

A close-up photograph of pecan leaves and a pecan nut. The leaves are green and have a serrated edge. The pecan nut is brown and has a distinctive striped pattern on its shell.

MIRIAM VILLEN STAHMANN FARMS

HCO GRADING

AUSTRALIAN PECAN ASSOCIATION CONFERENCE
AUG 2019



AGENDA

A Pecan Journey- From Receival to Sizing

Sampling

Grading

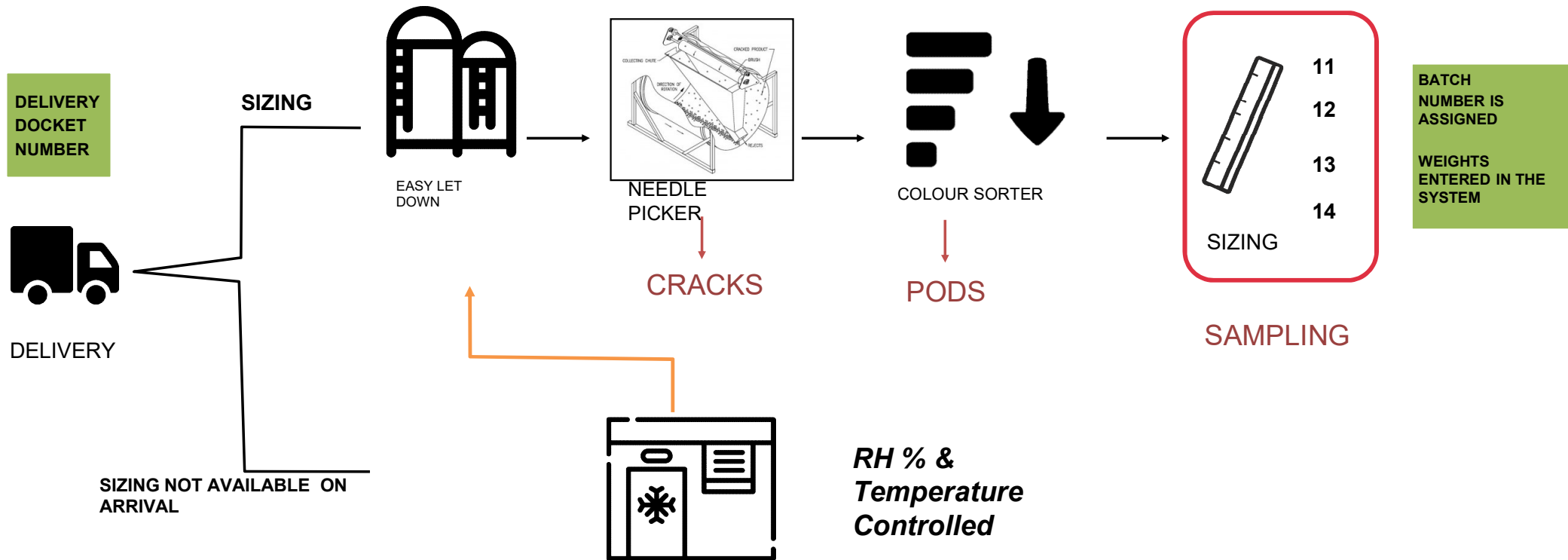
What affects Quality?

Quality Data

Q & A



THE PECAN JOURNEY- FROM RECEIVAL TO SIZING



THE PECAN JOURNEY- FROM RECEIVAL TO SIZING



PECAN SAMPLING

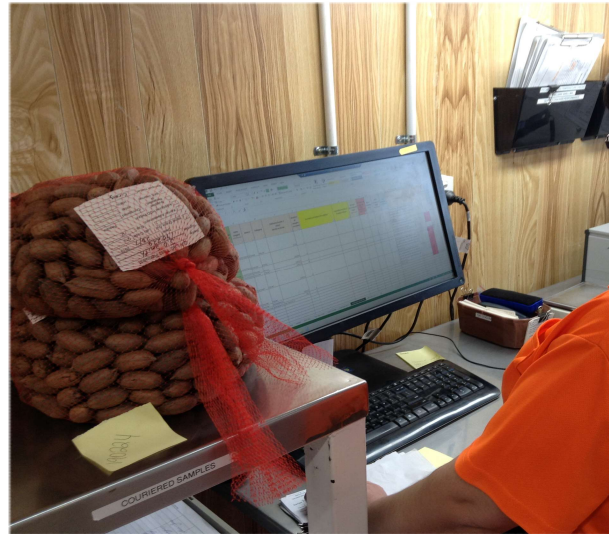


AUTOMATIC SAMPLER

SAMPLES ARE TAKEN AUTOMATICALLY

This assure that each size is representatively sampled

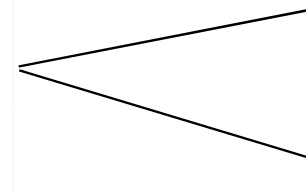
Sample / Subsample



SUBSAMPLE

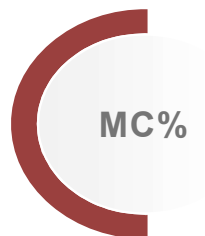
Each sample is identified by:

- Batch number
- Variety
- Size
- Date



QA LAB
(TESTING)

RETENTION
(RH & T CONTROLLED
ROOM)

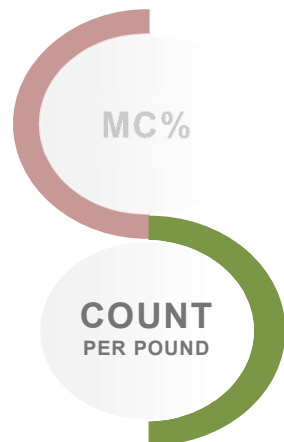


PECAN GRADING

- International method for moisture determination
- Hot air oven method
- 105 C for 24 Hours
- Australian Macadamias NIS moisture determination method
- 2 x 250 gram sample
- NATA Calibrated ovens and scales



Samples in dehydrator ready for weighing



PECAN GRADING



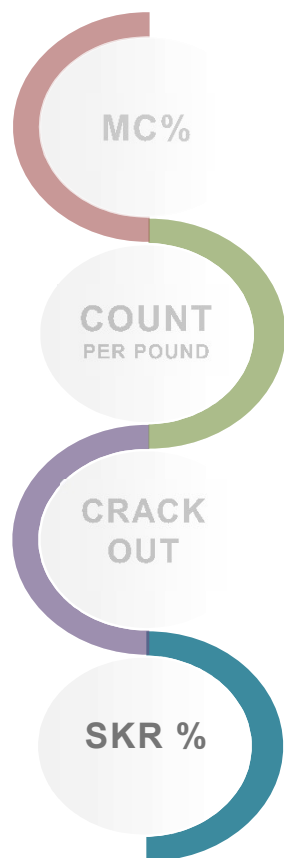
Lab assistant noting number of nuts in sample and exact weight



PECAN GRADING



PECAN GRADING



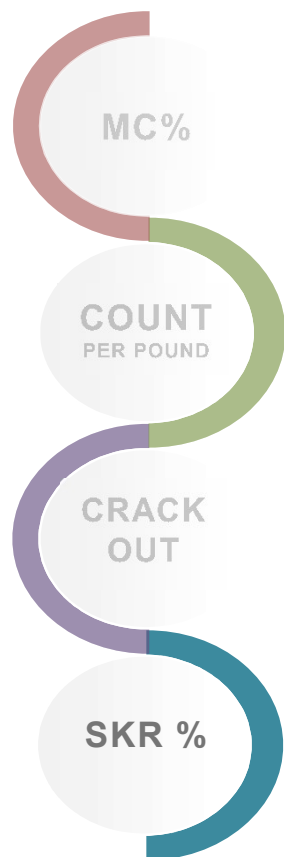
Premium



- Fairly uniform in colour
- Light coloured (Not darker than amber)
- Fairly well developed
- Free from damage by any cause. (except if it is caused by lab cracking equipment)
- May contain a small amount of corky material- Fuzziness <25 %

* SFE manual is based on USDA Standards for grades of shelled and In the shell Pecans

PECAN GRADING



Choice

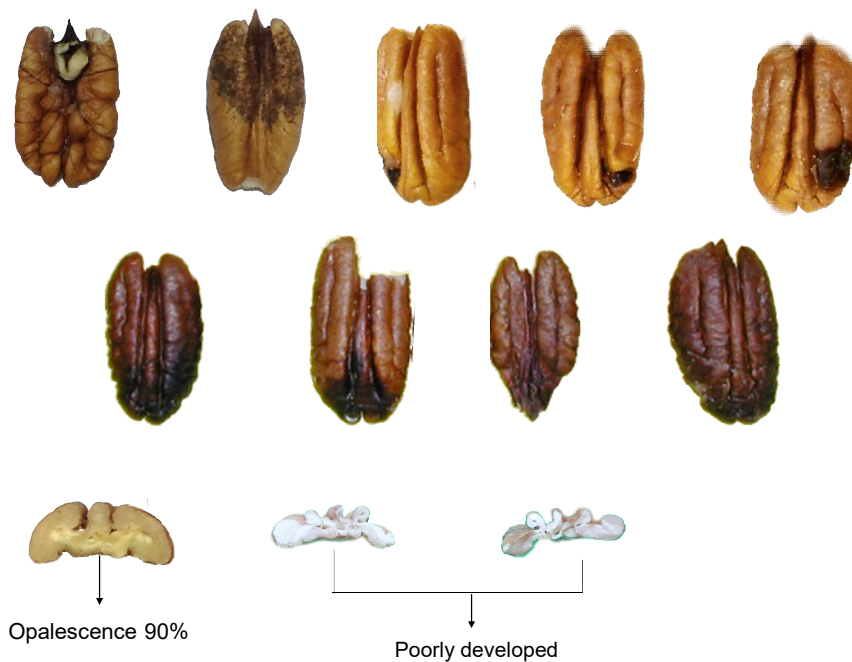


The undeveloped skin breaks off even

- No requirement for uniformity of colour
- Medium Brown, darker in colour
- Fairly well developed
- Deformed kernel

Two minor
defects don't add
up to major defect

Breaking Stock



- Kernel which is darker colour (blackish) or dark red
- Kernel having more than one dark blotchy spot or one dark spot >3mm
- Shrivelling when the surface of the kernel is very conspicuously wrinkled
- Opalescence >25% and <100%
- Poorly developed kernel
- Insect Damage
- Embryo Rot
- >25% Fuzziness attached to kernel
- Sunburn

In case of two defects, grade the worst visible defect present

PECAN GRADING

Rot



- Any visible Mould
- 100% Black colour
- Decay
- Dark blotchy Kernel spots more than three or two or more spots affecting the whole surface of the halve
- 100% Opalescence

MC%

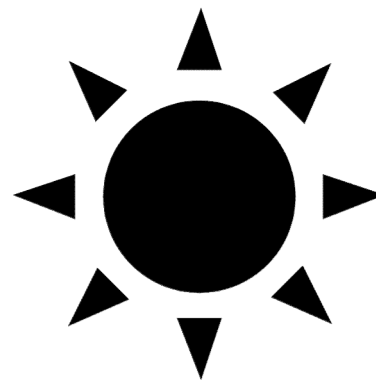
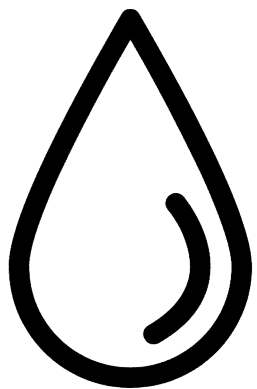
COUNT
PER POUND

CRACK
OUT

SKR %

USK %

WHAT AFFECTS QUALITY?



Pre Harvest

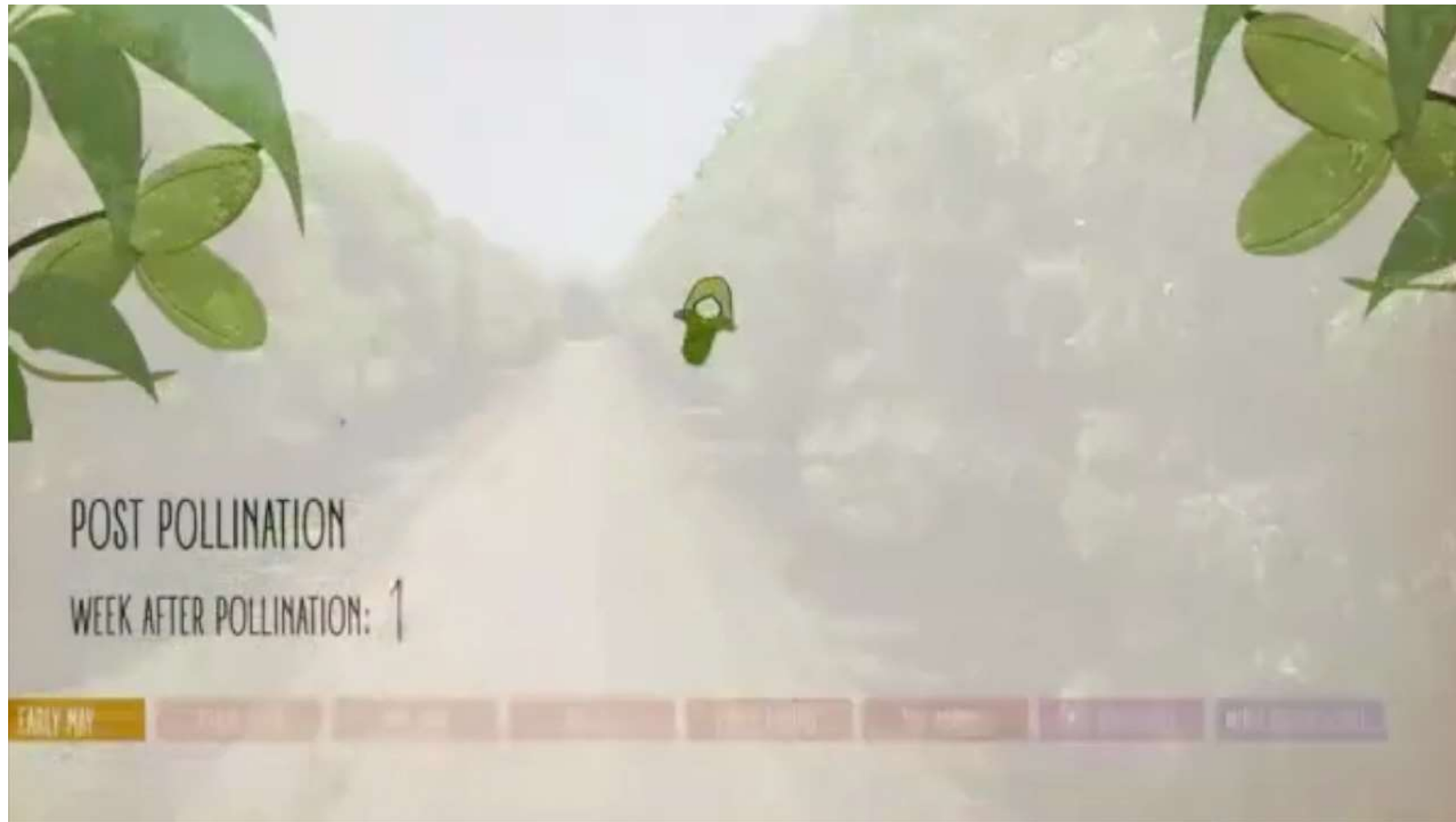
Harvest - Post harvest (Drying/ Storage)

HOW DO WE USE THIS DATA?



- Testimony or evidence of how favourable or unfavourable the growing conditions were during season.
- Support management decisions (Increase input <-> Increase output)
- Count per pound: Less number in one pound generally means better quality
- Size Breakdown annual comparison, are you producing bigger nuts? Are those nuts filling up well?
- In 2018 SFE commenced recording defects (Mould, Insect, others)

HOW DO WE USE THIS DATA?



The background of the slide is a grayscale photograph of a walnut and its leaves. The walnut is positioned in the upper right, showing its characteristic ridged shell. Several large, serrated leaves are scattered around it, with prominent veins visible. A solid black circle is overlaid on the left side of the image.

QUESTIONS?

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