Betagro supply premium pork products to discerning customers

The production of top quality pork requires a totally integrated approach from the breeder farm to the consumer's plate. International Meat Topics recently went to see the whole operation at the Betagro Group – Thailand's leading producer of quality pork products.

The company produce products in joint ventures with leading Japanese companies such as Ajimoto and Itoham for the discerning Japanese market as well as premium products, such as their S-Pure and Hymeat ranges, for the Thai marketplace.

The overnight chiller and, inset, the unique identification of a half carcase.

The agricultural dimension of the operation was explained to us by Kriengmas Punchai, Senior Vice President Swine Integration.

The company operates five breeding farms to produce grandparent sows and five commercial breeding farms and five farms to produce parent stock sows which operate to SPF principles. The progeny of the latter

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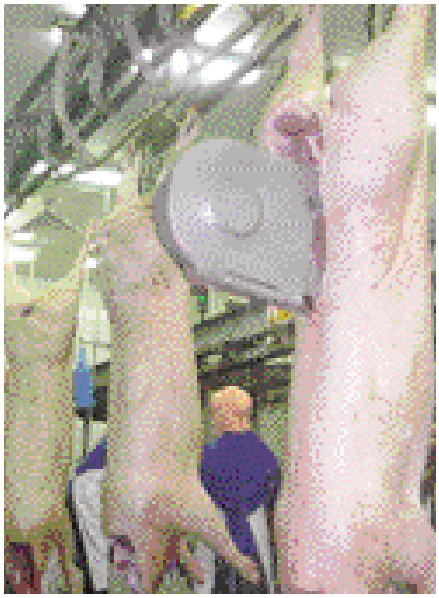
Left, The Betagro laboratory next to the processing plant. Below, left, coming out of the scald tank and, below right, a carcase is flamed to remove bristle remnants.



Splitting a carcase.

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goes to company and contract fattening farms. Commercial pigs are typically slaughtered at 103-105kg, which is achieved in 24-25 weeks at an FCR of 2.50, and approximately 1,000 of these animals go every day to the company's slaughtering plants.

Government certified farms

All farms are Thai Government certified and have high welfare, hygiene and biosecurity standards.

Genetically the company operates its own breeding programme that is periodically topped up with Canadian or European genetics and the final generation is sourced from a Large White type female and the company's own male line known as the B91 that contains Pietrain and Duroc genetics.

Betagro's agricultural division operates various schemes to ensure everything is done as it should be including ABSP (Assured Betagro Swine Procedures) that details all procedures and their FSQA (Food Safety Quality Assurance) Department is a powerful force within the company that has the brief to maintain, review and improve standards.

A strong emphasis is placed on the genetic attributes of meat quality with issues such as marbling, tenderness, drip loss and cooking loss very much to the fore in the company's strategic thinking. The latest biotechnological methods are used at the Betagro Science Center to help in the selection of the best boars in terms of meat quality so that these can be used to sire progeny that will be destined for the premium products.

Strict protocols

The production of pigs destined for S-Pure products is in accordance with strict protocols that ensure total traceability and define all aspects of the farming process such as the need to use organic rather than inorganic minerals. No β-agonists or antibiotic growth enhancers are allowed in the feeds.

These S-Pure products are marketed as hygienically produced residue free pork through major retail outlets and Japanese restaurants and they are now also going into the food service sector. Hymeat branded products go to Tesco Lotus who have a major presence in Thailand.

In addition, high health standards are maintained and routinely monitored and this results in very good live animal performance which, in turn, more than pays for the additional costs that are incurred in producing this premium pork. Betagro are also rolling out the S-Pure concept into broiler and table egg production.

We visited the production plant of Betagro Safety Meat Packaging Co Ltd in Patiananikom, Lopburi Province, to see the processing of these premium quality pigs and to meet their Senior Plant Division Manager, Santichai Bunmala.

The processing plant is certified by the Thai Department of Livestock Development and operates to international GMP and HACCP standards.

Attention to detail by QA staff pays dividends.

Currently 180 pigs per hour are processed but this is likely to increase to 200 per hour in the near future.

On arrival at the slaughterhouse every truck of pigs is inspected and logged into the system by its farm of origin and from this point onwards strict batch management ensures that every product leaving the operation can be traced back to its farm of origin by means of the strict traceability system that operates.

Typically, after unloading, the pigs rest for at least two hours and often as long as six hours in environmentally controlled hygienic lairage facilities before being killed by electrical auto-stunning and horizontal bleed out.

Following this every pig is pre-washed,

Meat inspection and, right, getting the grading measurements.

scaled and dehaired, dried, flamed to remove any residual hairs and then has its head removed. Prior to evisceration the animal is 'bunged' (occlusion of the rectum to prevent spillage of rectal contents) and then eviscerated with red and white offals processed separately. In Thailand very little of the pig is wasted and there is a market for most offals as well as the blood, which is allowed to clot to produce the locally popular 'blood cakes'.

The washing stage is effectively the CCP1 and is designed to greatly reduce soiling and bacteriological contamination of the carcases. Some 16 litres or more of water per pig at a pressure of 3.5 bars or greater and a chlorination level of 50ppm chlorine is used.

The carcase is then split by a chain saw and every carcase is subjected to detailed inspection by the meat inspectorate. The carcase is then subjected to LSQ grading and every carcase half is stamped with a stamp detailing farm of origin and carcase sequence number.

Carcase grading is with a German SFK fat and meat meter. The carcase then is subjected to a quick chill by air at a temperature of 2-10°C before being placed in the overnight chiller where colder air brings the carcase's deep meat temperature down to 4°C.

The cutting room.

The following day the carcase halves proceed to the cutting room where they are expertly jointed and the separate joints are specifically packed or go on for further processing. All joints are subjected to a detailed visual inspection (CCP2) and pass through a metal detector (CCP3) before being frozen at -30 to -35°C. Joints are packed frozen.

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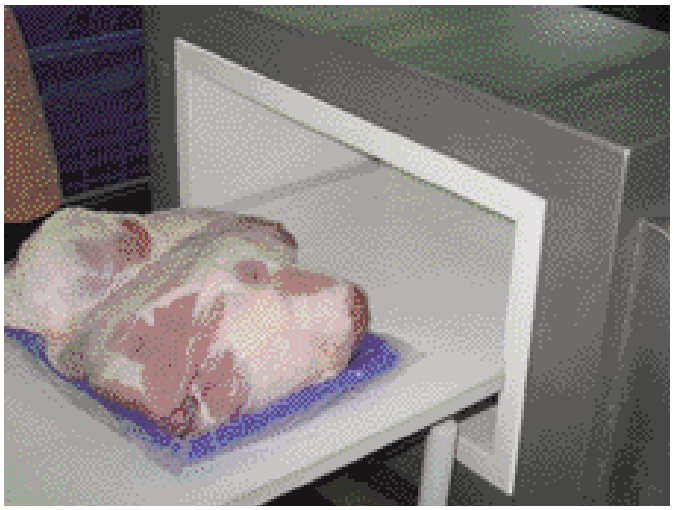
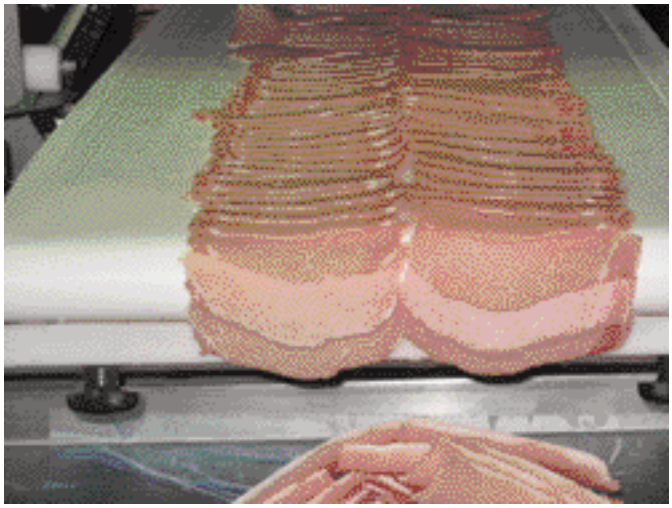
Left, metal detection and, right, packing mince.





Sliced meat before and after packing.

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The production of S-Pure products also requires the maintenance of an effective cool chain from processing through the distribution chain to the end user/consumer.

Quality assurance also involves the testing of samples and this starts at farm level. Every farm has samples collected at the abattoir every 10 days – urine is tested for agonist, serum is tested for sulphamezathine and a lean meat sample is tested for antibiotic residues. In addition, one fat sample from animals killed from each farm is tested for pesticides.

Microbiological testing of product necessitates three sample per lot being tested for total viable count, E. coli count, enterobacteria count, enterococci count, Staphylococcus aureus count and the presence or absence of salmonella.

Four samples of water and two of ice are tested each month.

The effectiveness of the cleaning programmes are assessed weekly by the microbiological testing of surface swabs.

Testing is either undertaken in a Thai Government laboratory or in the Betagro Science Centre's Lopburi laboratory which is close by and operates to the highest international standards (ISO 17025). ■

Betagro's quality pork is ideal for both the Thai or European consumers.