



PROCESSING

Harvesting

When macadamia nuts ripen they fall onto the ground and so require to be picked up rather than picked off the tree itself. It is then necessary to collect the nuts within roughly 2 – 3 weeks or else they will begin to germinate causing the nut to take on an unpleasant taste. Collection of the nuts can be done manually or with specialized machinery.

Dehusking

Once picked the fibrous outer husk of the macadamia is removed to reduce heat respiration and facilitate drying. A mechanical dehusker is employed in our orchard. The nuts are loaded into the hopper which feeds the nuts through two rotating rollers. The rollers rip the tough leathery green outer husk from the raw brown shell of the nut. The nut in shell (NIS) that emerges weighs only around 46% of the nut in husk and has a moisture content of approximately 20%. For local growers who do not have their own dehusking equipment, we are happy to make our dehusker available for them to use. The left over husks are composted and used as mulch.

Drying

For storage purposes the nut in Shell needs to have plenty of air. We store our NIS in purpose built silos which have fans at the bases blowing the ambient air through the NIS. Stored in this way, macadamia NIS remains fresh as well as drying the nut down.

For the purposes of processing the macadamia NIS requires to be dried down to a moisture content of 1.5%. This shrinks the kernel away from the inside of the shell to avoid damaging the kernel when cracking takes place. The nuts can be expected to dry down to about 15% moisture content just being in the ventilated silos. Once they have reached 15% or lower they can then be put into a drying bin which has a very low heat blown through it. The nuts are then dried down to 1.5% which can take up to 2 weeks.

Cracking

With the first commercial macadamia processing plant not being established until 1954, the processing of this extremely hard nut has come along way in a relatively short space of time. Today, our modern cracking equipment is fully mechanized.

After leaving the dryer, the nuts are fed into a rotating cylindrical sorter (trommel) prior to cracking. As they pass along the trommel the nuts are sorted into sizes by a series of progressively bigger holes which allow the nuts to fall through into their appropriate bins. This sorting allows the mechanical cracker to be placed on an appropriate setting according to the size of the nuts being cracked. A higher recovery of whole and undamaged kernel is achieved using this method ultimately resulting in a superior finished product.

Use for shell

The discarded shell, being the hardest of any nut, is used for a whole variety of different applications. It is ground up and used through a high power blaster for polishing aluminium and other metals. When charred it is one of the best sources of activated carbon, used for a variety of applications in the mining industry. It is highly flammable and can be used as a heat source. It also makes a good garden mulch.

Sorting

At MacNuts WA we use the water flotation method to separate cracked shell from kernel. this works on the principle that first grade kernel floats whereas poor quality kernel and shell sinks. A small quantity of chlorine is added to the water which ensures a sterile process. the first grade kernel is then passed briskly through a drying oven and through a colour sorter which separates out any remaining pieces of shell. The kernel then goes along the inspection bench for a final manual inspection before being sized and stored.

Roasting & flavouring

The kernel is dry roasted using a gas fired roasting oven. It is once more quality assessed before being sorted into different styles further to which salt or flavours are added as appropriate. The Roasted & Salted, Smoke and BBQ varieties are all prepared at our own factory. A local confectionery specialist prepares the Honey Coated, Caramel Coated and Chocolate Coated macadamias for us.

Packaging and Storage

To maintain maximum freshness and taste, the raw and roasted kernel in bulk quantities (11.34kg or 25lbs) is vacuum packed in laminated silver foil bags and then stored in our cool room at 5-7 degrees C. The 50gm snack packs are nitrogen flushed before they are sealed and our retail silver foil packets have an oxygen absorber inserted before being sealed. This careful processing, packaging and storage ensures that all our nuts have a long shelf life and will be fresh and crisp for you to enjoy.

At MacNuts WA we take great pride in providing customers with the finest quality macadamia nuts on the market. Our processing plant is run in adherence to strict guidelines monitored by the local environmental health officer. All the staff working within this area adhere to strict food handling protocols.

213 Doghill Rd, Baldivis, W.A, 6171, AUSTRALIA
Tel: 08 9524 1016 or 08 9524 2223
Fax: 08 9524 3133