#### Operating Review

## **Farming**

Baladna's farming division continued to support the Company's marketleading proposition and reputation for trusted quality throughout 2023. Despite tougher temperature and humidity conditions, our farming operations produced sufficient milk volumes to cater to the requirements of our customers during the year.

With our 2 farms covering 2.4 million square meters, our operations produced milk used in popular dairy products, from beverages and cheeses to yoghurts bringing joy and health benefits to millions of consumers across Qatar.

Baladna's well-deserved reputation for the freshness of its products derives from its speed to market. Our cows are routinely milked every 8 hours in a modern stress-free environment. The fresh milk is then chilled to below 4° C within minutes and stored in food-grade stainless steel silos. Raw milk is dispatched to our processing plants within 4 hours of milking, which contributes to our world-leading position in product freshness.

### Driving sustainability with improved water efficiency

The 2023 financial year saw our continued emphasis on the health and wellbeing of our herd, with new technology trialled to improve the comfort of the cows and the efficiency of our water management.

With the focus on delivering value, every day, we conducted a water-efficiency pilot to test SmartSoaker™, a new-to-the-industry technology from the USA. The pilot ran over a 6-month period, which included peak usage times.

SmartSoaker used electronic eye motion sensors in our milking barns to detect the position of an individual cow relative to a water-cooling jet. The jets were activated only when needed to cool the animal, while jets in unoccupied cow spaces remained inactive, reducing water wastage.

At the same time, we tested SmartSoaker, we ran a parallel project to monitor animal temperature and activity to provide accurate diagnostics about the effectiveness of our cooling system. The resulting data helped in our evaluation of SmartSoaker by providing comparisons between the old and new technology.

Data from the pilot showed a 65% reduction in water usage, translating into a 26% reduction in overall water consumption when applied. As a result of the trial's success, SmartSoaker will be installed in all our milking cow barns next year, reducing our water costs by an estimated QR 500,000 in 2024, and making Baladna the market leader in using this technology in the GCC.

SmartSoaker will have a significant impact by enhancing the comfort of our animals with targeted feedline soaking and accordingly, the lower milk production typically associated with heat-related stress in the summer will be addressed.

By improving milk production during the hot summer months in Qatar, Baladna will optimise the number of cows required to achieve targeted volumes, reducing our use of resources. Additionally, greater consistency of supply will further contribute to the country's food security objectives.

### Unwavering focus on herd comfort and health

We introduced various other measures in 2023 to improve the comfort levels of our herd. The installation of rubber mats on cow traffic lanes to and from the milking centres was completed. This new underfoot cushioning proved very successful, improving the welfare of our cows and reducing lameness by 12%.

In line with our principles of raising the level of veterinary care by tapping the expertise of the best veterinarians, we collaborated with a team of international experts to fine tune our herd immunisation and surveillance programmes.

Surveillance is crucial to monitoring herd health status and minimising disease. We complemented this capability with new laboratory equipment to enhance our diagnostic capabilities and upskill our lab workers.

# Data-driven and robotic technology deliver improvements

With ever-changing animal technology and innovations, we are continuously evaluating different systems to seek out the best solutions to our requirements in the Qatari desert.

In 2023, we improved our data collection and consolidation, thanks to the implementation in 2022 of easy-to-read dashboards to make trends analysis more accessible. Furthermore, the dashboards provided greater visibility over cow cooling and animal comfort. The success of these new dashboards encouraged our data analysts to widen the scope of issues covered to give us greater visibility over the wellbeing of our herd. The ability to monitor trends daily enabled an immediate response from the veterinary team when trends deviated from the norm.

During the year, we also installed robotic sanitisation and milking technology to enable faster and smoother milking that boosts yields.

In our ongoing bid to improve the wellbeing of our animals, a system called CattleEye was trialled to provide a real-time monitor of our dairy herd's mobility and compare it with previous days to assess hoof health and each animal's general condition. CattleEye was subsequently installed, and data collected will be fully integrated into our routine foot health protocols in the first quarter of 2024.

#### **New breeding programme**

Our farm team remains committed to bringing fresh and healthy products to consumers with optimum efficiency, guided by our corporate principle that governs the care of our livestock, and our commitment to collaborating with experts in livestock breeding and production.

As a result, we joined forces with a team of experts to use gender-selected semen to produce a higher female-to-male ratio among newborn calves. Selective use of gender-selected semen on cow families with the highest milk yields and longevity positively impacts the sustainability. We plan to continue using genetic selection from the best cows to increase productivity and consequently, the profitability of the business.

#### Looking ahead to 2024

In the coming year, we will continue to realise the benefits of our various water-saving initiatives as we strive for greater sustainability without compromising the health of our herd.

Additionally, sustainability will be the driving force behind our ongoing evaluation of how we clean and improve our cow bedding. Our animals are bedded on sand for comfort and cleanliness properties; accordingly, we are investing in improving our recycled sand to further enhance sanitation and comfort.

In the coming year, we plan to invest in cattle handling facilities that automate individual animal sorting or drafting from the herd. This process will reduce potential stress on target animals and their herd mates that occurs in manual drafting. It will assist to streamline routine daily tasks such as breeding, health checks and hoof care.

