

CUTTING Edge

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Getting the Numbers Right!



The Cutting Edge is a regular article written by Dr Jonathan Cutting for the New Zealand avocado industry magazine, AvoScene.

Crop estimation – the words are almost emotive for our industry's exporters. Reliable information on how much fruit is available in any one season is extremely important for our exporters in particular and the industry at large. Knowledge and information (quaintly referred to as "intelligence") is the basis for all planning. Clearly our "intelligence", at least in the crop estimation arena, has been deficient as the early planning information provided to exporters in recent years has not been reliable and resulted in a general loss in confidence. How could this have happened? It was only four years ago that the industry moved to a supposedly more reliable system. Some of the industry's best informed participants were involved in the "wise man" crop estimate committee. Pack houses are intimately involved in providing raw information. Every grower is captured through the P-PIN system. Exporter frustration is understandable - clearly something is not right! - or is that right. Let's take a good hard look at what we do.

So what is wrong. Well let us engage in some background investigation, look at industry participant expectation and then look to the future.

Industry expectation is elegantly simple – exporters want to know, by April May, what the export crop estimate is for the

season beginning August and running through to March the following year. They want the number, rather than the range, to be accurate within 5%. It sounds simple but in reality it is incredibly hard to deliver. Most countries struggle with accurate avocado crop estimates. An example is the Californian industry which, for the 2001/2002 year is now more than 10% over estimate this year with fruit still to go. An important consideration is that this is purely a domestic market without fine nuances such as export, local market splits and the niceties around grade standards. The amount of fruit involved in the "estimation error" is approximately 40 million pounds (almost twice the size of the NZ national crop).

In New Zealand flowering and fruit set starts in September but is not complete in the coolest areas till mid to late December. There is a common "old hand" grower expression in both Whangarei and Te Puke that you will only really know, with a degree of certainty, how much fruit you have by Christmas. The avocado is typified by several fruit drop episodes that span a period from January to late April or early May. Shortly after fruit set the trees flush with vegetative growth which usually covers the newly set crop. To many growers, particularly those new to our industry, the crop literally disappears before their eyes. Growers themselves tend to be "conservative optimists" (an oxymoron I realise) when it comes to next years crop and unless fruit set has been very heavy and leaf flush very limited they tend to be reluctant to "show their hand".

This is complicated to some extent, and especially in the Bay of Plenty (which produces approximately 65% of the national crop), by the kiwifruit harvest which starts in late April and only really

finishes in June. The complication is that kiwifruit pack houses, which collectively pack almost 85% of the export crop, are also involved with the kiwifruit harvest. Admittedly this is being addressed by dedicated avocado staff within some of the pack houses but in reality pack house resources, for anything other than kiwifruit, are limited during the March to July period. Therefore getting accurate individual avocado property P-PIN crop estimates is a very big request. Almost everyone understands the importance but few can really deliver to the need to visit each property prior to early May. Some pack houses are even reluctant to make this investment as growers may not have yet committed to a particular pack house or they are uncertain whether fruit drop episodes are really over.

A further distraction is that by late May or early June some growers and pack houses are more interested in the looming local market opportunities. Fruit maturity is a much higher commercial priority at that time than crop estimation.

The industry database is incomplete or has poor information in relation to actual bearing acreage (elsewhere in this AvoScene is an article on how to calculate bearing area that provides useful information from a crop prediction, crop estimation perspective). Growers can really help by ensuring that they know their acreage with high accuracy. By way of example an overestimation of half an acre per P-PIN (not much on an individual property) will result in an error of more than 250 ha and it's a common human trait to believe we have a little more than we really do.

As the crop grows so does the potential crop estimate error in absolute terms. For example using the existing percentage error and applying that to a 4 million tray export crop gives a margin of error of 800,000 trays, practically the size of the present Australian window for New Zealand fruit.

So what are we going to do? Obviously we need an overhaul of the crop

estimation approach currently in operation. Importantly we need additional "intelligence". Growers can assist and contribute by knowing accurately how much avocado acreage they have and second they can upskill themselves in the art of estimating their own crop and work closely with their pack house to ensure capture of this precious information. The AIC will develop additional "strings to its crop estimation bow" using multiple sources of information and refining the estimate using a process of triangulation. This is something we all really do need to get right and do better. ***We all win if we get it right.***

The AIC staff wish all growers a happy, blessed and very safe Christmas and hope that January bring the promise of a great harvest for 2003.