

## **Sustainable Agricultural Food System**

Project Leader – Brian Jacobson

**To:** Marika Nell & Student Sustainability Committee

This letter is sent to request a scope change for the Sustainable Agricultural Food System Phase 1 project and report on a vendor donation made to the project. Due to the custom nature of the equipment needed in this project, it is difficult to provide exact costs until well into the purchasing steps. Some improvements are found in design, and better options are commonly made available as the process moves on.

### **Original Equipment Budget**

Wash Tank - \$1000  
Hot Break Tank - \$50,000  
Pulper/Finisher - \$22,500  
Vacuum Evaporation Tank - \$80,000  
Positive Displacement Pump - \$12,500

**Total: \$166,000**

After much time was spent working with a vendor, a better way to integrate the wash tank and hot break tank was found. Originally, the wash tank was going to be a simple sink, with an apparatus coming from the hot break tank providing the transfer mechanism from the wash tank to the hot break tank. However, it was found that if we made a much smaller wash tank, and built the belt system as a part of the wash tank along with a spray cleaner, we would find several improvements. The first is water savings, as all water in the wash step will be able to be filtered and re-used. Second, the tomatoes will be washed much more effectively by a water spray as they travel the length of the belt, and third, the wash tank will be much more versatile for other future potential projects with the SSF.

### **Proposed Equipment Budget after Scope Change**

Wash Tank - \$18,600  
Hot Break Tank - \$34,400  
Pulper/Finisher - \$19,258 (purchased under budget)  
Vacuum Evaporation Tank - \$92,742  
Positive Displacement Pump - \$1000 (vendor donated large portion of cost - \$11,506)

**Total: \$166,000**

As you can see, the two affected pieces of equipment (wash tank & hot break tank) have very little effective change in combined cost (+\$3000). I would like to propose the small savings in cost from the pulper/finisher and partial donation of the positive displacement pump be used to fund the \$3000 increase in the combined cost of the wash and hot break tank, with the remainder of the savings (\$12,742) be applied to the vacuum evaporation tank if necessary. It appears the vacuum evaporation tank may come in slightly over budget due to the complexity of the water and energy saving vacuum system.

Thank you for your consideration. We look forward to your response.

Sincerely,  
Brian Jacobson