHARE IN 2030	44
4.3	ELECTRIC TRACTOR MARKET, BY BATTERY CAPACITY	45
FIGURE 12	51-100 KWH TO BE LARGEST SEGMENT DURING FORECAST PERIOD	45
4.4	ELECTRIC TRACTOR MARKET, BY BATTERY CHEMISTRY	45
FIGURE 13	LITHIUM IRON PHOSPHATE TO SURPASS OTHER SEGMENTS DURING FORECAST PERIOD	45
4.5	ELECTRIC TRACTOR MARKET, BY FUNCTION	46
FIGURE 14	AGRICULTURE & FORESTRY TO SECURE LEADING MARKET POSITION DURING FORECAST PERIOD	46
4.6	HYBRID ELECTRIC TRACTOR MARKET, BY POWER OUTPUT	46
FIGURE 15	51-100 HP TO HOLD LARGEST MARKET SHARE IN 2030	46
4.7	ELECTRIC TRACTOR MARKET, BY REGION	47

FIGURE 16	EUROPE TO BE LARGEST MARKET FOR ELECTRIC TRACTORS DURING FORECAST PERIOD	47
5	MARKET OVERVIEW	48
5.1	INTRODUCTION	48
5.2	MARKET DYNAMICS	49
FIGURE 17	DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES	49
5.2.1	DRIVERS	49
5.2.1.1	Stringent emission norms and regulations	49
FIGURE 18	NON-ROAD MOBILE MACHINERY (NRMM) EMISSION REGULATION OUTLOOK, 2019-2030	50
TABLE 4	BHARAT STAGE IV VS. BHARAT STAGE V REGULATIONS FOR PM LIMITS	50
TABLE 5	BHARAT STAGE IV VS. BHARAT STAGE V REGULATIONS FOR PN LIMITS	51
TABLE 6	NOX AND PM SAVINGS IN INDIA, BY EQUIPMENT TYPE, 2020-2045 (KILOTON)	51
TABLE 7	EURO STAGE IV, V, AND VI REGULATIONS FOR HEAVY-DUTY DIESEL ENGINES (G/KWH)	51
5.2.1.2	Incentives on electric tractors and finance credits	52
TABLE 8	INCENTIVES AND SUBSIDIES BY KEY COUNTRIES	52
FIGURE 19	GOVERNMENT INCENTIVES AND POLICIES CLOSING PRICE GAP BETWEEN ELECTRIC AND DIESEL TRACTORS	53
5.2.2	RESTRAINTS	54
5.2.2.1	Technological and operational issues	54
5.2.3	OPPORTUNITIES	55
5.2.3.1	Emergence of hydrogen fuel-powered electric tractors	55
TABLE 9	COMPARISON BETWEEN DIESEL, ELECTRIC, AND FCE TRACTORS	55
TABLE 10	RECENT DEVELOPMENTS RELATED TO HYDROGEN MANUFACTURING	56
5.2.3.2	Integration of OEMs with battery manufacturers	57
TABLE 11	TOP BATTERY MANUFACTURERS SUPPLYING BATTERIES TO OEMS	57
5.2.3.3	Use of electric tractors in greenhouse	57
TABLE 12	GREENHOUSE EMISSION REGULATIONS	58
5.2.4	CHALLENGES	58
5.2.4.1	High cost of electric tractors	58
TABLE 13	COST COMPARISON OF DIESEL AND ELECTRIC TRACTORS OVER TCO OF 5 YEARS IN INDIA	59
TABLE 14	PRICE COMPARISON OF DIESEL AND ELECTRIC TRACTORS	59
5.3	TRENDS AND DISRUPTIONS IMPACTING CUSTOMER BUSINESS	60
FIGURE 20	TRENDS AND DISRUPTIONS IMPACTING CUSTOMER BUSINESS	60
5.4	SUPPLY CHAIN ANALYSIS	61
FIGURE 21	SUPPLY CHAIN ANALYSIS	62
TABLE 15	ROLE OF COMPANIES IN SUPPLY CHAIN	63
5.5	PRICING ANALYSIS	64
5.5.1	BY BATTERY CHEMISTRY	64
TABLE 16	AVERAGE SELLING PRICE TREND OF ELECTRIC TRACTORS, BY BATTERY CAPACITY, 2021-2023 (USD)	64
5.5.2	BY REGION	65
TABLE 17	AVERAGE SELLING PRICE TREND OF ELECTRIC TRACTORS, BY REGION, 2021-2023 (USD)	65
5.6	CASE STUDY ANALYSIS	65
5.6.1	SOLETRACTAC'S SOLUTIONS FOR MUSHROOM FARMS	65
5.6.2	ELECTRIC TRACTORS FOR SUSTAINABLE AGRICULTURAL PRACTICE BY AGRIMACS INC.	65
5.6.3	CALIFORNIA GOVERNMENT FOCUSES ON FARMS TO GO GREEN WITH ZERO EMISSIONS	66
5.6.4	MONARCH TRACTORS SAVES USD?2,600 PER YEAR FOR WENTE VINEYARDS	67
5.6.5	PACIFIC NORTHWEST ELECTRIC TRACTOR BARRIERS STUDY	67
5.6.6	CHALLENGES RELATED TO AUTOMATION AND ELECTRIFICATION OF TRACTORS ADDRESSED BY DR. JIANFENG ZHOU	68
5.7	PATENT ANALYSIS	69

TABLE 18 INNOVATIONS AND PATENTS, 2021-2024 69

5.8 TRADE ANALYSIS 73

5.8.1 IMPORT DATA 73

TABLE 19 US: IMPORT DATA, BY COUNTRY (%) 73

TABLE 20 FRANCE: IMPORT DATA, BY COUNTRY (%) 73

TABLE 21 GERMANY: IMPORT DATA, BY COUNTRY (%) 73

TABLE 22 CANADA: IMPORT DATA, BY COUNTRY (%) 74

TABLE 23 UK: IMPORT DATA, BY COUNTRY (%) 74

TABLE 24 POLAND: IMPORT DATA, BY COUNTRY (%) 74

5.8.2 EXPORT DATA 75

TABLE 25 ITALY: EXPORT DATA, BY COUNTRY (%) 75

TABLE 26 FRANCE: EXPORT DATA, BY COUNTRY (%) 75

TABLE 27 NETHERLANDS: EXPORT DATA, BY COUNTRY (%) 75

TABLE 28 CANADA: EXPORT DATA, BY COUNTRY (%) 76

TABLE 29 CHINA: EXPORT DATA, BY COUNTRY (%) 76

5.9 TECHNOLOGY ANALYSIS 76

5.9.1 AUTONOMOUS AND SEMI-AUTONOMOUS DRIVING 76

TABLE 30 PRODUCTS LAUNCHED BY CRITICAL PLAYERS FOR AUTONOMOUS AND SEMI-AUTONOMOUS ELECTRIC TRACTORS 77

5.9.2 PRECISION AGRICULTURE 77

FIGURE 22 PRECISION FARMING ADOPTION DATA OF US FARMERS WITH INCREASING YIELD, 1996-2019 78

5.9.3 TELEMATICS AND REMOTE MONITORING 79

5.9.4 FUTURE BATTERY CHEMISTRY 80

FIGURE 23 COMPARISON OF SOLID-STATE VS. LITHIUM-IRON BATTERIES 80

5.9.5 H<sub>2</sub>ICE AS FUEL 81

5.9.6 BATTERY SWAPPING TECHNOLOGY 81

5.10 ECOSYSTEM MAPPING 82

FIGURE 24 OFF-HIGHWAY VEHICLE MARKET: ECOSYSTEM MAPPING 82

FIGURE 25 KEY PLAYERS IN ECOSYSTEM 83

5.11 REGULATORY LANDSCAPE 84

TABLE 31 REGULATION STANDARDS SET FOR ELECTRIC TRACTORS, BY REGION/COUNTRY 84

5.11.1 REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS 85

5.11.1.1 North America 85

TABLE 32 NORTH AMERICA: REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS 85

5.11.1.2 Europe 85

TABLE 33 EUROPE: REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS 85

5.11.1.3 Asia Pacific 86

TABLE 34 ASIA PACIFIC: REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS 86

5.12 KEY STAKEHOLDERS AND BUYING CRITERIA 86

5.12.1 BUYING CRITERIA 86

FIGURE 26 KEY BUYING CRITERIA FOR ELECTRIC TRACTORS 86

TABLE 35 KEY BUYING CRITERIA FOR TRACTORS 88

5.12.2 KEY STAKEHOLDERS 89

TABLE 36 INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS OF TRACTORS 89

5.13 KEY CONFERENCES AND EVENTS 89

TABLE 37 KEY CONFERENCES AND EVENTS, 2024-2025 89

5.14 BATTERY TECHNOLOGY 90

5.14.1 BATTERY RANGE VS. UNLADEN MASS 90

TABLE 38	ELECTRIC TRACTOR MODEL WITH VEHICLE RANGE VS. UNLADEN MASS	91
5.14.2	BATTERY RANGE VS. BATTERY TEMPERATURE	91
FIGURE 27	BATTERY DISCHARGE TEMPERATURE	92
5.14.3	BATTERY DENSITY VS. BATTERY CHEMISTRY	92
TABLE 39	BATTERY CHEMISTRIES FOR HDV APPLICATIONS (TRACTORS)	92
5.14.4	BATTERY CHARGING POWER VS. BATTERY RANGE	93
TABLE 40	TRACTOR MODELS WITH THEIR BATTERY CHARGER CAPACITIES AND BATTERY RANGES	93
5.15	TOTAL COST OF OWNERSHIP	94
FIGURE 28	TOTAL COST OF OWNERSHIP: ELECTRIC AND DIESEL TRACTORS	94
5.16	INVESTMENT AND FUNDING SCENARIO	95
FIGURE 29	INVESTMENT SCENARIO, 2020-2024	96
TABLE 41	LIST OF FUNDING IN 2021-2024	96
5.17	POWER TAKE-OFF (PTO)	96
TABLE 42	ELECTRIC TRACTOR MODELS WITH PTO OFFERINGS	97
6	ELECTRIC TRACTOR MARKET, BY PROPULSION	98
6.1	INTRODUCTION	99
FIGURE 30	ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024 VS. 2030 (USD MILLION)	99
TABLE 43	ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS)	99
TABLE 44	ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS)	100
TABLE 45	ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION)	100
TABLE 46	ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION)	100
6.2	BATTERY ELECTRIC	101
6.2.1	REDUCING BATTERY MANUFACTURING COSTS TO DRIVE MARKET	101
FIGURE 31	AVERAGE GLOBAL PACK AND CELL PRICE, PER KWH, 2013-2023	101
TABLE 47	BATTERY ELECTRIC TRACTOR SPECIFICATION WITH MOTOR AND BATTERY CAPACITIES	102
TABLE 48	BATTERY ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (UNITS)	102
TABLE 49	BATTERY ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (UNITS)	102
TABLE 50	BATTERY ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (USD MILLION)	103
TABLE 51	BATTERY ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (USD MILLION)	103
6.3	HYBRID ELECTRIC	103
6.3.1	HIGHER POWER OUTPUT THAN BATTERY ELECTRIC TRACTORS TO DRIVE MARKET	103
TABLE 52	HYBRID ELECTRIC TRACTOR SPECIFICATIONS WITH THEIR MOTOR AND ENGINE CAPACITIES	104
TABLE 53	HYBRID ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (UNITS)	104
TABLE 54	HYBRID ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (UNITS)	105
TABLE 55	HYBRID ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (USD MILLION)	105
TABLE 56	HYBRID ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (USD MILLION)	105
6.4	HYDROGEN	106
6.4.1	ADVANCEMENTS IN FUEL CELL TECHNOLOGY AND INFRASTRUCTURE TO DRIVE MARKET	106
TABLE 57	HYDROGEN ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (UNITS)	106
TABLE 58	HYDROGEN ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (USD MILLION)	106
6.5	PRIMARY INSIGHTS	107
7	ELECTRIC TRACTOR MARKET, BY BATTERY CHEMISTRY	108
7.1	INTRODUCTION	109
FIGURE 32	ELECTRIC TRACTOR MARKET, BY BATTERY CHEMISTRY, 2024 VS. 2030 (USD MILLION)	109
TABLE 59	ELECTRIC TRACTOR MARKET, BY BATTERY CHEMISTRY, 2021-2023 (UNITS)	110
TABLE 60	ELECTRIC TRACTOR MARKET, BY BATTERY CHEMISTRY, 2024-2030 (UNITS)	110
TABLE 61	ELECTRIC TRACTOR MARKET, BY BATTERY CHEMISTRY, 2021-2023 (USD MILLION)	110

TABLE 62	ELECTRIC TRACTOR MARKET, BY BATTERY CHEMISTRY, 2024-2030 (USD MILLION)	110
7.2	LITHIUM IRON PHOSPHATE (LFP)	111
7.2.1	INCREASING APPLICATION IN SMALL FARMLANDS TO DRIVE MARKET	111
TABLE 63	LITHIUM IRON PHOSPHATE: ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (UNITS)	111
TABLE 64	LITHIUM IRON PHOSPHATE: ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (UNITS)	112
TABLE 65	LITHIUM IRON PHOSPHATE: ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (USD MILLION)	112
TABLE 66	LITHIUM IRON PHOSPHATE: ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (USD MILLION)	112
7.3	LITHIUM NICKEL MANGANESE COBALT OXIDE (LI-NMC)	113
7.3.1	AFFORDABILITY, HIGH DENSITY, AND FAST CHARGING CAPABILITY TO DRIVE MARKET	113
FIGURE 33	CHARACTERISTICS OF LI-NMC BATTERIES	113
TABLE 67	LITHIUM NICKEL MANGANESE COBALT OXIDE: ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (UNITS)	114
TABLE 68	LITHIUM NICKEL MANGANESE COBALT OXIDE: ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (UNITS)	114
TABLE 69	LITHIUM NICKEL MANGANESE COBALT OXIDE: ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (USD MILLION)	114
TABLE 70	LITHIUM NICKEL MANGANESE COBALT OXIDE: ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (USD MILLION)	114
7.4	OTHERS	115
7.4.1	SODIUM-ION BATTERIES	115
TABLE 71	SODIUM-ION BATTERY VS. LITHIUM IRON PHOSPHATE BATTERY	116
7.4.2	SOLID-STATE BATTERIES	116
TABLE 72	OTHERS: ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (UNITS)	116
TABLE 73	OTHERS: ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (USD MILLION)	117
7.5	PRIMARY INSIGHTS	117
8	ELECTRIC TRACTOR MARKET, BY BATTERY CAPACITY	118
8.1	INTRODUCTION	119
8.2	ELECTRIC TRACTOR MODELS AND BATTERY CAPACITIES	119
TABLE 74	ELECTRIC TRACTOR MODELS AND BATTERY CAPACITIES, BY OEM	119
FIGURE 34	ELECTRIC TRACTOR MARKET, BY BATTERY CAPACITY, 2024 VS. 2030 (USD MILLION)	120
TABLE 75	ELECTRIC TRACTOR MARKET, BY BATTERY CAPACITY, 2021-2023 (UNITS)	120
TABLE 76	ELECTRIC TRACTOR MARKET, BY BATTERY CAPACITY, 2024-2030 (UNITS)	120
TABLE 77	ELECTRIC TRACTOR MARKET, BY BATTERY CAPACITY, 2021-2023 (USD MILLION)	121
TABLE 78	ELECTRIC TRACTOR MARKET, BY BATTERY CAPACITY, 2024-2030 (USD MILLION)	121
8.3	<50 KWH	121
8.3.1	MODERATE-DUTY APPLICATIONS AND SMALL FARMING NEEDS TO DRIVE MARKET	121
TABLE 79	<50 KWH BATTERY CAPACITY: ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (UNITS)	122
TABLE 80	<50 KWH BATTERY CAPACITY: ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (UNITS)	122
TABLE 81	<50 KWH BATTERY CAPACITY: ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (USD MILLION)	122
TABLE 82	<50 KWH BATTERY CAPACITY: ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (USD MILLION)	122
8.4	51-100 KWH	123
8.4.1	MEDIUM-SIZED AND MIXED FARMING OPERATIONS TO DRIVE MARKET	123
TABLE 83	51-100 KWH BATTERY CAPACITY: ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (UNITS)	123
TABLE 84	51-100 KWH BATTERY CAPACITY: ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (UNITS)	124
TABLE 85	51-100 KWH BATTERY CAPACITY: ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (USD MILLION)	124
TABLE 86	51-100 KWH BATTERY CAPACITY: ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (USD MILLION)	124
8.5	>100 KWH	125
8.5.1	HEAVY MACHINERY AND EQUIPMENT FOR MULTI-TASKING TO DRIVE MARKET	125
TABLE 87	>100 KWH BATTERY CAPACITY: ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (UNITS)	125
TABLE 88	>100 KWH BATTERY CAPACITY: ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (USD MILLION)	126
8.6	PRIMARY INSIGHTS	126

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9 HYBRID ELECTRIC TRACTOR MARKET, BY POWER OUTPUT 127

9.1 INTRODUCTION 128

FIGURE 35 HYBRID ELECTRIC TRACTOR MARKET, 2024 VS. 2030 (USD MILLION) 128

TABLE 89 HYBRID ELECTRIC TRACTOR MARKET, BY POWER OUTPUT, 2021-2023 (UNITS) 129

TABLE 90 HYBRID ELECTRIC TRACTOR MARKET, BY POWER OUTPUT, 2024-2030 (UNITS) 129

TABLE 91 HYBRID ELECTRIC TRACTOR MARKET, BY POWER OUTPUT, 2021-2023 (USD MILLION) 129

TABLE 92 HYBRID ELECTRIC TRACTOR MARKET, BY POWER OUTPUT, 2024-2030 (USD MILLION) 129

9.2 <50 HP 130

9.2.1 INCREASING DEMAND FOR COMPACT AND MANEUVERABLE TRACTORS TO DRIVE MARKET 130

TABLE 93 SPECIFICATIONS OF HYBRID TRACTORS AVAILABLE IN MARKET 130

TABLE 94 <50HP: HYBRID ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (UNITS) 131

TABLE 95 <50HP: HYBRID ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (UNITS) 131

TABLE 96 <50HP: HYBRID ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (USD MILLION) 131

TABLE 97 <50HP: HYBRID ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (USD MILLION) 131

9.3 51-100 HP 132

9.3.1 MIXED FARMING AND PRECISION FARMING TO DRIVE MARKET 132

TABLE 98 51-100 HP: HYBRID ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (UNITS) 132

TABLE 99 51-100 HP: HYBRID ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (UNITS) 133

TABLE 100 51-100 HP: HYBRID ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (USD MILLION) 133

TABLE 101 51-100 HP: HYBRID ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (USD MILLION) 133

9.4 >100 HP 134

9.4.1 STRINGENT EMISSION REGULATIONS AND GOVERNMENT INCENTIVES TO DRIVE MARKET 134

TABLE 102 >100 HP: HYBRID ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (UNITS) 134

TABLE 103 >100 HP: HYBRID ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (UNITS) 134

TABLE 104 >100 HP: HYBRID ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (USD MILLION) 135

TABLE 105 >100 HP: HYBRID ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (USD MILLION) 135

9.5 PRIMARY INSIGHTS 135

10 ELECTRIC TRACTOR MARKET, BY FUNCTION 136

10.1 INTRODUCTION 137

FIGURE 36 ELECTRIC TRACTOR MARKET, BY FUNCTION, 2024 VS. 2030 (USD MILLION) 137

TABLE 106 ELECTRIC TRACTOR MARKET, BY FUNCTION, 2021-2023 (USD MILLION) 137

TABLE 107 ELECTRIC TRACTOR MARKET, BY FUNCTION, 2024-2030 (USD MILLION) 138

10.2 AGRICULTURE & FORESTRY 138

10.2.1 INCREASE IN FOOD PRODUCTION AND PRECISION AGRICULTURE TO DRIVE MARKET 138

TABLE 108 AGRICULTURE & FORESTRY: ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (USD MILLION) 139

TABLE 109 AGRICULTURE & FORESTRY: ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (USD MILLION) 139

10.3 UTILITY 139

10.3.1 GOVERNMENT REGULATIONS AND INCENTIVES TO DRIVE MARKET 139

TABLE 110 UTILITY: ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (USD MILLION) 140

TABLE 111 UTILITY: ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (USD MILLION) 140

10.4 INDUSTRIAL 140

10.4.1 ENVIRONMENTAL CONCERNS AND NEED FOR NOISE REDUCTION TO DRIVE MARKET 140

TABLE 112 INDUSTRIAL: ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (USD MILLION) 141

TABLE 113 INDUSTRIAL: ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (USD MILLION) 141

10.5 PRIMARY INSIGHTS 141

11 ELECTRIC FARM EQUIPMENT MARKET, BY EQUIPMENT TYPE 142

11.1 INTRODUCTION 142

11.2	ELECTRIC SPRAYERS	142
11.3	ELECTRIC WEEDERS	143
11.4	PRIMARY INSIGHTS	143
12	ELECTRIC TRACTOR MARKET, BY REGION	144
12.1	INTRODUCTION	145
FIGURE 37	ELECTRIC TRACTOR MARKET, BY REGION, 2024 VS. 2030 (USD MILLION)	145
TABLE 114	ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (UNITS)	145
TABLE 115	ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (UNITS)	146
TABLE 116	ELECTRIC TRACTOR MARKET, BY REGION, 2021-2023 (USD MILLION)	146
TABLE 117	ELECTRIC TRACTOR MARKET, BY REGION, 2024-2030 (USD MILLION)	146
12.2	ASIA PACIFIC	147
12.2.1	RECESSION IMPACT ANALYSIS	147
FIGURE 38	ASIA PACIFIC: ELECTRIC TRACTOR MARKET SNAPSHOT	148
FIGURE 39	ASIA PACIFIC: ELECTRIC TRACTOR MARKET, BY COUNTRY, 2024 VS. 2030 (USD MILLION)	149
TABLE 118	ASIA PACIFIC: ELECTRIC TRACTOR MARKET, BY COUNTRY, 2021-2023 (UNITS)	149
TABLE 119	ASIA PACIFIC: ELECTRIC TRACTOR MARKET, BY COUNTRY, 2024-2030 (UNITS)	149
TABLE 120	ASIA PACIFIC: ELECTRIC TRACTOR MARKET, BY COUNTRY, 2021-2023 (USD MILLION)	150
TABLE 121	ASIA PACIFIC: ELECTRIC TRACTOR MARKET, BY COUNTRY, 2024-2030 (USD MILLION)	150
12.2.2	CHINA	150
12.2.2.1	Leadership in EV technology to drive market	150
TABLE 122	CHINA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS)	151
TABLE 123	CHINA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS)	151
TABLE 124	CHINA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION)	151
TABLE 125	CHINA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION)	152
12.2.3	INDIA	152
12.2.3.1	Increase in farm mechanization to drive market	152
TABLE 126	INDIA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS)	153
TABLE 127	INDIA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS)	153
TABLE 128	INDIA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION)	153
TABLE 129	INDIA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION)	153
12.2.4	JAPAN	154
12.2.4.1	Aging farmer population and labor shortage to drive market	154
TABLE 130	JAPAN: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS)	154
TABLE 131	JAPAN: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS)	155
TABLE 132	JAPAN: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION)	155
TABLE 133	JAPAN: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION)	155
12.2.5	SOUTH KOREA	156
12.2.5.1	Government incentives for farmers to drive market	156
TABLE 134	SOUTH KOREA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS)	156
TABLE 135	SOUTH KOREA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS)	156
TABLE 136	SOUTH KOREA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION)	156
TABLE 137	SOUTH KOREA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION)	157
12.2.6	REST OF ASIA PACIFIC	157
TABLE 138	REST OF ASIA PACIFIC: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS)	157
TABLE 139	REST OF ASIA PACIFIC: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS)	158
TABLE 140	REST OF ASIA PACIFIC: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION)	158
TABLE 141	REST OF ASIA PACIFIC: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION)	158

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## 12.3 EUROPE 159

### FIGURE 40 EUROPE: ELECTRIC TRACTOR MARKET SNAPSHOT 159

TABLE 142 EUROPE: ELECTRIC TRACTOR MARKET, BY COUNTRY, 2021-2023 (UNITS) 160

TABLE 143 EUROPE: ELECTRIC TRACTOR MARKET, BY COUNTRY, 2024-2030 (UNITS) 160

TABLE 144 EUROPE: ELECTRIC TRACTOR MARKET, BY COUNTRY, 2021-2023 (USD MILLION) 160

TABLE 145 EUROPE: ELECTRIC TRACTOR MARKET, BY COUNTRY, 2024-2030 (USD MILLION) 161

#### 12.3.1 RECESSION IMPACT ANALYSIS 161

##### 12.3.2 GERMANY 161

12.3.2.1 Increasing demand for high-power tractors to drive market 161

TABLE 146 GERMANY: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS) 162

TABLE 147 GERMANY: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS) 162

TABLE 148 GERMANY: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION) 162

TABLE 149 GERMANY: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION) 163

##### 12.3.3 UK 163

12.3.3.1 Precision agriculture and sustainable farming to drive market 163

TABLE 150 UK: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS) 163

TABLE 151 UK: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS) 164

TABLE 152 UK: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION) 164

TABLE 153 UK: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION) 164

##### 12.3.4 FRANCE 165

12.3.4.1 Government National Low Carbon Strategy to drive market 165

TABLE 154 FRANCE: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS) 165

TABLE 155 FRANCE: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS) 165

TABLE 156 FRANCE: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION) 166

TABLE 157 FRANCE: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION) 166

##### 12.3.5 SPAIN 166

12.3.5.1 Labor shortage and increasing focus on precision agriculture to drive market 166

TABLE 158 SPAIN: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS) 167

TABLE 159 SPAIN: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS) 167

TABLE 160 SPAIN: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION) 167

TABLE 161 SPAIN: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION) 168

##### 12.3.6 RUSSIA 168

12.3.6.1 Increasing adoption of farm mechanization to drive market 168

TABLE 162 RUSSIA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS) 168

TABLE 163 RUSSIA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS) 169

TABLE 164 RUSSIA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION) 169

TABLE 165 RUSSIA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION) 169

##### 12.3.7 ITALY 170

12.3.7.1 Presence of vineyards to drive market 170

TABLE 166 ITALY: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS) 170

TABLE 167 ITALY: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS) 170

TABLE 168 ITALY: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION) 171

TABLE 169 ITALY: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION) 171

##### 12.3.8 REST OF EUROPE 171

TABLE 170 REST OF EUROPE: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS) 172

TABLE 171 REST OF EUROPE: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS) 172

TABLE 172 REST OF EUROPE: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION) 172

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TABLE 173 □ REST OF EUROPE: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION) □ 172

12.4 □ AMERICAS □ 173

12.4.1 □ RECESSION IMPACT ANALYSIS □ 173

TABLE 174 □ AMERICAS: ELECTRIC TRACTOR MARKET, BY COUNTRY, 2021-2023 (UNITS) □ 173

TABLE 175 □ AMERICAS: ELECTRIC TRACTOR MARKET, BY COUNTRY, 2024-2030 (UNITS) □ 174

TABLE 176 □ AMERICAS: ELECTRIC TRACTOR MARKET, BY COUNTRY, 2021-2023 (USD MILLION) □ 174

TABLE 177 □ AMERICAS: ELECTRIC TRACTOR MARKET, BY COUNTRY, 2024-2030 (USD MILLION) □ 174

12.4.2 □ US □ 175

12.4.2.1 □ High presence of OEMs to drive market □ 175

TABLE 178 □ US: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS) □ 175

TABLE 179 □ US: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS) □ 175

TABLE 180 □ US: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION) □ 176

TABLE 181 □ US: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION) □ 176

12.4.3 □ CANADA □ 176

12.4.3.1 □ Landscaping and ground maintenance to drive market □ 176

TABLE 182 □ CANADA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS) □ 177

TABLE 183 □ CANADA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS) □ 177

TABLE 184 □ CANADA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION) □ 177

TABLE 185 □ CANADA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION) □ 177

12.4.4 □ MEXICO □ 178

12.4.4.1 □ Focus on addressing increasing greenhouse emissions to drive market □ 178

TABLE 186 □ MEXICO: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS) □ 178

TABLE 187 □ MEXICO: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS) □ 178

TABLE 188 □ MEXICO: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION) □ 178

TABLE 189 □ MEXICO: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION) □ 179

12.4.5 □ BRAZIL □ 179

12.4.5.1 □ Increasing vineyards and coffee plantations to drive market □ 179

TABLE 190 □ BRAZIL: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS) □ 180

TABLE 191 □ BRAZIL: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS) □ 180

TABLE 192 □ BRAZIL: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION) □ 180

TABLE 193 □ BRAZIL: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION) □ 180

12.4.6 □ ARGENTINA □ 181

12.4.6.1 □ Digital agriculture and 2030 Agenda for Sustainable Development to drive market □ 181

TABLE 194 □ ARGENTINA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (UNITS) □ 181

TABLE 195 □ ARGENTINA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (UNITS) □ 181

TABLE 196 □ ARGENTINA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2021-2023 (USD MILLION) □ 181

TABLE 197 □ ARGENTINA: ELECTRIC TRACTOR MARKET, BY PROPULSION, 2024-2030 (USD MILLION) □ 182

12.5 □ PRIMARY INSIGHTS □ 182

13 □ COMPETITIVE LANDSCAPE □ 183

13.1 □ OVERVIEW □ 183

13.2 □ MARKET SHARE ANALYSIS □ 183

FIGURE 41 □ MARKET SHARE ANALYSIS, 2023 □ 183

TABLE 198 □ DEGREE OF COMPETITION, 2023 □ 184

13.3 □ REVENUE ANALYSIS □ 185

FIGURE 42 □ REVENUE ANALYSIS OF TOP 5 PLAYERS, 2020-2022 □ 185

13.4 □ COMPANY EVALUATION MATRIX □ 186

13.4.1 □ STARS □ 186

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13.4.2	EMERGING LEADERS	186
13.4.3	PERVASIVE PLAYERS	186
13.4.4	PARTICIPANTS	186
13.4.5	COMPANY FOOTPRINT	187
FIGURE 43	ELECTRIC TRACTOR MARKET: COMPANY FOOTPRINT, 2023	187
TABLE 199	ELECTRIC TRACTOR MARKET: PROPULSION FOOTPRINT, 2023	188
TABLE 200	ELECTRIC TRACTOR MARKET: REGION FOOTPRINT, 2023	189
FIGURE 44	COMPANY EVALUATION MATRIX, 2023	190
13.5	KEY PLAYERS' STRATEGIES/RIGHT TO WIN	191
TABLE 201	COMPANIES ADOPTED PRODUCT DEVELOPMENTS, PARTNERSHIPS, AND CONTRACTS AS CRUCIAL GROWTH STRATEGIES FROM JANUARY 2020 TO JANUARY 2024	191
13.6	COMPETITIVE SCENARIOS AND TRENDS	192
13.6.1	PRODUCT LAUNCHES/DEVELOPMENTS	192
TABLE 202	ELECTRIC TRACTOR MARKET: PRODUCT LAUNCHES/DEVELOPMENTS, JANUARY 2021-JANUARY 2024	192
13.6.2	DEALS	196
TABLE 203	ELECTRIC TRACTOR MARKET: DEALS, JANUARY 2020-JANUARY 2024	196
13.6.3	OTHER DEVELOPMENTS	202
TABLE 204	ELECTRIC TRACTOR MARKET: OTHER DEVELOPMENTS, JANUARY 2020-JANUARY 2024	202
13.6.4	EXPANSIONS	204
TABLE 205	ELECTRIC TRACTOR MARKET: EXPANSIONS, JANUARY 2020-JANUARY 2024	204
13.7	COMPANY VALUATION	206
FIGURE 45	COMPANY VALUATION, 2023 (USD BILLION)	206
13.8	COMPANY FINANCIAL METRICS	206
FIGURE 46	COMPANY FINANCIAL METRICS, 2023 (USD BILLION)	206
13.9	BRAND COMPARISON	207
14	COMPANY PROFILES	208
(Business overview, Products offered, Recent developments & MnM View)*		
14.1	KEY PLAYERS	208
14.1.1	KUBOTA CORPORATION	208
TABLE 206	KUBOTA CORPORATION: COMPANY OVERVIEW	208
FIGURE 47	KUBOTA CORPORATION: COMPANY SNAPSHOT	209
TABLE 207	KUBOTA CORPORATION: PRODUCTS OFFERED	209
TABLE 208	KUBOTA CORPORATION: PRODUCT LAUNCHES	210
TABLE 209	KUBOTA CORPORATION: DEALS	210
TABLE 210	KUBOTA CORPORATION: OTHER DEVELOPMENTS	211
14.1.2	SOLECTRAC	213
TABLE 211	SOLECTRAC: COMPANY OVERVIEW	213
FIGURE 48	SOLECTRAC: COMPANY SNAPSHOT	214
TABLE 212	SOLECTRAC: PRODUCTS OFFERED	214
TABLE 213	SOLECTRAC: PRODUCT LAUNCHES	215
TABLE 214	SOLECTRAC: DEALS	216
TABLE 215	SOLECTRAC: OTHER DEVELOPMENTS	216
14.1.3	AGCO CORPORATION	218
TABLE 216	AGCO CORPORATION: COMPANY OVERVIEW	218
FIGURE 49	AGCO CORPORATION: COMPANY SNAPSHOT	219
TABLE 217	AGCO CORPORATION: PRODUCTS OFFERED	219
TABLE 218	AGCO CORPORATION: PRODUCT LAUNCHES	220

TABLE 219	AGCO CORPORATION: DEALS	220
TABLE 220	AGCO CORPORATION: EXPANSIONS	222
14.1.4	CNH INDUSTRIAL N.V.	223
TABLE 221	CNH INDUSTRIAL N.V.: COMPANY OVERVIEW	223
FIGURE 50	CNH INDUSTRIAL N.V.: COMPANY SNAPSHOT	224
TABLE 222	CNH INDUSTRIAL N.V.: PRODUCTS OFFERED	224
TABLE 223	CNH INDUSTRIAL N.V.: PRODUCT LAUNCHES	225
TABLE 224	CNH INDUSTRIAL N.V.: DEALS	225
TABLE 225	CNH INDUSTRIAL N.V.: EXPANSIONS	226
14.1.5	ESCORTS KUBOTA LIMITED	228
TABLE 226	ESCORTS KUBOTA LIMITED: COMPANY OVERVIEW	228
FIGURE 51	ESCORTS KUBOTA LIMITED: COMPANY SNAPSHOT	229
TABLE 227	ESCORTS KUBOTA LIMITED: PRODUCTS OFFERED	229
TABLE 228	ESCORTS KUBOTA LIMITED: PRODUCT DEVELOPMENTS	230
TABLE 229	ESCORTS KUBOTA LIMITED: DEALS	230
14.1.6	MONARCH TRACTOR	232
TABLE 230	MONARCH TRACTOR: COMPANY OVERVIEW	232
TABLE 231	MONARCH TRACTOR: PRODUCTS OFFERED	232
TABLE 232	MONARCH TRACTOR: PRODUCT DEVELOPMENTS	233
TABLE 233	MONARCH TRACTOR: DEALS	233
TABLE 234	MONARCH TRACTOR: OTHER DEVELOPMENTS	236
14.1.7	DEERE & COMPANY	237
TABLE 235	DEERE & COMPANY: COMPANY OVERVIEW	237
FIGURE 52	DEERE & COMPANY: COMPANY SNAPSHOT	238
TABLE 236	DEERE & COMPANY: PRODUCTS OFFERED	238
TABLE 237	DEERE & COMPANY: PRODUCT DEVELOPMENTS	239
TABLE 238	DEERE & COMPANY: DEALS	240
TABLE 239	DEERE & COMPANY: EXPANSIONS	240
14.1.8	YANMAR HOLDINGS CO., LTD.	241
TABLE 240	YANMAR HOLDINGS CO., LTD.: COMPANY OVERVIEW	241
FIGURE 53	YANMAR HOLDINGS CO., LTD.: COMPANY SNAPSHOT	241
TABLE 241	YANMAR HOLDINGS CO., LTD.: PRODUCTS OFFERED	241
TABLE 242	YANMAR HOLDINGS CO., LTD.: PRODUCT DEVELOPMENTS	242
TABLE 243	YANMAR HOLDINGS CO., LTD.: DEALS	242
TABLE 244	YANMAR HOLDINGS CO., LTD.: OTHER DEVELOPMENTS	242
14.1.9	CELLESTIAL E-MOBILITY PVT LTD	243
TABLE 245	CELLESTIAL E-MOBILITY PVT LTD: COMPANY OVERVIEW	243
FIGURE 54	CELLESTIAL E-MOBILITY PVT LTD: COMPANY SNAPSHOT	244
TABLE 246	CELLESTIAL E-MOBILITY PVT LTD: PRODUCTS OFFERED	244
TABLE 247	CELLESTIAL E-MOBILITY PVT LTD: PRODUCT DEVELOPMENTS	245
TABLE 248	CELLESTIAL E-MOBILITY PVT LTD: DEALS	245
14.1.10	INTERNATIONAL TRACTORS LIMITED	246
TABLE 249	INTERNATIONAL TRACTORS LIMITED: COMPANY OVERVIEW	246
TABLE 250	INTERNATIONAL TRACTORS LIMITED: PRODUCTS OFFERED	246
TABLE 251	INTERNATIONAL TRACTORS LIMITED: PRODUCT LAUNCHES	247
TABLE 252	INTERNATIONAL TRACTORS LIMITED: OTHER DEVELOPMENTS	247
14.1.11	PROXECTO	248

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TABLE 253 PROXECTO: COMPANY OVERVIEW 248

TABLE 254 PROXECTO: PRODUCTS OFFERED 248

TABLE 255 PROXECTO: PRODUCT DEVELOPMENTS 249

\*Details on Business overview, Products offered, Recent developments & MnM View might not be captured in case of unlisted companies.

14.2 OTHER PLAYERS 250

14.2.1 AUTONXT AUTOMATION PVT. LTD. 250

TABLE 256 AUTONXT AUTOMATION PVT. LTD.: COMPANY OVERVIEW 250

14.2.2 RIGITRAC TRAKTORENBAU AG 251

TABLE 257 RIGITRAC TRAKTORENBAU AG: COMPANY OVERVIEW 251

14.2.3 SABI AGRI 251

TABLE 258 SABI AGRI: COMPANY OVERVIEW 251

14.2.4 ARGO TRACTORS S.P.A. 252

TABLE 259 ARGO TRACTORS S.P.A: COMPANY OVERVIEW 252

14.2.5 FOTON LOVOL 253

TABLE 260 FOTON LOVOL: COMPANY OVERVIEW 253

14.2.6 TRACTORS AND FARM EQUIPMENT LIMITED 254

TABLE 261 TRACTORS AND FARM EQUIPMENT LIMITED: COMPANY OVERVIEW 254

14.2.7 VST TRACTORS 255

TABLE 262 VST TRACTORS: COMPANY OVERVIEW 255

14.2.8 MOTIVO ENGINEERING 256

TABLE 263 MOTIVO ENGINEERING: COMPANY OVERVIEW 256

14.2.9 TADUS GMBH 256

TABLE 264 TADUS GMBH: COMPANY OVERVIEW 256

14.2.10 ZY ELEKTRIK TRACTOR 257

TABLE 265 ZY ELEKTRIK TRACTOR: COMPANY OVERVIEW 257

14.2.11 AUGA 257

TABLE 266 AUGA: COMPANY OVERVIEW 257

14.2.12 ZTRACTOR 258

TABLE 267 ZTRACTOR: COMPANY OVERVIEW 258

14.2.13 AMOS POWER 258

TABLE 268 AMOS POWER: COMPANY OVERVIEW 258

15 RECOMMENDATIONS 259

15.1 EUROPE TO DOMINATE ELECTRIC TRACTOR MARKET 259

15.2 EMPHASIS ON SOLID-STATE BATTERIES IN ELECTRIC TRACTORS FOR FUTURE APPLICATIONS 259

15.3 HYDROGEN ELECTRIC TRACTORS TO BE KEY FOCUS AREA 260

15.4 CONCLUSION 260

16 APPENDIX 261

16.1 KEY INSIGHTS FROM INDUSTRY EXPERTS 261

16.2 DISCUSSION GUIDE 261

16.3 KNOWLEDGESTORE: MARKETSandMARKETS' SUBSCRIPTION PORTAL 264

16.4 CUSTOMIZATION OPTIONS 266

16.4.1 ELECTRIC TRACTOR MARKET, BY REGION 266

16.4.1.1 UAE 266

16.4.1.2 Saudi Arabia 266

16.4.1.3 Egypt 266

16.4.2 ELECTRIC TRACTOR MARKET, BY BATTERY CAPACITY 266

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16.4.2.1	Asia Pacific	266
16.4.2.1.1	China	266
16.4.2.1.2	India	266
16.4.2.1.3	Japan	266
16.4.2.1.4	South Korea	266
16.4.2.1.5	Rest of Asia Pacific	266
16.4.2.2	Europe	266
16.4.2.2.1	Germany	266
16.4.2.2.2	France	266
16.4.2.2.3	UK	266
16.4.2.2.4	Spain	266
16.4.2.2.5	Russia	266
16.4.2.2.6	Italy	266
16.4.2.2.7	Turkey	266
16.4.2.2.8	Rest of Europe	266
16.4.2.3	North America	267
16.4.2.3.1	US	267
16.4.2.3.2	Canada	267
16.4.2.3.3	Mexico	267
16.4.2.3.4	Brazil	267
16.4.2.3.5	Argentina	267
16.4.3	DETAILED ANALYSIS AND PROFILING OF ADDITIONAL MARKET PLAYERS	267
16.5	RELATED REPORTS	267
16.6	AUTHOR DETAILS	268



**Electric Tractor Market by Propulsion (Battery, Hybrid & Hydrogen), Capacity (<50, 51-100 & >100kWh), Chemistry (LFP & NMC), Hybrid Tractor (<50, 51-100 & >100HP), Function (Agriculture, Utility & Industrial) and Region - Global Forecast to 2030**

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