AgroSpectrum ASIA
Envisaging Future | Updating Present

FairGene launches dedicated Black Soldier Fly Egg facility to scale global insect protein industry

17 July 2026 | News

Joint venture between Fairville Farming and NRGene Canada brings advanced BSF genetics to commercial egg production, targeting higher yields and improved supply reliability for insect producers worldwide

FairGene

As the global insect protein industry accelerates its transition from niche innovation to commercial-scale production, one of its biggest bottlenecks—consistent access to high-quality black soldier fly (BSF) eggs—is beginning to ease. NRGene Canada and Fairville Farming Co. have officially launched FairGene, a joint venture that has commenced operations at a dedicated BSF egg production facility in Bassano, Alberta. The facility is designed to provide commercial insect producers worldwide with a reliable supply of genetically improved BSF eggs, addressing a critical constraint in the rapidly expanding alternative protein sector.

The launch marks a strategic milestone not only for the two companies but also for an industry increasingly seeking standardized, high-performance biological inputs to improve production efficiency and scalability.

Genetics moves to the forefront of insect farming

While the insect farming industry has traditionally focused on optimizing feed substrates and rearing systems, genetics is emerging as a key differentiator in commercial performance.

FairGene's production facility exclusively utilizes NRGene Canada's MaxBSF genetic platform, which has been developed to improve productivity across multiple performance indicators, including larval growth, feed conversion efficiency and production cycle duration.

According to the company, commercial evaluations have demonstrated that MaxBSF enables significantly higher larval density and biomass production while shortening the harvest cycle. Compared with conventional BSF breeding lines, the

technology has generated up to 2.1 times greater output, allowing producers to increase production without expanding physical infrastructure. The genetic improvements are expected to strengthen the economics of BSF farming, an industry that is increasingly supplying sustainable protein, insect oil and organic fertilizer (frass) to livestock, aquaculture and agriculture markets.

Addressing a critical supply chain challenge

As insect farming expands globally, securing dependable egg supplies has become one of the industry's most pressing operational challenges. The Alberta facility has already begun producing commercial BSF eggs, with initial production reportedly delivering encouraging results. By combining Fairville's agricultural production expertise with NRGene Canada's breeding technologies, the venture aims to establish a stable, genetics-driven supply chain capable of supporting insect producers across international markets.

Industry observers note that standardized egg production could significantly reduce biological variability, enabling commercial insect farms to achieve more predictable production outcomes.

Beyond eggs: Building an integrated production platform

In addition to supplying eggs, NRGene Canada is expanding the commercialization of its insect breeding technologies through an advanced neonate delivery system. The company has developed a logistics platform capable of shipping one-day-old BSF larvae directly to producers, eliminating the need for customers to incubate eggs on-site. The system currently accommodates up to one million neonates per shipment, with capacity expected to increase to 2.5 million larvae per container by the end of 2026.

The larvae are designed to maintain viability for up to two weeks after hatching, offering producers greater operational flexibility while simplifying the production process.

Expanding Canada's role in insect agriculture

For Fairville Farming, the venture represents a strategic diversification into one of agriculture's fastest-growing biological production sectors. Meanwhile, for NRGene Canada, the Bassano operation serves as an important commercial validation of its proprietary BSF genetics platform, extending the company's expertise in advanced breeding technologies beyond traditional crop genomics.

Looking ahead, the partners are evaluating the development of a dedicated BSF rearing facility adjacent to the egg production operation. The proposed expansion would support NRGene Canada's hub-and-spoke production model while serving as a demonstration centre for commercial-scale insect farming.

A growing market for sustainable protein

The launch comes as demand for insect-derived ingredients continues to rise across global feed and agricultural industries. Black soldier fly larvae are increasingly viewed as a sustainable alternative source of protein for aquaculture, poultry and pet food, while insect oil is finding new applications in feed formulations and frass is gaining recognition as an organic soil amendment.

As the sector moves toward industrial-scale production, technologies that improve biological consistency, genetics and supply chain reliability are expected to become increasingly important competitive advantages. By combining advanced breeding technologies with dedicated commercial production, FairGene aims to position itself as a foundational supplier to the next generation of the global insect protein industry.