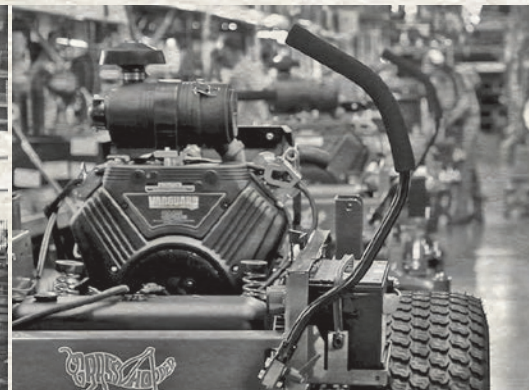


A History of Innovation

Moridge Manufacturing, Inc. • Home of the Grasshopper Mower



MORIDGE
Manufacturing, Inc.

The history of Morigde Manufacturing... A half-century of innovation... **a lifetime of progress.**



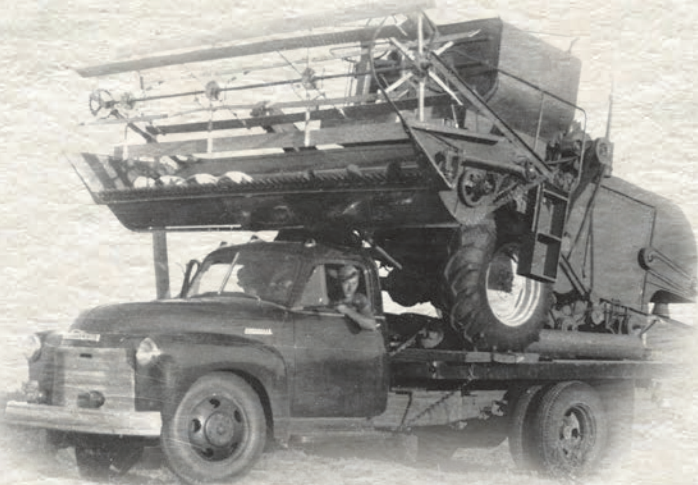
Elbert J. Guyer,
company founder.

Entrepreneurial spirit sparks innovation

What led young Kansas farmer and engineer Elbert Guyer to design innovative harvesting equipment for an international market? As a person born with an entrepreneurial spirit, Elbert was always in search of ways to make the world a better place. It was in the 1950s, while he was harvesting from the southern plains of Texas to the northern fields of Saskatchewan and Manitoba, that he observed many different harvesting conditions and began contemplating how the critical timing of harvest affected grain collection.

Having an inventive mind, Elbert spent many long hours conceiving and designing custom harvest and grain handling tools. He was excited to discover how to help farmers beat the weather and maximize the profits from their grain harvest.

While stationary grain-drying facilities had been around since the Roman Empire, Elbert's vision would require the development of significant technological innovations to bring on-site grain drying to any rural location for a variety of crops.



Elbert's custom harvesting in the 1940s.



Elbert Guyer.



Morigde Springtooth Harrow.



Morigde Automatic Tube Feeder.

▼ Elbert Guyer traveled from southern Texas to Canada with his custom harvesting operation and discovered various landscapes and cultures.

▼ Manufacturing of the portable crop dryer begins in Moundridge, Kansas.

1950s

1958



Moridge Grain Dryer.

Through his own technological innovations, Elbert developed a portable recirculating crop dryer, and the advantages were revolutionary. Now crops could be harvested at peak nutritional maturity, prior to devastation by weather or pestilence. For the first time in history, farmers were able to increase the likelihood of a successful harvest. They increased yields by gathering their grain early, then drying it to optimum storage-moisture content.

This important breakthrough came in the mid 1950s and sparked an innovative and progressive business that would prosper over the years. Elbert's portable grain dryer captured the attention of farmers across North America, and shortly after, the word spread to world markets, with more farmers becoming anxious to put it to use.

Stanley Guyer, company president, remembers watching his father, Elbert, develop one innovative product after another—from a milo guard for a combine's cutting bar to TV towers and playground equipment. He recalls that, as the demand for the crop dryer grew, the neighbors to the manufacturing facility, which was located on the Guyer family farm, watched their home lights dim from the power surge whenever a worker performed a spot weld. And he remembers how the rural phone network, with its party lines, were completely overwhelmed when the pace of business picked up.



Grain Dryer in use.



Dryers loaded onto railcars for shipment.



Moridge Grain Dryers on a Texas farm.



Dryer delivered to Italian farm.

▼ Moridge begins exporting crop dryers to Mexico and Canada.

▼ The iconic Grasshopper logo is designed by a local high school student in 1965. The logo has endured for more than 50 years and was developed in conjunction with a prototype machine.

Moridge Manufacturing introduces ▼ the ZeroTurn™ Grasshopper Mower to the U.S. market in 1969.

1959

1965

Moridge Manufacturing is located in America's heartland, with proximity to important advantages for success, like an international airport, a four-lane interstate highway and a high-speed digital communications network. The Moridge Manufacturing factory and management facilities are located outside of dense traffic, and general congestion. An environment of free flow and self-determination has evolved.



Dryers staged for shipping.

Innovations behind the crop dryer give roots to Moridge Manufacturing

Elbert's crop dryer enterprise quickly outgrew the facility on the family farm, and he began to search for an ideal location to begin new operations. Good highways, regular train service and proximity to an international airport were among the advantages of Moundridge, Kansas. In addition, its location in a rural industrial area with a modern utility infrastructure made it attractive for establishing a manufacturing facility. Manufacturing of the Moridge Crop Dryer began in Moundridge in 1958. Within the first year, Moridge Manufacturing was already exporting outside the United States. By the 1980s, the grain dryer was dominating the marketplace. Moridge Manufacturing used the product's success as a springboard for expansion.

Other innovative products produced by Moridge Manufacturing, Inc., in the earlier days included:

- **10" Grain Auger** — unique in its time for size in diameter, provided high capacity; longer than any previous auger in its class, reached the center of a storage bin; and tractor mounted for flexibility and convenience.

- **Soybean Roaster** — optimized the protein content for fish and hog farms.
- **Automatic Tube Feeder** — allowed stockmen to unload feed silage from a silo and evenly distribute to a large herd with time and labor efficiency.
- **Springtooth Harrow with wings** — folded forward for transport, making it conveniently roadworthy.

Through the production of the grain dryer and other earlier innovations, the company developed expertise in the areas of airflow technology, electronics, engineering and fabrication processes, as well as exporting and international relations. All areas of expertise are still in use today in the manufacturing and marketing of the company's current flagship product line: Grasshopper mowers.



Assembly Line Supervisor Bob Gehring checks on Grasshopper mowers.

▼ Full-scale production of the Grasshopper Mower begins as a division of Moridge Manufacturing.

▼ The industry's first swing-out, dual-level steering is introduced on a zero-turn mower.

1970

1973

The birth of the Grasshopper Mower

Because the dryer was marketed and utilized in the fall, the company needed a spring product to balance production schedules in the plant. In 1969, a key transaxle patent provided the technology needed to produce the first true zero-turn radius mower, and the Grasshopper Company division was born. That year, the first Grasshopper mowers were in production and introduced to the U.S. market. The continuous production of the crop dryer sustained the company while the Grasshopper mower evolved.

The Grasshopper assembly line debuted at Morigde Manufacturing in 1970. The mowers were built at one of the finest manufacturing facilities in central Kansas and distributed through channels already established by Morigde Manufacturing grain products.

Engineers, led by Merlin Esau, began refining the mower and soon found themselves dedicated to continual product innovation in order to meet the ongoing needs of customers. That required a commitment to adding the latest technologies, such as a powder paint booth, robotic welding, brake press and laser cutting. These factory innovations, coupled with quality products, services and processes, continue to sustain

the Grasshopper Company division of Morigde Manufacturing, Inc., as an industry leader.

The Grasshopper family

The way the company is managed is reflected by the fact that it is a prosperous business and a stable factor in the marketplace. It remains an ongoing resource for customers, dealers, distributors and employees—the extended Grasshopper family.

Stan Guyer, just the second president in company history, believes the organization remains nimble to quickly respond to market challenges, and, because of its

size and management layers, the company encourages the open and efficient flow of communication.

Morigde Manufacturing has an established culture of equality and individualism. There are no executive parking spaces outside. Managers don't ask employees to do tasks that they wouldn't do themselves. The company's unique culture may be why so many employees have worked there for more than 15 years. The result is a tight-knit, motivated group of employees empowered by innovation and committed to progress.



An early Grasshopper design.



▼ State-of-the-art engineering equipment is utilized.

▼ First liquid-cooled, 3-cylinder diesel powerplants for zero-radius mowers introduced, providing increased fuel economy.

1980s

1983

“Quality builds itself,”

says Stan Guyer. He has played many hands-on roles in implementing new technologies in the plant. “When new technology is implemented in one area of the plant, other sectors must keep pace.”

Embracing technology

Technology also plays an integral role in the company’s leadership. Every employee agrees on the power of plant technology. This “pioneering” attitude throughout the company facilitates the implementation of the latest manufacturing processes in every phase of the operation. As a result, the company’s workforce has warmly embraced technology. Employees view it as a means of empowerment rather than as a threat to job security. Using technology to turn limited resources to their advantage, employees take pride in their output.

Roger Vogts, former plant superintendent and 40-year veteran of Moridge Manufacturing said, “Personal pride is monumentally important to providing consistent quality in all processes.” That belief continues today with the next generation of leadership.

The company’s founding legacy is alive and well

Elbert Guyer believed Moridge Manufacturing’s forte was to use all of its resources to turn an idea into a viable, functional product. This legacy of the company’s founder is still present to this day, as company leaders continue to grow Elbert’s ideals through innovation and technology.

“Management would rather do whatever it takes to produce a product that performs years of trouble-free service for a customer than cut corners on a product that might otherwise end up with other brands in a landfill,” notes Stan Guyer. “In addition to all other criteria, management must be convinced that product quality will be enhanced before any new technology is put into place.

A second theme from the early days of the company’s culture that has carried through to



Robotic break-presses increase manufacturing efficiency.



Pedro Wirz, Mexico; Charlie Irwin, International Sales; and Company President Stan Guyer.

the present day is constantly evaluating the needs of the customer to improve the product.

“Our staff creates a rewarding workplace by maintaining an internal corporate culture that is built around providing our customers a product that enhances their quality of life,” says Ruthanne Stucky, Marketing Director at Moridge Manufacturing. “The company is a stable, profitable resource that reinvests in new technology, thus enhancing a dealer network that supports the product in our customers’ locations. The company considers feedback from the customers and dealers as vital to keeping the engineering research dynamic and pertinent to product development.”

Decisions affecting the company’s future are based on long-term goals and relationships rather than quarterly investor goals. Third-generation Guyer family members fill key roles in the company’s day-to-day

▼ Installation of Moridge’s first robotic welder led to increased volume and a better work environment for employees.

▼ Powder coat paint system introduced.

operations. Their goal is to maintain the innovative character of the company as they meet the challenges and opportunities ahead.

The innovation continues

The team at Morige Manufacturing defines their collective strengths and the spirit of innovation that drives progress.

Though Elbert's innovative crop dryer laid the foundation of quality manufacturing in Moundridge, it was the introduction of the zero-turn mower technology that has grown the Grasshopper Company division of Morige Manufacturing into the industry leader it is today. The company is proud to have introduced the world to many "firsts" and continues to innovate and grow its line of quality mowers and ground maintenance equipment.

Morige Manufacturing and Grasshopper Mowers continue to evolve each year. To produce a superior product that lasts requires a dedication to innovation and continuous improvement to meet the changing demands of a world market. The company's slogan, "It's So Much Mower," is more pertinent today than ever.

After the initial introduction of the zero-turn radius technology, there was no turning back. To keep up with demand, the company's first welding robot was put into place in 1984. The

robot could work 24 hours a day, producing one perfect weld after another with repetitive accuracy and increased output.

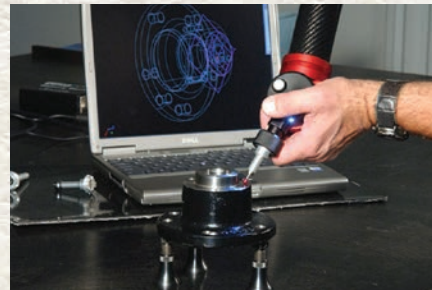
Other manufacturing innovations quickly followed. A powder coat paint system was installed in 1986—a first for zero-turn mowers—raising the bar on exterior finish durability. The use of amazingly accurate CNC laser and punch presses significantly reduced the amount of metal waste within the manufacturing process. Innovations in factory fabrication and assembly operations have allowed a single employee to supervise multiple CNC presses as they systematically load, punch and unload. Laser units function the same way, allowing employees to focus more energy on quality inspection.

Today, a team of robotic welders operates over two shifts, up to 20 hours per day, producing the heavy-duty tractor frames and

commercial mower decks the company is known for with remarkable consistency.

CNC equipment also grinds, polishes, cuts and drills into many unique components that make up a Grasshopper mower. These manufacturing innovations allow for quick and valuable improvements to products, making them strong, durable and long-lasting.

Morige management family: Ruthanne Stucky, Stan Guyer, Linda and Duane Guyer, Nathan Guyer, and Trent, Cathy and Andrew Guyer in 2007. Not pictured: Judy Guyer, Roger Stucky, Spencer Stucky and Katie Hutchinson.



Checking parts accuracies using advanced technology.



A machinist operating a CNC vertical mill.



State-of-the-art laser cutting.

▼ Introduction of Grasshopper's ergonomic Ultimate Operator Station for increased rider comfort.

▼ Award-winning AERA-vator™ aeration system introduced.

1994

1996



One of nine robotically controlled welders.

Manufacturing processes and excellence

It doesn't stop there. Moridge Manufacturing is always on the cutting edge of manufacturing and fabrication processes, and has been since the beginning. Since 1998, Moridge has used laser-cutting technology to achieve the perfect material cut, every time.

In 2011, Moridge made significant investments in laser-cutting technology to improve the usable yield for every sheet of metal that came through the plant. With new lasers and upgraded profile nesting software, the process consistently delivers up to 89% usable yield, which reduces raw material consumption by 15%.

To further improve the laser-cutting process, a laser inspection machine automatically compares the dimensions and outline of the part being made to the original CAD file. This

testing procedure improves the consistency of each part made and completely eliminates rejection and reworking, which means a lot of saved time and materials.

An industry leader

Today, Grasshopper mowers and all-season implements are available through an independent dealer network in all 50 states and over 40 countries. The Grasshopper Company division of Moridge Manufacturing has built a worldwide reputation with zero-turn radius mowers and grounds maintenance equipment. With True ZeroTurn™ capability, Grasshopper products turn any large or complex mowing job into quick and easy work. The growing product line includes more than 50 combinations of zero turn mowers.

As the Grasshopper Company continues to embark on new market expansion, demographics point to growth opportunities in an increasingly competitive environment. The loyal Grasshopper customer base is sure to grow as the company continues to improve products and make them more accessible.



Moridge Manufacturing facilities in Moundridge, Kansas.



Grasshopper mower in homeowner application.

▼ Grasshopper is the first to offer both FrontMount™ and MidMount™ mowers with swing-out dual levers.

▼ PowerFold® lift is introduced, allowing the operator to rotate deck at the touch of a button and without heavy lifting.

Partnering with our community

Moridge Manufacturing continues to set itself apart with a strong commitment to the worldwide communities in which it operates. In addition to a sincere investment in the community of Moundridge, where the manufacturing facilities remain, Moridge Manufacturing is committed to bettering every community that its products and people touch.



Grasshopper mower in commercial application.

Through environmentally sound production practices and the continuous development of their workforce around the world, the Grasshopper Company division of Moridge Manufacturing holds an important place in the global marketplace.

Moridge Manufacturing has enjoyed much success in the small community of Moundridge, Kansas.

Their additional participation and investment in downtown Moundridge activities is designed, in part, to further enhance quality of life in the area—which also helps to attract and retain quality labor. Additionally, employees are involved in a range of advisory boards throughout the area. The company also takes pride in supporting numerous non-profit organizations.

While investing in the quality of life close to home, Moridge Manufacturing embraces new ideas from around the globe. In addition to



branch facilities in Georgia and Michigan, Grasshopper product is staged in 11 other US distribution centers and nearly 40 international centers. Fresh ideas from diverse global perspectives are regularly reviewed, serving as a learning ground for future innovation.

Merlin Esau, an engineer who joined the company in the 1960s, notes, “What I’ve admired greatly about the company is that we’ve always considered operator comfort and ease of service right behind safety as important design criteria.”

▼ The industry’s first PowerTilt™ Hopper allows the operator to easily empty the collection container.



▼ Grasshopper Company is awarded the World Trade Council of Wichita’s Export Achievement Award in recognition of successful efforts to build international distribution channels.

2005

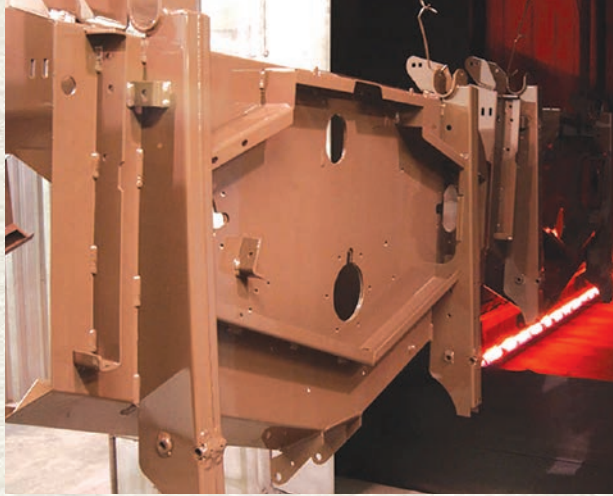
2007

Stan Guyer is proud of factory representatives, calling them “champions in the field,” while the independent dealer network, he says, takes pride in promoting quality service and products.

Green innovations

As evidenced in the java brown and tan earth tone colors of its equipment, Grasshopper also takes pride in the protection of ecology. Conservation of raw materials has been a strong incentive for implementing advanced equipment for cutting, bending, punching and welding with a minimal amount of energy and waste. Grasshopper was one of the first commercial mower manufacturers to implement a powder coat paint line. Paint particles are reclaimed and reused to eliminate many of the environmental hazards associated with traditional painting operations.

Moridge Manufacturing embraces technology that reduces wastes and promotes a long-lasting product. Small “drop-off” scraps of steel from CNC equipment along the production line are gathered and reused in castings, spindles and other mower parts. Thanks to the greater quality of the products themselves, they are often recycled from one



Powder coat paint line.

owner to another over time, increasing their productive life over many years, and even over generations.

What does the future hold?

How does Moridge Manufacturing continue down the path of innovation, progress and success?

Duane Guyer, vice president of finance, says, “I learned quickly that long-term success for the company was to be achieved by a balance of all forces competing for revenue. We worked hard to create synergies between manufacturing processes, product design, personnel development, investments and sales opportunities from emerging markets that are unique to Grasshopper. It is this synergy that really defines the spirit and essence of the company. Publicly held companies will

too often sacrifice one management goal for another in order to achieve near-term profits. Grasshopper, on the other hand, continues to implement innovations as though the company were brand new with sights set on growth.”

With a unique cultural upbringing and a group of employees indoctrinated into the philosophies of its leadership, Moridge Manufacturing is poised to bring a continuous flow of innovation to the grounds maintenance industry in the years ahead.



Presentation of donation to community daycare center.

Putting a face on our values

G-Mow, the company mascot, conveys the company attitude of pride, confidence and determination. This strong, positive character displays an attitude shared by company management and stated in the company’s mission statement: Our goal is to continually improve our



G-Mow Grasshopper mascot.

▼ In October, Moridge is presented a Partnership Award for Excellence in Pioneering Innovation by representatives from Parker Hannifin.

▼ Moridge Manufacturing celebrates 50 years of quality manufacturing services and is selected as a finalist in the *Wichita Business Journal's* Best In Business competition.

▼ Dedicated rear discharge decks are implemented for FrontMount™ and MidMount™ mowers.

product and services to meet our customers' needs by producing a high-quality, versatile product that provides long-lasting value to its owner.

Working toward the best

Over the years, Morigde Manufacturing has worked hard to earn a variety of awards for both the equipment it builds and the impact the company leaves on its communities. Some of these honors include:

Pollution Prevention (P2) Award 2012

Grasshopper has effectively reduced its raw steel consumption by more than 300 tons per year, with a net zero waste ration, by using high-efficiency laser cutting, welding and robotic technologies and reusing and recycling scrap material. In recognition of these efforts to reduce the consumption of energy and raw materials, The Kansas Department of Health and Environment awarded Grasshopper with a P2 Award.

Company of the Year 2014 After touring headquarters in Moundridge, SME's Wichita Chapter 52—formerly known as the Society of Manufacturing Engineers—named Grasshopper its Company of the Year. SME representatives said they were impressed with the company's efficient operations, and with the durability and versatility of its products.

Dealer's Choice Award 2015 The North American Equipment Dealers Association—now known as the Equipment Dealers Association—ran a nationwide survey with equipment dealers to find which companies provide dealers with high-quality products, parts, service and support. In 2015, Grasshopper earned the Association's Dealer's Choice Award for the Outdoor Power Equipment Manufacturer category. Out of 21 represented manufacturers, Grasshopper received the highest ratings in technical support, parts availability, parts quality, warranty procedures, marketing/advertising support and manufacturer response.

Wichita Business Journal Recognition 2016

After implementing robotics and other state-of-the-art manufacturing processes that increase efficiency, reduce consumption of raw materials and reduce waste, Morigde Manufacturing was recognized by the Wichita Business Journal for achievements in export growth and overall excellence at the Manufacturing, Wholesale and Distribution Awards.

Dealer's Choice Award 2016 The Equipment Dealers Association awarded Grasshopper the Dealer's Choice Award for the second consecutive year. Grasshopper earned exemplary ratings, topping all manufacturers

in all 12 surveyed categories relating to dealership operations and support.

Looking to the future

Morigde Manufacturing celebrated its 60th year of excellence in engineering and manufacturing in 2018. Grasshopper celebrated 50 years in 2019. The company's commitment to producing the best, most durable and reliable zero-turn mowers continues to be its main focus.

More Accolades

Grasshopper Mowers was inducted into The Wichita Business Journal's 2020 Hall of Fame on September 15, 2020. Factors contributing to the induction were the company's Kansas roots, multi-generational family ownership, commitment to innovation and long-term viability.

On Oct. 22, 2020, The Grasshopper Company was honored by U.S. Secretary of Commerce Wilbur Ross for its contribution to American export growth. Grasshopper was the only Kansas company to receive The President's "E" Award, the highest recognition a U.S. entity can receive for making a significant contribution to the expansion of U.S. exports.



▼ Upgraded in 2011, powder coat paint booth reduces waste and improves efficiency.

▼ Inaugural class is inducted into the Built to Last Club, recognizing users who build their business longevity around Grasshopper durability.

▼ Morigde enters a partnership with the Military Warriors Support Foundation in 2013 to donate a Grasshopper mower to a wounded combat veteran. The first donation was in conjunction with comedian Jeff Foxworthy and officially announced during a live appearance on "Fox & Friends" in New York City.

2011



White House | Washington, D.C.



Graceland | Memphis, Tennessee



Oak Alley Plantation | Louisiana

A company that promotes outdoor products not surprisingly has a great appreciation for ecology. From the installation of the first powder coat paint system to emission control and metal recycling, Moridge Manufacturing is committed to protecting the land from which its products draw their strength. We encourage you to keep the farms, parks and backyards of the world “green” for years to come.

MORIDGE

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Parc Monceau | Paris



Abraham Lincoln birthplace | Kentucky



Burghley House | Great Britain

▼ Moridge is recognized as a charter member of the National Farm Machinery Show (NFMS) in 2015 for 50 years of exhibiting at the 50th anniversary of NFMS in Louisville, Kentucky.

▼ Grasshopper represented Kansas at the President's Made in America Product Showcase, hosted at the White House in July 2017 featuring a product from each state.

▼ Moridge celebrated its 60th anniversary in 2018. In 2019, Grasshopper celebrated 50 years of innovation.

▼ The Grasshopper Company was inducted into the Wichita Business Journal's 2020 Hall of Fame, and was the only Kansas company to receive The President's prestigious "E" Award for making a significant contribution to the expansion of U.S. exports.