

# A Game-Changer — Haygrove's Total Vent shaping the future of growing

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It was all about berries in Bundaberg this September, with Berries Australia hosting an information night and grower dinner, and Silver Partner Haygrove holding an Open Day at Hillwood Berries.

Proceedings commenced at the Young Australian Hotel, with representatives from MADEC, Queensland Fruit & Vegetable Growers (QFVG) and Bundaberg Fruit & Vegetable Growers (BFVG) providing a useful update for growers about the government schemes and grants currently available to support horticultural producers.

The following day and in the scorching heat of the Bundaberg sun, the Open Day at Hillwood Berries Queensland showcased Haygrove's cutting-edge protected cropping technology, with a focus on the patent-pending Total Vent design. Hillwood Berries are growing strawberries, blackberries, blueberries and raspberries on site, under a variety of different structures.

The 20-hectare facility exemplifies a significant leap forward in field-scale polytunnel design, using mechanisation to boost the crop yield and quality, minimise labour and have the versatility to adapt to a changing climate.

The headline product showcased was the Total Vent, designed to mechanically roll the polythene to the apex of the tunnel. This system provides precise climate control, offering growers the means to combat the effects of extreme weather on both the crop and the structures, using automated venting.

Marcus Dornauf, Managing Director of Hillwood Berries Queensland, shared his firsthand experience with Total Vent, and commented on its remarkable flexibility in optimising the growing environment in Queensland's hot and humid climate.

During the insightful discussions, the key advantages

of Total Vent and retractable shade nets took centre stage, with a spotlight on their precise climate control. The structure's ability to mechanically open the roof or sides of the tunnel in hot weather; combined with its strategically positioned vents for releasing rising hot air, and the agility to respond swiftly to rain events showcased its efficacy in managing temperature and humidity to enhance the crop.

The integrated retractable shade net, where a single motor operates up to 0.6ha at a time, provides another lever for temperature management. Delegates at the Open Day experienced the full cooling effect of the vents and shade nets whilst standing in the tunnels on the farm tour.

The 10-metre bay width, that utilises the space protected by the rainwater gutter under the 3-metre support leg, stood out as a game-changer for Hillwood Berries. This innovative approach increases plant density over an equivalent area, translating to a substantial revenue gain of \$130,000 per hectare per year, demonstrating the tangible economic benefits of adopting these innovative technologies.

Using rainwater gutters in combination with mechanised vents allows for efficient rainwater harvest. As well as using this water as a vital resource for irrigating the crops, the gutters promote responsible water usage, and they protect the soil below preventing erosion in the tunnel from rainwater run-off.



**Raspberries growing in Total Vent tunnel with the vents fully open.** Photo credit: Haygrove



**Utilising the space under the rainwater gutter for an additional plant row has generated Hillwood Berries additional revenue of \$130,000 per hectare.** Photo credit: Haygrove

Addressing a key concern for growers, Total Vent tackles labour efficiency by automating venting processes. This not only minimises man-hours and reduces labour costs, it also ensures crops are no longer compromised by decisions to forego venting.

Mechanised venting can be operated at precise moments and with sufficient frequency, ensuring crops reach their yield potential. Pollination efficiency can also be improved by rolling up the polythene to allow better access for beneficial pollinators, a feature which further solidifies Total Vent's role in enhancing overall crop yields.

The system's ability to fully utilise natural light without additional energy requirements is also noteworthy. Through retracting the polythene, Total Vent enhances UV light exposure, contributing to healthier plants and increased rates of photosynthesis. This commitment to sustainable and efficient farming practices underscores the system's forward-thinking approach.

Total Vent's versatility doesn't stop at automated venting, it can also be custom-tailored to specific needs, sizes, and crops. Whether it's improved plant quality or meeting unique configuration requirements, Total Vent stands as a testament to the adaptability needed in modern berry growing.

As the industry grapples with challenges such as climate change and labour shortages, Total Vent emerges as a viable solution for growers aiming to operate successfully on a large scale. Hillwood Berries' early adoption and subsequent success with this technology serve as a compelling testament to the transformative power of Total Vent in shaping the future of berry growing.

After exploring the Total Vent tunnels, the tour group moved to the Fixed Top Vent style, which comes with the option of additional roller vents on the hoops and sides of the tunnel.



**Blueberries growing in the innovative Total Vent tunnels.**  
Photo credit: Haygrove



**Open Day attendees enjoying some shade in the blueberry crop planted in Total Vent tunnels with retractable shade nets.**  
Photo credit: Haygrove

The final part of the tour looked at the EZVent tunnel which is a simple solution for quick return on investment.

Each tunnel allows for the leg row to be utilised, and the addition of rain gutters allows for greater structural integrity while at the same time allowing rainwater to be harvested. Interestingly, strong tape is used in place of ropes to prevent wear and tear to the plastic.

Planning each tunnel requires careful consideration, not only about the type of crop and local conditions, but the availability of power and decisions about how

best to safely erect the tunnels. After undertaking thorough risk assessments, Hillwood Berries elected to utilise boom lifts as the safest and most cost-effective for building their structures.

Overall, it was a well-structured and informative day. The range of tunnel styles available is impressive, and it was great to see so many growers from all over Australia come to Bundaberg to learn about the latest innovations from Haygrove.



**Aerial view of the Total Vent showing the polythene rolled to a range of venting positions.** Photo credit: Haygrove



**Strawberries growing in Haygrove's substrate gutters under EZVent tunnels.** Photo credit: Haygrove



**The simpler Fixed Top Vent design is being used to grow Rubus.** Photo credit: Haygrove



**Total Vent is mechanised by electric motors, minimising the labour requirement and giving a high degree of flexibility to manage the growing environment.** Photo credit: Haygrove

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