PULSES, SPICES & SESAME SEEDS.
A Bühler publication.

Supporting the International Year of Pulses 2016. Delivering innovative, comprehensive processing solutions for safe and nutritious pulse products.

ISSUE 1.

Image on cover: Shivam Protein Co. Ltd., Gujarat, India
Welcome to Bühler's newsletter on pulses, spices and sesame seeds.

The United Nations declared 2016 as the International Year of Pulses (IYOP). The aim is to increase awareness and celebrate the significance of beans, chickpeas, lentils and other pulses as a staple food source. More importantly, the United Nations seeks to focus on key factors that can further maximise the benefits of pulses to health, nutrition and sustainability.

As a leading technology and solutions provider in processing, Bühler is committed to serving pulses, spices and sesame seeds processors worldwide. Our collaborative innovation approach aims to develop comprehensive processing solutions along the pulses value chain, starting from the farm to plate - enabling processors to deliver safe and nutritious pulses based products and supporting the goals of the International year of Pulses.

For further information, please email pulse.spice-processing@buhlergroup.com

In the meantime, we wish you a pleasant reading.

Best regards,
Prasad Jaripatke

Making the most of pulses.

Pulses, like any other grains, consist of starchy endosperms and an outer hard protective layer, known as the husk or hull. However, unlike grains, the endosperm and husk are firmly attached. The strength of this attachment will vary depending on the type and origin of the pulse and this will make them either easy or hard to dehull. In lentils and chickpeas, the attachment is loosely bound, so they need relatively little pre-treatment to efficiently remove the hull whilst retaining the endosperm. Pigeon peas and mung beans, on the other hand, require the addition of oil, tempering and intermediate drying for better husk removal. An intricate process, but if done properly, greatly improves yield, digestibility, texture, cooking quality and taste – maximising your overall profitability.

Any equipment dedicated to this intricate processing must overcome these various challenges. A product engineer must also have extensive knowledge of the properties and behaviour of the raw material to recommend the appropriate equipment that will deliver the highest product quality and maximise profits.

Bühler have designed equipment specifically for pulses processing, such as the PULSROLL™ AIHI and Pulse dryer. Both significantly reduces product damage and waste.

For more information on the process and these products, speak to our Bühler pulses experts.
**New solution:**

**SORTEX A optical sorters.** Sophisticated technologies for pulses, spices and sesame seeds.

Bühler’s most sophisticated and versatile sorting capabilities, the SORTEX A range delivers exceptional sorting performance for the most challenging sorting application for all varieties of pulses, seed spices and sesame seeds.

Featuring new advanced vision, lighting and ejection systems, this state-of-the-art optical sorter provides the ultimate sorting performance delivering superior premium quality accepts with concentrated rejects.

The SORTEX A demonstrates a commitment to providing processors with dedicated customised options to meet specific sorting requirements.

**NEW SORTEX A RANGE**

Designed to remove defects other sorters struggle to detect.

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**New solution:**

**Bühler Pulse DRYER**

Drying is one of the critical steps in pulses processing as its performance in removing excess moisture content from raw material greatly influences the process efficiency, yield and final product quality.

Engineered exclusively for pulse processing, the Bühler Pulse Dryer is a batch type dryer with processing capacities of up to 15 tonnes per batch. It ensures consistent drying performance even with fluctuations in the raw material moisture.

Key benefits include highly uniformed and consistent drying performance, reduced thermal shock for a better product quality, improved yield and milling performance and an automated and seamless operation.

**Bühler Pulse DRYER**

Engineered exclusively for pulses, processing capacities of up to 15 tonnes per batch.

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**New solutions:**

**PULSROLL™ – Pulse Huller**

Upgrade your plant’s existing hulling system to PULSROLL™. Bühler’s universal, new generation pulses huller that delivers superior hulling performance on a variety of pulses including pigeon peas, chickpeas, mung beans, black beans and yellow peas.

An effective huller, the PULSROLL™ offers processors better yield of premium quality product - minimal sharp edges on splits, lower brokens, splits and residue (powder).

It is available as a stand-alone solution or offered as part of a complete pulses processing line.

Key benefits include high throughput capacity of up to 4 tonnes per hour with low power consumption and better yield of premium product.

The PULSROLL™ also emits less vibration and noise to deliver a more reliable and consistent hulling performance.

**PULSROLL™ Pulse Huller**

Pulse huller designed for a wide variety of pulses.
Shivam Protein started as a trading organisation over 60 years ago and moved into processing so that it could guarantee its products – producing hulled and split pigeon peas for the domestic market.

To ensure consistent product quality and safety Shivam Protein needed to reduce manual labour and sought Bühler – the only company able to deliver a fully integrated solution, to install a state-of-the-art automated plant.

The plant was commissioned as a complete Bühler project, which included design, installation and full testing, integrating all key processes of pigeon pea processing.

As well as cleaning, it also grades and dries the peas, then dehulls, splits, optically sorts and polishes before the final packaging stage.

Shivam Protein have reported complete satisfaction with positive response from its market. Yield is up by 2% when compared to existing mill while labour and power costs per tonne of output reduced significantly.

Mr. Ashok Jethwani, Owner of Shivam Proteins, said "The Bühler plant has delivered results beyond our imagination. Not only is the operation dust free and hygienic but also fully automated which helped to improve productivity while keeping the production costs low. With our flagship brand "Shivam" reaching new heights in the market - our trust in Bühler as a leading solution provider for pulses processing, has further deepened."

**YIELD UP BY 2%**
Labour and power costs per tonne of output significantly reduced.

**GLOBAL PRESENCE**
Bühler location for pulses, spices and sesame seeds processing capabilities.

**Successful application:**
Shivam Protein Co. Ltd, Gujarat, India.

**Global comprehensive integrated solutions:** Presence in over 140 countries offering local support and service sites in integrated solutions.

Bühler operates in all major pulses, spices and sesame seeds production markets. So, wherever you are in the world, our local Bühler operating companies can provide you with a window to our comprehensive services, from pre-cleaning to packing to plant automation. Offering expertise and vast process know-how of pulses, spices and sesame seed processing.

For more information:
Please read our dedicated Pulses, Spices and Sesame Seeds processing brochure, available to download on [www.buhlergroup.com/pulses](http://www.buhlergroup.com/pulses).