

# Introduction of the Rondeel® Egg Production System

## *The Rondeel non-confined egg production system unveiled*

In response to the need for a more sustainable, non-confined, small-scale, egg production system suitable for defined markets in the EU, Rondeel, an affiliate Company of Vencomatic, in cooperation with Dutch research institutions have developed the Rondeel® system. A trial unit has been erected at Barneveld in the Netherlands, to house 30,000 hens. In concept the Rondeel® comprises five modules radiating out like spokes of a wheel from a central core over an arc of 270 degrees. The front 90 degrees serves as access to the central core for delivery of feed and packing material and transfer of farm-packed eggs. The central

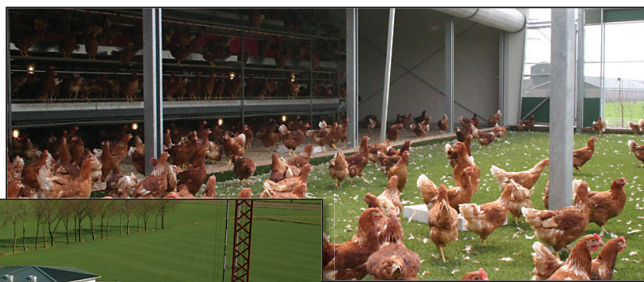
work area receives eggs from the nests on belts for farm packing and refrigerated storage.



**Total area for hens in the Rondeel egg production system, including night quarters and open quadrants is 1.6 feet<sup>2</sup>.**

The unit is approximately 245 ft in diameter. Hens are housed in each of half of the two adjacent segments which contain nests, feeders and nipple lines arranged as in an aviary installation. The quadrants between the five “night quarter” modules comprise the outside access for the flocks and are accessible to the hens during the day. This area is covered with Gardengrass® (a tufted plastic material) and each quadrant has a semi-circular area for dust bathing and an overhead screen to protect the flocks from contact with free-living birds and from predatory raptors. The use of an artificial turf substrate for the outside access quadrants could be problematic with regard to accumulation of fecal material which may contribute to endoparasites or salmonellosis. Apparently the surface of the exterior access areas will be vacuumed at regular intervals to remove accumulated droppings and feathers. During inclement weather hens can be confined to the night quarters using roll-down doors.

An additional 15 ft wide area around the circumference of the Rondeel® has been planted to trees and foliage and is available to the hens if required. The total area for each hen including the night quarters and the open quadrants is 1.6 ft<sup>2</sup>. The Rondeel® concept was developed from a study conducted by Wageningen University, the major Dutch agricultural institute dealing with welfare, nutrition and housing of poultry. A research team evaluated flock welfare, social responsibility, the requirements of laying hens and optimal efficiency for a family-operated egg



**Gardengrass, which is vacuumed at regular intervals to remove droppings and feathers, covers the surface of outside areas.**



**Like spokes of a wheel, the quadrants of the Rondeel egg production system radiate out from a central core used for delivery of feed and packing material and transfer of farm-packed eggs.**

production unit. The Rondeel® provides an environment suitable for the hen, supplying feed, water, security, and allows for social behavior including interaction, scratching, and dust bathing.

Sales representatives on the Vencomatic booth at VIV were unable to quote a capital cost either for the completed project or on a per hen basis. Since the first flock had not been placed in the prototype commercial unit at the time of the VIV Exhibition there was no data available on production parameters or cost. Given appropriate management there is no reason why these should be different to more conventional farms of equivalent flock size.

The projected output of 500 cases of eggs per week from the initial Rondeel® installation is committed to the large Dutch supermarket chain Albert Hein and will be sold under their private brand specifying their Rondeel origin. These eggs qualify under law as being derived from “Barn flocks” and are imprinted with the EU Number 2 stamp distinguishing them from the EU Number 1 reserved for eggs from “Free range” flocks which are allowed at least 2.7 ft<sup>2</sup>. The eggs will be assigned a 3-Star rating from the Dutch Association for the Protection of Animals (analogous to U.S. certification by the American Humane Association) and also the quality mark of the ‘Milieukeur’ attesting to an environmentally friendly and sustainable production system. **EI**

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