

# Macadamia Dehusker



This is where we take our freshly picked up nuts to be dehusked.

The employee weighs the crate. They then dump his/her full crate of harvested nuts in to a trailer which is then transported via tractor to the Dehusker hopper.

A conveyer belt then takes the nuts up into the Dehusking machine. This machine removes the green husk around the macadamia nut. The nuts then move with another conveyer belt where ladies do the 1<sup>st</sup> sorting of nuts by removing any damaged nuts out.

The nuts then move into a washing bath to get rid of fungus, pest and bacteria. This also removes floating nuts where the kernel has not matured. The nuts then go through a pre-sizer to remove 16mm and below.

It then goes through a heat bench where hot air blows to dry the nuts and then travel on a conveyer belt into a drying bin in the Macadamia Drying Facility.



**“When tillage begins, other arts will follow. The farmers, therefore, are the founders of civilization.” Daniel Webster**



# Macadamia Dry Processing Facility



In 2015 Hein Späth along with Doran Bungay came together to design a state of the art Drying Process Plant.

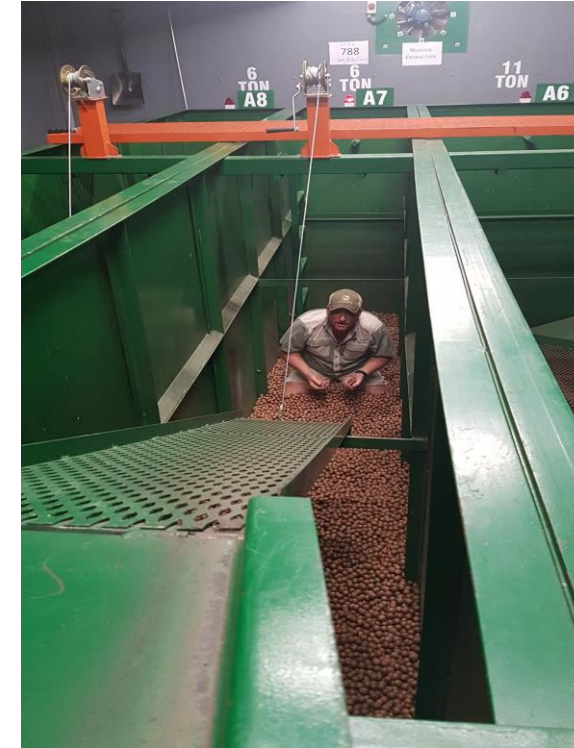
Hein Späth then built this state of the art and first in South Africa Macadamia Drying facility. Solar heat is extracted through the zinc roof via Fans and Ducting. The heated air then flows through 6000 – 20ℓ Black Buckets filled with Brine Water.

That builds up more heat than bricks. From there heated air is drawn through a second set of fans to the bin areas filled with Macadamia nuts to dry them at 25°C. When the nuts have reached 10% moisture, it is moved from the drying bins onto a conveyer belt for the 2<sup>nd</sup> sorting. The nuts then travel up a conveyer belt into the sizer, which sizes the nuts into individual hoppers of 16-19mm, 21-23mm, 24-25mm and 26+.

The nuts are then returned to drying bins in their sizes to dry further at set temperature of 40°C. This process shocks the nuts loose and makes it easier for cracking.

The heat from the fans then dries out the Macadamia nut in shell to ± 1,5% moisture.

Moisture tests are done every day to allocate the perfect delivery date. Sample test is done on each bin to allocate the quality and to improve orchard management.



**"If we estimate dignity by immediate usefulness, agriculture is undoubtedly the first and noblest science." Samuel Johnson**

# Macadamia Drying Process



*34 X Computerized Temperature Controlled Bins with Total Drying Capacity 300 Tons*

- *De-husk, 1<sup>st</sup> Sort and allocate bin*
  - *Bring moisture down from  $\pm 35\%$  to  $10\%$  at a Maximum temperature of  $25\text{ }^{\circ}\text{C}$  \**  *$\pm 2$  Days*
  - *2<sup>nd</sup> Sort*
  - *Size into the following sizes* *16-19* *20-21* *22-23* *24-25* *26+*
  - *Return the nuts back to separate sized bins*
  - *Increase heat to a Maximum of  $40\text{ }^{\circ}\text{C}$ \* till reached between  $2\%$  &  $1.5\%$  moisture*  *$\pm 5$  Days*
  - *Remove from bins in size*
  - *3<sup>rd</sup> Sort and Bag*
- Total Drying Process  $\pm 7$  Days

**\* DO NOT LET THE TEMPERATURE DROP... It will gain moisture that cannot be removed. (Causes Mould)**

## Bagging Process

Farm name  
Country of origin  
Cultivar  
Size & Weight  
Batch Number



"The ratio of We's to I's is the best indicator of the development of a team." Lewis B. Ergen