Title The possible influence of post-harvest objectives on *Cucurbita maxima* subspecies *maxima* and subspecies *andreana* evolution under cultivation at the Argentinean Northwest: an archaeological example

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Abstract

This paper investigates the possible links between postharvest activities and methods of plant husbandry or management of *Cucurbita maxima* ssp. *maxima* and *C. maxima* ssp. *andreana* in the prehispanic Argentinean Northwest area. Microscopic methods were used to assess the micromorphological characteristics of modern specimens of South American *Cucurbita* and *Lagenaria* species to obtain diagnostic anatomical traits. These traits were then used as criteria for identifying archaeological Cucurbitaceae rind remains from domestic to funerary contexts of the Pampa Grande archaeological site (1720 ± 50 BP, cal. 259–433 AD). Following the taxonomic identification of the archaeological plant remains, they were futher assessed for signs of human selection or possible cultivation, including: rind thickness, qualitative characters (lobbing, wartiness and colour) and postharvest traits (artificial shape, charring, staining and decoration of sherds). The results indicate the presence of *Lagenaria siceraria* together with spontaneous, intermediate and domestic *C. maxima* morphotypes. Different subspecies *maxima* morphtypes were recognized: those intended as food, having thin pericarps to facilitate consumption and those intended also as food, but as containers too, as in *Lagenaria*, in which the rinds are thickened and lignified. The latter morphotype may possibly represent a strategy of postharvest intensification, but not through new processing techniques, but through the development of landraces with a longer fruit shelf life, resulting from changing husbandry criteria to selective pressures over cultivated stands.

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