A Sampling Method by Sandy Lang and Edwin Pitts

We offer here a sampling method that represents something of a compromise between the two extremes alluded to. Hopefully, it will work for you at least adequately, and without involving you in a massive amount of work.

Consistency: But first a reminder. It is familiar that when a government wishes to conceal the truth about the effectiveness of their policies, they usually change the manner in which the relevant statistics are collected. This prevents any direct comparison being made between the present and the past. Learn from this…

Choose a best sampling method thoughtfully and with care and then, in each successive season, *stick with it to the letter*. At least this way, a harvest maturity assessment that worked for you last season in terms of oil style and oil quality will probably work for you again this season. If you really DO feel that you must change your method, then use your old method and the new one in parallel for a few seasons to gain some idea of how the two relate to one another.

Numbers: To properly assess fruit maturity you will require a sample of at least between 200 and 300 fruit – just a small handful of fruit, however carefully selected will *not* be enough to provide you with statistically significant results (i.e. results that will not mislead you altogether).

Picking: To avoid having to select individual fruit, you will need to pick *all* the fruit from a preselected shoot. There are roughly 5 fruit per shoot (the actual number depends very much on cultivar and season etc). To encompass at least some of the variability in maturity that occurs between one shoot and another within a canopy, you will need to select shoots at least from each aspect of the canopy (north, south, east and west). To encompass at least some of the variability in maturity that occurs between one tree and another within the block, you will need to select trees regularly throughout the block. A worked example is probably the best way to convey this information allowing you to easily to design your own sampling pattern.

WORKED EXAMPLE

Kits, cats, sacks and wives: Suppose that you have a block of 320 trees. With about 5 fruit per shoot, you will require roughly 60 shoots to make up a sample of 300 fruits. If these 60 shoots are to be taken uniformly from around the block, you will require to visit 60 trees, so walking along the rows, visit every fifth tree and ignore the intermediate ones. If shoots are to be taken uniformly from each aspect of the canopy, you will require to pick from the northern face of the first tree that you visit, the southern face of the second, the eastern face of the third, the western face of the fourth, the northern face of the fifth and so on. Accumulate the picked fruit into a plastic bucket. There is no need to record from which tree, canopy face etc they were picked.

This way you will accumulate (very) approximately 300 fruit taken uniformly with respect to the block as a whole, and also uniformly from the four major faces of the canopies. Also, by picking *all* of the fruit from each selected shoot you will have avoided any introduction of personal bias in terms of fruit selection (size, colour etc).

It remains only to establish a protocol for selecting the shoot from the predetermined tree and predetermined canopy face. A convenient approach is to choose the most extreme shoot on each selected canopy face (e.g. the most northerly, fruitbearing

shoot). Take from shoots that are at a constant and convenient height from the ground. Chest height is easiest. Do this regardless of what the shoot looks like (even if it has only one miserable fruit). Don't introduce personal bias by selecting the nearest 'nice looking' shoot.

It is really important that you determine your shoot-selection strategies in advance, then apply them to the letter like some sort of 'robot'. At all costs avoid superimposing some other more subjective selection criteria along the way.