

Grain Innovation Center

Application & Training Center Factsheet

Head: Rudolf Hofer (Milling Solutions), Lothar Driller (Animal Nutrition)

Location: Uzwil, Switzerland

Area: 2,000 square meters

Operational since: Established in 1951. Re-opening after renovation on October 28, 2024

Grain Innovation Center

The Grain Innovation Center (GIC) is a multi-purpose application center where customers can conduct tests on food and animal feed, develop new processes and solutions in cleaning, optical sorting, grinding, sifting, mixing, protein shifting, hygienization, flaking, pelletizing, cooling as well as pearling, peeling, and dehulling of grains and pulses.

At the GIC, food trials encompass a variety of raw materials, including cereals, herbs, spices, ancient grains, and pulses. Leveraging its extensive expertise in processing, the GIC also offers testing for various other commodities, including coffee, nuts, and insects. Additionally, the application center caters to non-food bulk solids, such as plastics and absorbers.

State-of-the-art feed trials can be performed with production capacities of up to 5 tonnes per hour, covering the entire production line or individual process steps. One of the main advantages of the plant is its ability to provide not only detailed data that enables continuous and precise monitoring of the process but also data about physical and chemical properties of the product at every stage of production and under different process conditions.

The new GIC meets the requirements for a forward-thinking and safe environment for both our customers' trials and Bühler's own process developments. Additionally, synergies will be leveraged through the relocation and integration of the current training centers, the Milling Academy, and the Swiss Institute of Feed Technology (SFT), into Bühler's comprehensive ecosystem of Application & Training Centers.

What is unique about it?

The GIC brings together Bühler's long-standing legacy in milling, cutting-edge technology, and a team of top-notch professionals who drive innovation test new products, and develop new processes for food and feed milling customers. By integrating the GIC with Bühler's network of Application & Training Centers in Uzwil, customers benefit from an ideal setup that enables them to turn challenges into opportunities. This unique hub combines all processing stages under one roof, from initial cleaning to the production of intermediate and final products such as protein concentrates, flour, flakes, and pellets. Utilizing forefront technology, the center also incorporates partner solutions such as Hosokawa's fine grinding and air classification systems.

Key figures



Approximately **60** trials per year.



Approximately **200,000** kilograms of processed material per year.



Over **10** development projects per year.

Raw materials

Raw materials include all kinds of grains, maize, ancient grains, and pulses but also non-food (bulk solids). In addition, by-products from food production, alternative protein sources such as microalgae and insects, and a wide variety of different plant materials can be processed.

Finished product categories

Finished product categories include flour from wheat, barley, rye, soy, durum, peas, beans, and over 100 other types of flour. They also comprise dehulled and pearled products, peeled products, mash feed, flakes, protein concentrates, crumbles, pellets, and intermediate products.

Technology solutions

Main machines include:

- Wide range of cleaning machines
- Grinding solutions
- Sifting equipment
- Mixing solution
- Laboratory flaking line
- Fine grinding and air classification from Hosokawa Alpine
- Vertical whitener TopWhite
- Huller PullsRoll
- Polisher HighPoly
- Stone mills
- Dehuller
- Dampener and liquids flow controller
- Hygienization line for long-term thermal conditioning
- Pellet press
- Counterflow cooler

Services

Product and process development:

- The GIC team conducts feasibility trials, product development, and scale-up process development with raw materials.
- The GIC experts undertake enhanced product development.

Plant or process optimization:

- To ensure the optimum running of plants and processes, GIC provides a unique test and application environment to demonstrate and develop process-based solutions.
- The team supports the development of solutions to improve energy efficiency, minimize resource consumption, and reduce waste.

Testing of machines:

- Collaborate with R&D to test and co-develop new Bühler machines prior to market release.
- It conducts validation of machines, settings, and technologies to mitigate investment risks.

Training and courses (on-site):

- The GIC does not offer training and courses directly but does so through the Bühler Milling Academy and the Swiss Institute of Feed Technology.

Close collaboration with all food and feed related Application & Training Centers

Protein Application Center: Test and develop products and processes throughout the entire value chain – from farm to fork, all within the same location. This allows customers to optimize their products comprehensively.

Extrusion Application Center: Utilize this multi-purpose lab for food and animal feed to experiment and innovate. Customers can refine their extrusion processes and improve product quality.

Pasta Application Center: Create traditional or gluten-free pasta, as well as couscous. Customers benefit from specialized equipment and expertise to perfect their pasta recipes.

Food Creation Center: Combine the expertise of the GIC and the Food Creation Center to create innovative salty or sweet snacks, such as protein bars enriched with cereals. Customers can leverage combined knowledge for unique product development.

Flavor Creation Center: Develop innovative snacks using the combined expertise of the GIC and the Flavor Creation Center. From nut-infused granola to chocolate chip-studded treats, customers can enhance their product range.

Energy Recovery Center: Discover this unique R&D facility, built by Bühler and Vyncke, showcasing innovative ways to reuse side streams and reduce CO₂ footprint, waste production, and energy costs. Customers can learn about integrated energy efficiency solutions and optimize raw material usage. It is open for customer trials to explore side stream combustion on-site intermediate products.

Scan to learn more from the website



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