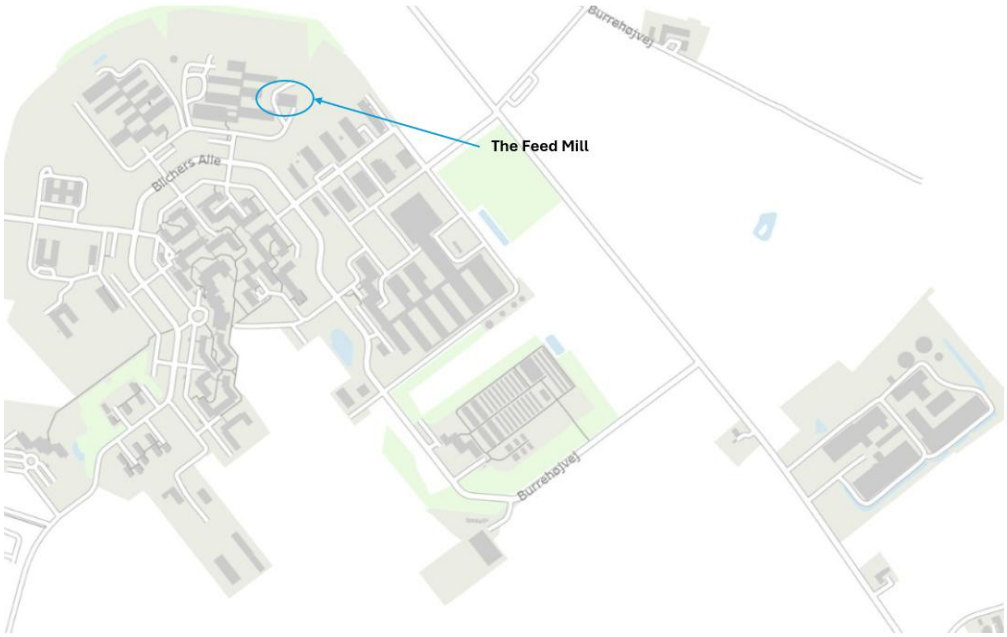
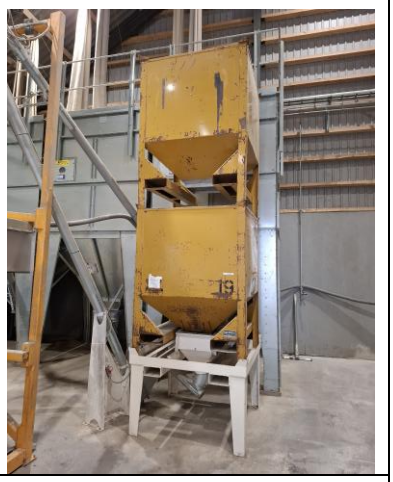
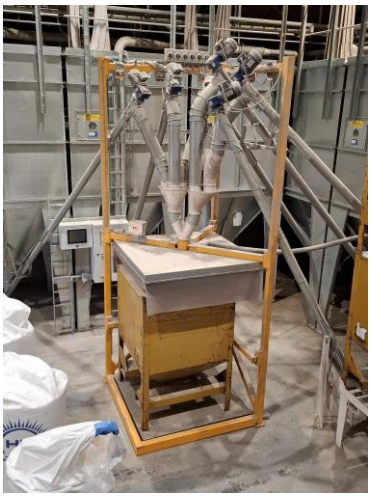
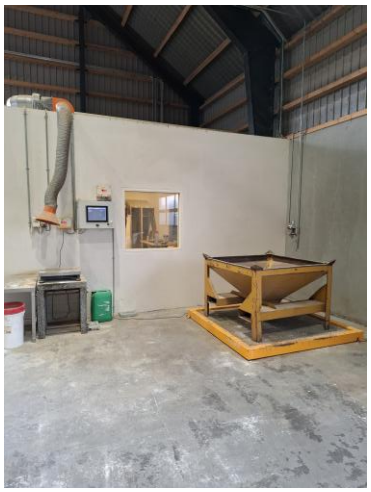
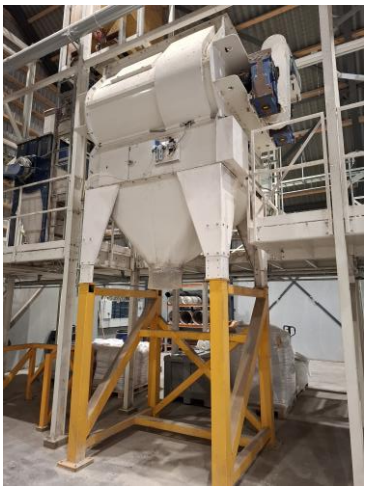
GIF User Manual	Presentation of GIF – Feed Mill
Barn / Building	8241
Period	[25.06.01] – [year.mm.dd]
Responsible	Jens Bech Andersen

Topics	***Description***
General Information about GIF – Feed Mill	The feed mill at AU Viborg – Foulum Research Centre was established in 2018 and produces feed daily for a wide range of research trials. The facility is a flexible, small-scale feed production plant with a capacity ranging from 2 to 2,000 kg per batch. It offers multiple processing methods, including hammer and disc milling, rolling, mixing, pelleting in various diameters, extrusion, and steam-heat treatment. The facility also supports the mixing of feed rations with a high fat content. The feed mill supports research in areas such as feeding, health, animal welfare, and feed economics for pigs, poultry, cattle, and horses. The facility differs from conventional feed mills through its advanced technology and ability to produce feed with varying textures, pellet sizes, and compositions – in both small and large quantities. Its flexibility makes it a central component of research activities at AU Viborg.
Core Functions of the Feed Mill	**The feed mill core functions include:** 1. Mobile silos 2. Weighing 3. Milling 4. Mixing systems 5. Pelleting with steam-heat treatment  *Figure 1. Arial view of AU Viborg with Feed Mill location marked*

Descriptions of GIF – Feed Mill Core Functions		
1. Mobile silos	The feed mill is built around mobile silos, commonly referred to as "**yellow containers**." Each container can hold up to 800 kg, depending on bulk density, and can be easily moved between different workstations in the facility. This flexible system optimises the production process and minimises the risk of cross-contamination.	
2. Weighing	Large ingredients such as wheat and soy are weighed in a container on a large platform scale, which can handle up to 800 kg at a time. This scale receives ingredients from 6 silos, each with a capacity of 6 tons of raw materials. An additional silo can also be connected, capable of handling a further 800 kg.	
	Small ingredients such as amino acids, limestone, vitamins, and oils are weighed individually on a scale that can handle up to 24 kg. In addition, there is a platform scale capable of weighing between 1 kg and 1,000 kg, used for raw materials over 20 kg that cannot be transferred pneumatically into the silos.	

3. Milling	The following types of mills are used at the feed mill: • **Hammer mill** with screen sizes of 2, 2.5, 3, 5, 6, and 7 mm • **Disc mill** adjustable from 0.5 mm to 7 mm • **Roller mill** adjustable from 1 mm to 8 mm	
4. Mixing systems	The following types of mixers are used at the feed mill: • **Cement style mixer** from 2 kg to 20 kg • **Horizontal mixer** from 100 kg to 200 kg • **Conical mixer** from 10 kg to 50 kg • **Conical mixer** from 100 kg to 250 kg • **Paddle mixer** from 500 kg to 2,000 kg	
5. Pelleting with steam-heat treatment	The pelleting machine uses dies with diameters of 2, 3, 5, and 8 mm and can be operated with or without heat treatment. Without heat treatment, the temperature is approximately 60–65 °C, while with steam-heat treatment it reaches around 75–85 °C. After pelleting, the pellets are cooled in a box cooler using natural airflow.