

# TOMRA Food: Success story Koushuiwa, China



Suzhou Koushuiwa Food Co., Ltd., founded in 2007, specializes in the development, production and sales of snack food. Koushuiwa Food has three major brands, Koushuiwa, Moon Street, and Jiangnan Cuisines. These brands' best-selling products include sunflower seeds, orchid beans and other roasted seeds and nuts.

## Optical sorting to improve sunflower seed quality and build a premium brand

With their living standards significantly improved, Chinese consumers are becoming increasingly demanding about food. Today's consumers are very picky about food taste, appearance and quality, and this challenges food businesses. In this fiercely competitive market, one enterprise stands out for winning the favor of customers with high-quality products.

Koushuiwa has always followed the business philosophy of "winning through integrity and quality" and is committed to providing consumers with high-quality products and perfect service. Believing in the importance of technological development, in 2008 the company began adopting advanced production equipment to improve production efficiency, ensure product quality, and meet growing market demand.

## Pursuing better product quality through more advanced sorting technologies

Sunflower seed production lines are usually divided into the raw production line and the roasted production line. Defects and foreign materials are removed through the raw line, and the filtered raw sunflower seeds enter the roasted line for roasting or the secondary sorting. After this, the final products are packed and sold on the market.

Raw sunflower seeds are usually purchased through multiple channels, which means there can be inconsistent quality and a lot of impurities.

If only using gravity stoners to filter out foreign materials, many laborers would be required for second-round sorting to ensure product quality.

However, as some foreign materials are quite small, and some look very similar to good products, they are difficult to identify and remove through manual sorting. This is a production difficulty for many processors.

## Foreign materials commonly seen in sunflower seeds

As a leading food company, Koushuiwa realized the importance of optimizing production lines, and started to apply color sorting machines to its raw

line to improve product quality. The business gradually discovered, however, that its existing color sorting machine could not detect some foreign materials, such as flower pith and nodules, due to their similar color to sunflower seeds.

Some other impurities, such as the cocklebur plant and animal droppings, were also difficult to remove completely. This meant that, after using the color sorting machine, it was still necessary to conduct second-round sorting with 10 to 15 workers.

To further optimize its production lines, Koushuiwa contacted other food sorting brands. Koushuiwa saw that TOMRA is a pioneer in sorting technology, and that its sorting machines not only have powerful color and shape sorting capabilities but are also equipped with NIR (near-infrared), laser and other advanced optical sorting technologies. TOMRA was invited to assess the existing problems with Koushuiwa's production lines. Taking into account Koushuiwa's objectives, production capacity and budget, TOMRA recommended the TOMRA 3C lane-based sorting machine, which is suitable for seeds and nuts products.

## NIR Technology effectively sorts out foreign materials in raw seeds

After forming a clear picture of Koushuiwa's production lines, TOMRA

conducted a series of tests on raw sunflower seeds with a TOMRA 3C sorting machine equipped with NIR technology and an RGB full-color camera. TOMRA's NIR technology is able to accurately identify the characteristics of different materials in order to sort out foreign materials from the sunflower seeds.

### Different materials present different forms in nir processing

Tests conducted at Koushuiwa by TOMRA's technical engineers confirmed that unwanted materials such as stones, insects, flower pith, nodules and animal droppings can all be detected and sorted out. This sorting met the required quality standard without any need for manual sorting on the raw line. And because the NIR technology accurately distinguishes foreign material from good products, good products are rarely removed mistakenly, reducing waste of raw seeds. Koushuiwa was impressed by the results achieved by the TOMRA 3C and decided to purchase the machine. Mr. Xie Dongping, the owner of Koushuiwa Food Co., Ltd., said: "The test results of TOMRA's sorting machine are satisfactory because it basically sorts out all foreign materials and defects in raw sunflower seeds. Sorted sunflower seeds have a high purity and don't need second-time manual sorting." in TOMRA pays for itself in two to three years on average."

### Improve quality of raw sunflower seeds and reduce investment in roasted sunflower seeds production

Raw sunflower seeds are processed firstly on the raw line and then on the roasted line before being packed and sent to market. If foreign materials could not be completely removed on the raw line, many workers or a sorting machine would be required for re-sorting on the roasted line to ensure the quality of the finished product. However, because the shells of sunflower seeds become fragile after roasting, they are easily damaged by color sorting machines. Damaged peels would not affect the taste of the seeds but would negatively affect consumers' perceptions of product quality and brand image. Moreover, sunflower seeds with damaged peels can only command low

prices and would reduce the manufacturer's profits. This problem was solved by applying TOMRA's equipment in the raw line. Now Koushuiwa can ensure product purity without any need for a sorting machine on the roasted line. This has reduced labor, saves costs, and prevents damage to the peels of roasted sunflower seeds.

### Worry-free pre-sales consulting and local service

Excellent sorting performance was the main reason why Koushuiwa chose TOMRA. In addition, Koushuiwa was very impressed by the performance of TOMRA's team during machine testing and installation. After Koushuiwa signed the sales contract, TOMRA delivered and set-up the machine well within a month. The TOMRA 3C continues to work smoothly and perform well on the production line. Since this successful installation, the quality of Koushuiwa's sunflower seed products have effectively been guaranteed. The company, which produces a variety of snacks in addition to sunflower seeds, is considering expanding its cooperation with TOMRA by installing sorting machines in other business areas. In the view of Mr. Xie Dongping, TOMRA not only has advanced technologies, but also a perfect service system.

"TOMRA's professionalism impressed me deeply. When we raised the requirement of the sorting setting in the early testing stage, TOMRA's sales and technical engineer were both patient and professional, responded very quickly, and adjusted the solution exactly as required." Mr. Xie Dongping, the owner of Koushuiwa Food Co., Ltd

In addition to providing highly professional pre-sales support, TOMRA also has a strong after-sales service team which responds swiftly to clients' needs. Mr. Xie Dongping said: "TOMRA's service team is always very professional and provided us at the beginning with training in machine operation and maintenance. If there are ever simple problems, they provide remote assistance via cellphone and WeChat, which is fast and convenient. We are willing to establish a long-term partnership with TOMRA."

TOMRA is one of the world's most advanced manufacturers of food sorting technology. Before entering the Chinese market, TOMRA had already provided quality sorting solutions to many food enterprises internationally and received unanimous praise from clients. TOMRA is committed to continuously developing and improving food sorting technologies and to providing more advanced food sorting solutions to successful enterprises such as Koushuiwa. ♦

