

Analyze the national cranberry cooperative essay

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NATIONAL CRANBERRY CO-OPERATIVE CASE STUDY

Nishi Sharma In 1971, National Cranberry Cooperative faced recurring operational problems that affected the productivity and relationship of NCC to growers. This analysis will discuss how NCC can improve its operation before the peak-season comes in. The analysis was based from facts cited in the case, using tools such as but not limited to process flow diagram, cost, benefit and utilization analysis, and work-force scheduling.

The author recommends solution that will not just improve NCC's operations but will also increase plant's capacity and decrease its cost thereby leading to long-term savings for the growers. Problem Statement/Key Issues This case analysis will investigate two primary problems faced by NCC (1) Long waiting period of trucks during unloading of berries at RP1 and (2) Too much overtime cost. This case will also look at a secondary problem, specifically, the inaccuracy of grading of berries.

Supporting Argument It is necessary to address the truck's queuing problem in 1970 in order to attain NCC's planned increase in output of water harvested crop from 58% to 70% the following year. The queuing/idle time during unloading also creates unnecessary costs particularly the cost of leasing trucks and hiring drivers. Also, Cranberries' market price is influenced by the government regulation Cranberry Marketing Order 1070, which mandates owners to scrap 10% or 200, 000 bbls of harvested crops, thereby reducing income for the same resources used.

With this, it is important that NCC manage its resources properly including scheduling of workforce (seasonal ; full-time) to reduce the costs like the overtime pay. With the cost amounting to \$112, 500 ($\$450, 000/2 \times 0.5$) incurred for paying extra premiums to second graded berries, it is important to look at the grading process and assess the need for installing an equipment that can help reduce the said cost. Alternatives The following are the alternatives proposed by Mr. Williston:

- To buy and install new dryers.
- Convert dry berry holding bins to store water harvested or dry berries

Install Light Meter System for color grading

PROCESS DIAGRAM – NATIONAL CRANBERRIES CO-OPERATIVE

Assumptions:

We have assumed that:

1. There is a cost associated with trucks waiting to be unloaded and it is \$5 per hour.
2. We have not considered per hour operating cost of plant
3. Overtime for both regular and part time worker has been taken to be \$6.50 per hour.
4. In calculating the payback time, the same cost saving will occur every day.

It is given in case that wet berries will make 70 % of total berries and that normal running hours for plant is 11 (12-1) hours. Case 1: 10000 bbl/day Wet Berries (WB) (7000 bbl/day Dry Berries (DB) (3000bbl/day Total Time = 11 Hrs WB feed= $7000/11 = 637$ bbl/hr DB feed= $3000/11 = 273$ bbl/hr

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Minimum processing rate for WB is at dryers, which is = 600 bbl/hr Minimum processing rate for DB is = 1500 bbl/hr Hence, after 11 hours total accumulation of WB = $(637-600)*11 = 407$ bbl Overtime = $407/600 = 0.7$ hrs

Now, assuming this is not a peak season, we have considered only 27 workers. Since plant is working suboptimal level during overtime, only two-third of the work force will be working on wet berries drying process. = $2/3$ work force = $20*(2/3) = 12$ Savings per day = $12 * 6.5 = 78$ Savings for season = $78*90 = 7020$ If we add another dryer, to save overtime cost, cost will be = 40000 Analysis Considering the cost of depreciation and cost of investment in dryer(8-10%) it will not be economical to buy another dryer.