

# Mountain Top Farm Report

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## 1. Trial Harvest and Harvest Forecast

The accuracy of this forecast is strictly limited to the representative sample harvested. The more trees would be sampled the more accurate the forecast would become. Also there were some poor looking areas that will bring the average yield down. (See Coffee Farming Operation)

Three good-looking trees were hand harvested (not the best but not the worst. Poor looking areas were ignored) the trees harvested were one 4-5 years old, the other 2-3 year old and the last 5-6 year old. All fruit was collected OR (Over ripe), R (Ripe) and UR (Under Ripe). The yield is expressed in all R equivalent. This exercise needs to be compared with actual yields and needs to be perfected over time. Kauai plantation in Hawaii spends considerable time on "pre-harvest forecasts" by sample counting of branches in the fields and computing yield forecasts including ripe and under ripe distribution.

### Yield based on 3 sample trees

Age of tree/ yr	# of trees	Kg Harvested/ per sample trees	Total Fruit/ Kg
4-5	40700	8	325,000
2-3	6270	4	25,080
5-6	9560	8	76,000
Total	56530		426,000

If the fields were relatively even in performance a 20% yield reduction do to uneven performance and "ground loss" from the harvester would be reasonable. With areas of poor performance this loss factor would be correspondingly greater.

### Ground loss

After the sample harvest of the Korvan harvester (1080 feet), fruit under the trees were collected and scaled. Per tree and for this first pass, 150 grams of fruit was collected. This sampling was done under one tree and should be done over a larger area to be more representative. It should be done also after each harvesting pass.

### Ground loss projection

Kg collected per pass/ tree	Kg per all trees	Kg 2 passes total	Kg 3 passes total
-.150	8479	16959	25437
% of total potential harvest	1.9%	3.9%	5.9%

Opening the tree base will reduce ground loss due to better performance of the catch plates. (See Coffee Farming Operation)

### Projected harvest, minus ground loss and uneven yield loss

Total Fruit / Kg	Ground Loss Kg	Uneven Yield Allowance / Kg	Total / Kg Fruit Harvested
426,000	5.9% 25437	14.1% 60,66	20% 340,000

### Yield distribution based on Over Ripe, Ripe and Under Ripe Fruit, Projected Distribution based on 340,000 Kg of Fruit.

Over Ripe / Kg 35%	Ripe / Kg 55%	Under Ripe / Kg 10%
Cherry equivalent 119,000 Adjusted wt 84,200	187,000	34,000

There is some weight adjustment as ripe fruit dries on the tree and loses weight prior to harvest. Therefore there is a shift in weight distribution. This weight loss is difficult to predict as the content of OR changes through the harvest. It is good to have total fruit weight however as it will indicate the volume to be dried and allows drier capacity calculation. (Approximate)

1 Liter Cherry = .685 Kg, dried to OR from the tree = .485 kg with ½ to ¾ the volume of ripe cherry (depends on the state of dryness; 1.41 reduction)

1 Liter OR, or Floaters = .575 kg = .480 Dry Floaters= .120 Kg Dry Green Beans

1 Kg of Cherry = .1956 Kg of Parchment = .1478 Kg of Dried Green Bean ( 6.76 Reduction Ratio)

1 Liter Wet Parchment = .790 kg = .445 kg Dry Parchment ( 10% reduction in volume from wet parchment to dry parchment)

**Amount of OR and Wet Parchment to Dry per Season**

	Harvested Kg.	Harvested Liters	# of Drier Loads 5000 liters	# of Drier Loads 7600 liters
OR or Floaters	adjusted wt/Kg 84,200	173,600	34	22
Wet Parchment	80,587	102,008	20	13

Interesting to note that 35% of the harvest as OR or floaters will take up 34 drier loads as compared to 20 loads of parchment. The time to dry Floaters is also considerably longer than parchment...