



'Mealani', A New Variety of Tea for Hawai'i

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Background/Description

'Mealani' is a variety of tea (*Camellia sinensis* (L.) Kuntze) that was selected at the Mealani Research Station in Waimea on the Island of Hawai'i, elevation 2,800 feet above sea level (Figure 1). In a trial conducted at the Mealani Research Station during 2012–13, the highest yield of 'Mealani' was found to be nearly comparable to that of 'Yutaka Midori' (Table 1). Because 'Yutaka Midori' is a tea variety that is familiar to most Hawai'i tea growers, we will therefore be comparing 'Mealani' with 'Yutaka Midori'.



Figure 1. A row of 'Mealani' being tested at the Mealani Research Station

Table 1. Total fresh annual yield of two varieties of tea, 'Mealani' and 'Yutaka Midori', grown at the Mealani Research Station extrapolated* to pounds/acre equivalent. Rows were on 6-foot centers.

Plant spacing	Yield, Single Row, lbs./acre (# plants/ac)	Yield, Double Row, lbs./acre (# plants/ac)
'Mealani'		
18"	5,561 (5,808 plants)	11,162 (9,680 plants)
30"	5,288 (2,904 plants)	6,082 (4,840 plants)
'Yutaka Midori'		
18"	4,542 (5,808 plants)	11,321 (9,680 plants)
30"	4,748 (2,904 plants)	9,460 (4,840 plants)

***During May 2012–May 2013 from 450-square-foot plots, non-replicated. These fields were established in 2004.**

'Mealani' has shorter internodes compared to 'Yutaka Midori', and the plants are more compact. The 'Mealani' plant typically exhibits strong branching behavior, with shoots throwing many side branches. The average shoot weight of 'Mealani' was about two-thirds that of 'Yutaka Midori' (Figure 2), so it takes longer to



Figure 2. The shoots of 'Mealani' were typically finer than those of 'Yutaka Midori'. Left: The average shoot weight of 'Yutaka Midori' was 0.51g (approx. 900 shoots per lb). Right: The average shoot weight of 'Mealani' was 0.34g (approx. 1350 shoots per lb).

hand-harvest the same weight. The shoots of 'Mealani' were finer than those of 'Yutaka Midori' and were easier to process, due to the smaller stem size that makes them easier to roll and dry. It can have a floral aroma when processed and is highly suitable for making semi-oxidized (like oolong) and fully oxidized (like black) teas (Figures 3 and 4). The young shoots of 'Mealani' are covered with fine hairs which may be visible in the dried tea (Figure 3A).

'Mealani' is a selection from a population of open-pollinated seedlings grown at the Mealani Research Station in a variety selection trial. This variety was previously referred to as 16-11. The seeds were obtained by Dr. Francis Zee (USDA-ARS, retired) from the Taiwan Tea Experiment Station (F. Zee, personal communication). This selection exhibited resistance to spider mites



Figure 3: Semi-oxidized tea made from 'Mealani': A) Dried tea, B) Liquor



Figure 4: Fully oxidized tea made from 'Mealani': A) Dried tea, B) Liquor

that severely affected other plants. Compared to 'Yutaka Midori', 'Mealani' is more susceptible to gray blight (*Pestalotiopsis* sp.) and brown blight (*Colletotrichum* sp.).

Comparison of yields

During May 2012–May 2013, two plots of 'Mealani' and 'Yukata Midori' were harvested every 2 weeks. Results are shown in Table 1.

Reference

Zee, F., D. Sato, L. Keith, P. Follett, and R.T. Hamasaki. 2003. Small-scale Tea Growing and Processing in Hawaii. NPH-9, Cooperative Extension Service, College of Tropical Agriculture and Human Resources, University of Hawai'i at Manoa.

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