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POSTHARVEST QUALITY MANAGEMENT OF JAPANESE TARO

Suzie Newman

Lucrative potential export markets exist for Japanese taro (*Colocasia esculenta* var. *antiquorum*), more commonly known as eddoe, in both Japan and the USA. Japanese taro or eddoe differs from the more common Polynesian dasheen type. Eddoe produces smaller corms (40 to 100 g) and has a distinctive texture and flavour, often described as 'sticky' and 'nutty'. Japan currently imports more than 25,000 t of fresh taro, with a further 60,000 t imported frozen. This is sourced mainly from China, but there is a window of opportunity for Australian producers from June through to August.

To meet this export market opportunity Australian producers need to satisfy Japanese market specifications and quality requirements. To assist Australian producers to achieve this a project jointly funded by RIRDC, Central Queensland University and NSW Agriculture is looking to develop product specifications, determine suitable production and postharvest methods and to facilitate the development of export supply chains.



The NSW Agriculture Postharvest Group is looking specifically at determining the acceptability of Australian grown product to

Japanese consumers and to develop appropriate shipping and storage recommendations. To evaluate product acceptability, we carried out a taste panel with a focus group of local Japanese ladies. This group was presented with samples from a diverse range of growing areas ranging from Darwin in the Northern Territory, to Gatton in southern Queensland and Gosford in central NSW. They were asked to evaluate the acceptability of the product in terms of appearance, taste and texture. Overall their preference was for corms with a light colour and attractive appearance, that exhibited the typical sticky and nutty characteristics. Whilst there was a considerable difference in the quality of the product produced from each of the eight growing regions, most of the samples were considered to be of acceptable quality for the Japanese market. This bodes well for the development of future market opportunities in Japan.



Ensuring the product reaches the Japanese consumer in optimal condition is also critical to realising market opportunities. An initial study has focussed on the development of export handling protocols. As part of this study, we are looking at the effect of curing time, temperature and relative humidity on the quality and shelf-life of stored corms. Results from a preliminary trial have been promising, with a more in-depth trial planned for early this year. Results from this study should enable us to make recommendations for a trial shipment of Japanese taro planned for the middle of the year.

For further information on the postharvest aspects of this project you may contact Suzie Newman or Jenny Bower at Gosford Research and Advisory Station on (02) 4348 1900.

Choy Sum

Brassica rapa var. parachinensis



Other names

English: flowering white cabbage, mock pak choy

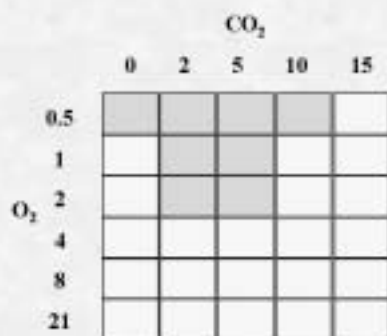
Chinese: cai xin, cai tai, choy sum, pak tsoi sum

Vietnamese: cai ngot

Japanese: saishin

Use

The developing flowering shoot (which is tender and sweet) is the main part used. Leaves and whole plants can be used if harvested young enough. Young leaves and flower shoots can be used in salad. Shoots can be stir-fried or lightly steamed.



Quality characteristics

- flowers should be closed or just opening
- leaves should be green & free of yellowing, holes & cuts
- overall appearance of flower stalk & leaves should be fresh with no wilting caused by moisture loss
- base cut should be clean & free of rots

Postharvest handling

- Low temperature storage slows flower opening, leaf yellowing & water loss. Cool to at least 5°C before packaging. Packaging reduces water loss & adds value through improved presentation.
- Wash in sanitised water before packing to minimise rots. Allow to air-dry before packing in plastic bags.
- Modified Atmosphere Packaging reduces respiration rate & slows leaf yellowing.
- Optimum combinations of oxygen and carbon dioxide are shown above (darker shading = beneficial, lighter shading = no effect).

Compiled by Tim O'Hare and Lung Wong (DPI Gatton)



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