AGROSAVIA - COMMERCIAL FACT SHEET

Cashew - AGROSAVIA Mapiria Ao1

***English reference translation**. Prepared from the supplied Spanish-language AGROSAVIA fact sheet. This translation is provided for reference; the original Spanish document remains the source text.*

Scientific name	*Anacardium occidentale* L.
Commercial name	AGROSAVIA MAPIRIA Ao1
Adaptation	Flat Altillanura of the Orinoquia; Caribbean region (Dry Caribbean - Humid Caribbean). The original fact sheet reports observations for the Flat Altillanura, Zona Bananera (Magdalena), and Chinú (Córdoba).

Life cycle and agronomic characteristics

Beginning of fruiting	3 years after transplanting
Useful life	30 years
Altillanura flowering/fruiting	November-January
Altillanura harvest	January-March
Altillanura plant height	4.5 m
Altillanura nut weight	11 g
Altillanura kernel weight	3.33 g
Altillanura kernel yield	30%
Altillanura kernels per U.S. pound	136
Kernel classification	W180
Altillanura cashew apple/peduncle weight	104 g
Vitamin C - Altillanura	138 mg ascorbic acid/100 g fruit
Antioxidant activity - Altillanura	109 mg Trolox/100 g fruit
Experimental yield - Altillanura	1,900 kg nuts/year; 14 kg nuts/tree/year
Anthracnose - average infection, Altillanura	19.5%

Regional comparison reported in the original fact sheet

Characteristic	Flat Altillanura, Orinoquia	Zona Bananera, Magdalena	Chinú, Córdoba
Flowering/fruiting	Nov-Jan	Dec-Apr	Dec-Apr
Harvest	Jan-Mar	Mar-May	Mar-May
Plant height	4.5 m	7 m	7 m
Nut weight	11 g	10.7 g	13.1 g
Kernel weight	3.33 g	2.7 g	3.1 g
Kernel yield	30%	25.4%	24.4%
Kernels per U.S. pound	136	185.2	161.3
Kernel grade	W180	W180	W180
Cashew apple/peduncle weight	104 g	91.5 g	54.7 g

Management recommendations

Adaptation

In the Flat Altillanura of Colombia's Eastern Plains, Mapiria Ao1 is reported as highly adapted to a climate with more than 1,500 mm of rainfall over roughly eight months followed by a four-month dry season that coincides with flowering and fruiting. Deep, well-drained, medium-textured soils are required; unsuitable soil conditions can markedly affect growth and production. In the Colombian Caribbean tropical dry-forest region, the clone is also reported as well adapted where soils are deep, well drained and sandy-loam, without hardened or stony layers; unsuitable soil conditions may limit tree growth and production.

Planting material

To maintain varietal characteristics, propagation should be through grafted plants (asexual propagation), referred to as clones. The recommended rootstock is genotype 36-80, a local material with high seed productivity and hardiness. For Altillanura, the original fact sheet highlights tolerance to high aluminum conditions typical of native savannas. Grafted plants, rootstock seed and scion sticks should be obtained from nurseries registered with ICA or from an entity/institution authorized to distribute plant material.

Planting season

Plant grafted seedlings at the beginning of the rainy season, preferably during the second quarter (April-June). Before transplanting to the final site, plants should have six green, mature, healthy leaves.

Planting management - Altillanura

For one hectare of Corpoica Mapiria Ao1, the fact sheet specifies 125 plants, one plant per site, at 10 m between rows and 8 m between plants. Under Altillanura conditions, incorporate 2 kg dolomitic lime per planting site within a 1 m radius, one month before planting.

Planting management - Caribbean

For one hectare, the fact sheet specifies 100 plants at 10 m x 10 m. In acid soils, incorporate 2 kg dolomitic lime per site within a 1 m radius one month before planting. At transplanting, place 100 g phosphate rock plus 1 kg well-decomposed organic fertilizer at the bottom of the hole. Where hardened soil layers occur, dig deep enough to break them and improve root penetration. Plant at the beginning of the rains and irrigate through the first dry months after transplanting until establishment.

Weed management

For adequate growth and production, perform two to four weed-control operations per year in the alleys and around the tree. Keeping the tree basin weed free reduces competition and facilitates fruit harvest. In the Caribbean, control frequency should reflect periods of higher rainfall.

Fire protection

The original fact sheet describes disc-harrowed strips approximately 15 m wide around 25-50 ha blocks to reduce the risk of fire from neighboring areas (Owen & Román, 1996). This work should be carried out toward the end of the rainy season or at the beginning of the dry season, from initial land preparation until trees are established.

Pruning

In Altillanura, conduct formative pruning in the first year by removing undesirable lower branches to obtain one branch-free stem up to 35-45 cm. In the Caribbean recommendation, periodically remove rootstock suckers after planting; form a single stem free of branches to 60-75 cm, then retain 3-4 main branches arranged spirally at different heights. Remove excessively vigorous upright branches and branches growing toward the ground that hinder weed control or harvest.

Disease management

Anthracnose caused by *Colletotrichum gloeosporioides* is described as the most widespread and destructive cashew disease, especially during rainy periods and when new leaves, flowers and fruits are emerging. The new clones may be affected, but the fact sheet reports infection below 20%, below economic-damage levels. Copper-based fungicides at 2.5-5.0 L/ha are noted, subject to economic feasibility. Under nursery conditions, weekly copper oxychloride sprays at 3 g commercial product/L of water are cited (Owen & Román, 1996). In the Caribbean, resinous canker/gummosis associated with *Lasiodiplodia theobromae* is described in local cultivars; where present, recommendations include disinfecting tools, scraping affected tissue and applying a broad-spectrum fungicide/insecticide wound paste, and, in severe cases, removing affected branches.

Pest management

Observed insects have generally not been economically important but may become primary pests. *Sibine* spp. larvae may defoliate adult trees; *Beauveria bassiana* is cited as an entomopathogenic option. *Atta* spp. leaf-cutting ants occur particularly in nurseries and recently transplanted trees; locate nests and use direct management, including *Metarhizium anisopliae*. Thrips (*Selenothrips rubricinctus*) may dry leaves and defoliate trees, particularly during drought; cultural sanitation and *Lecanicillium lecanii* are noted. In Caribbean observations, *Trigona* spp. bees are also reported to defoliate tender leaf shoots.

Fertilization

Altillanura establishment plan: 60 days after field planting, 30 g potassium chloride; year 1: 130 g urea + 70 g potassium chloride; year 2: 180 g urea + 300 g single superphosphate + 100 g potassium chloride; year 3: 270 g urea + 450 g single superphosphate + 150 g potassium chloride (Román, 1992). From year 4 onward, 1 kg/tree/year of 10-30-10 is indicated. Caribbean recommendation: the same establishment sequence, followed from year 4 onward by 2 kg/tree/year of a 17-6-18-2 compound fertilizer. In all cases, fertilization should be adjusted according to soil and foliar analyses.

Harvest

Nuts are generally collected when fruits fall to the ground and should be gathered at least twice per week. The nut may be separated from the peduncle by gentle twisting or appropriate machinery. At the end of harvest, which usually coincides with the onset of rains, collect as quickly as possible. If the peduncle/cashew apple will be used, collect more frequently, preferably in the morning, avoiding bruising.

Drying and nut storage

Store nuts only when dry, at approximately 9% moisture, recognizable by a brittle condition. The original fact sheet describes drying nuts on a concrete floor in layers no deeper than 30 cm for three days, turning the layers daily. When rain is possible, cover with tarpaulin or plastic, especially at night. After drying, pack in 50 kg fique sacks and store in a ventilated place on pallets with aisles for air circulation. Keep pallets at least 30 cm from walls and 1 m below the ceiling.

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