Customer
A food industry leader that processes ultra-pure liquid for privately labeled beverages.

Project
The customer needed a wash system capable of sufficiently cleaning watermelons for the purpose of harvesting the internal section to produce drinkable juice.

Requirement
Provide a system capable of removing dirt and other organic materials from the outer rind, and delivering the watermelons to the peeling process sanitized at the rate of 400 melons per hour.

Specifications
Completely remove all particles, microscopic organisms and apply a sanitizer.

Challenges
- Aggressively spray clean the watermelon to remove dirt and organic growth without penetrating the exterior rind and contaminating the interior fruit.
- Water only spray cleaning without an elevated solution temperature.
- Transfer the melons through the process without compromising the outer rind.

ITS Solution
Provide a single stage conveyor type cleaning system with a dedicated rinse spray bar to apply a sanitizing solution prior to the melons exiting the system. The cleaning stage consists of multiple spray bars with nozzles delivering a concentrated volume of solution from 360° to envelop the entire watermelon. For melon containment and protection during transfer, ITS provided a Polypropylene conveyor belt and UHMW part guides.

Keys to Success
- Process development by the ITS engineering and sales teams.
- Product analysis and sanitizing solution recommendation by ITS partner.
- Testing within the ITS R&D lab.

Results
ITS developed a process and provided a spray cleaning system capable of delivering a product in compliance for food-grade product manufacturing. In addition to providing a capable cleaning process, material handling design considerations allowed for processing without rind damage, which eliminated unnecessary product losses.