

Overview of Rambutan Phenology, Flowering, and Fruit Set in Hawai'i

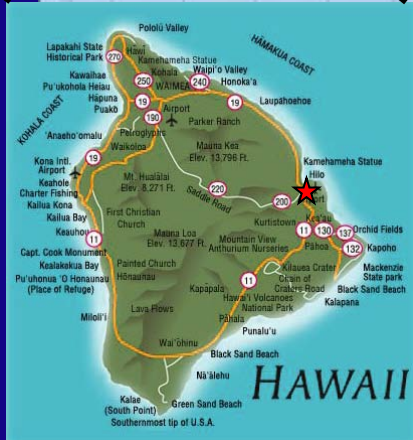
A.M. Kawabata

M.A. Nagao

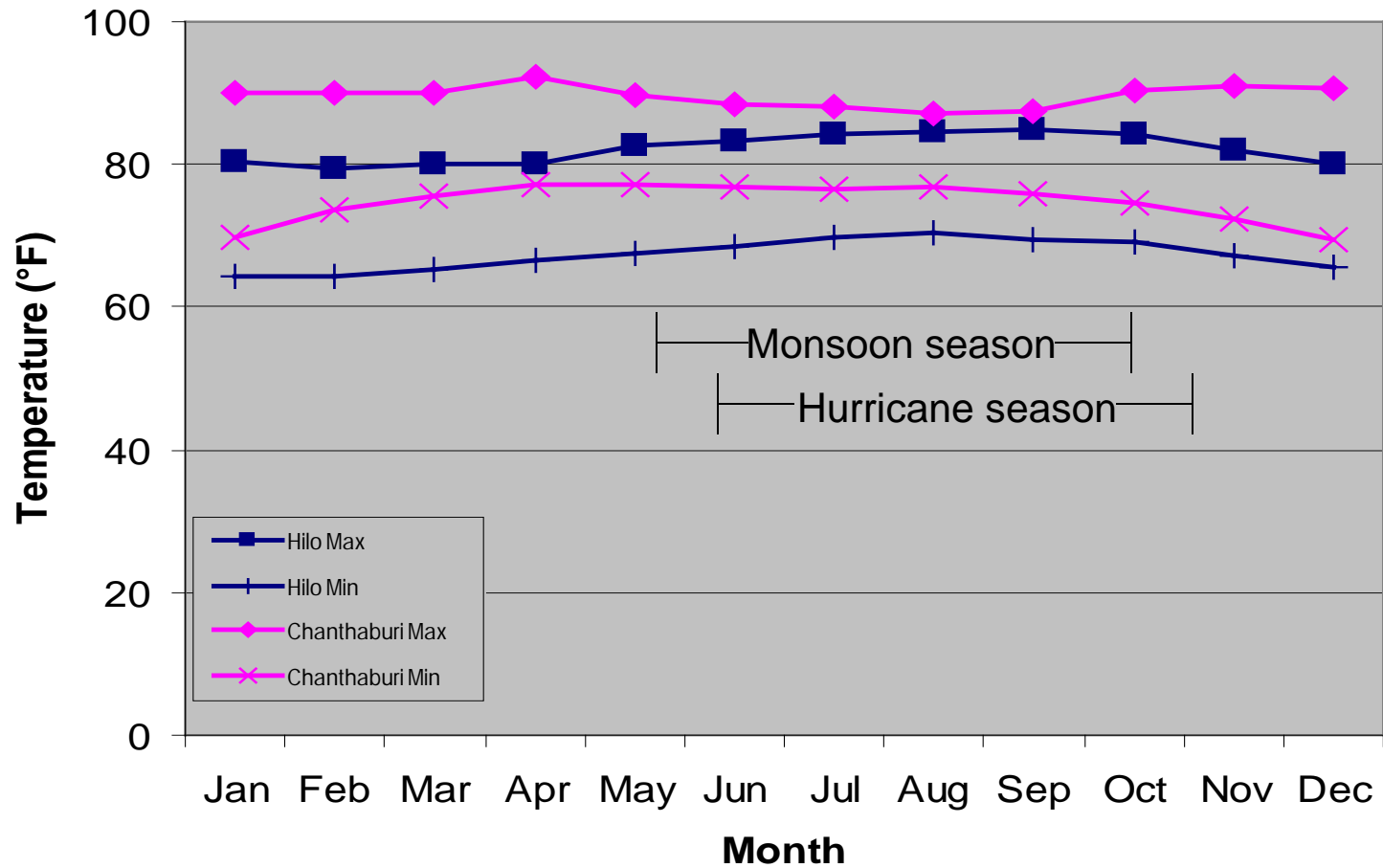
D.F. Aoki

K.Y. Hara

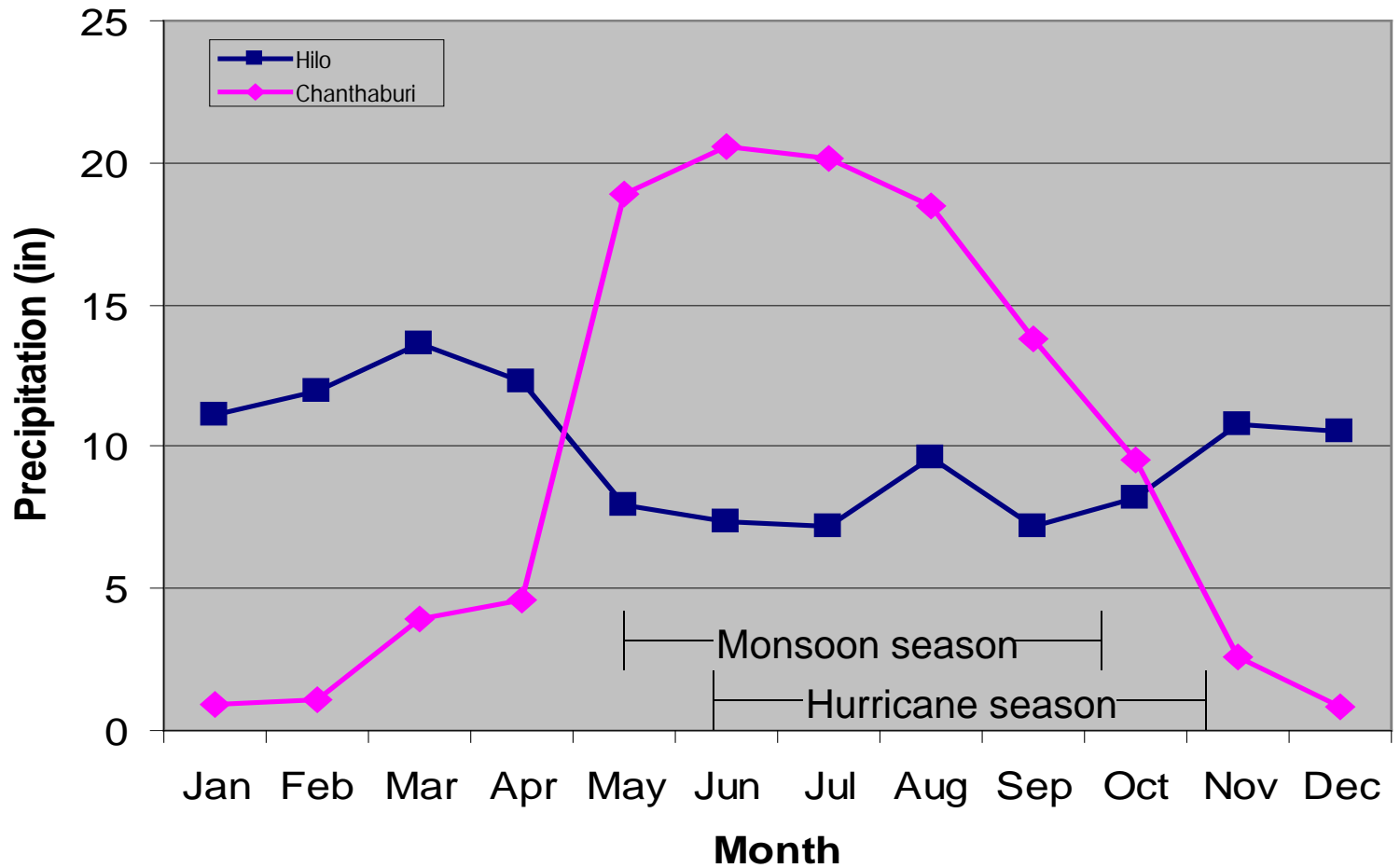
L.K. Pena



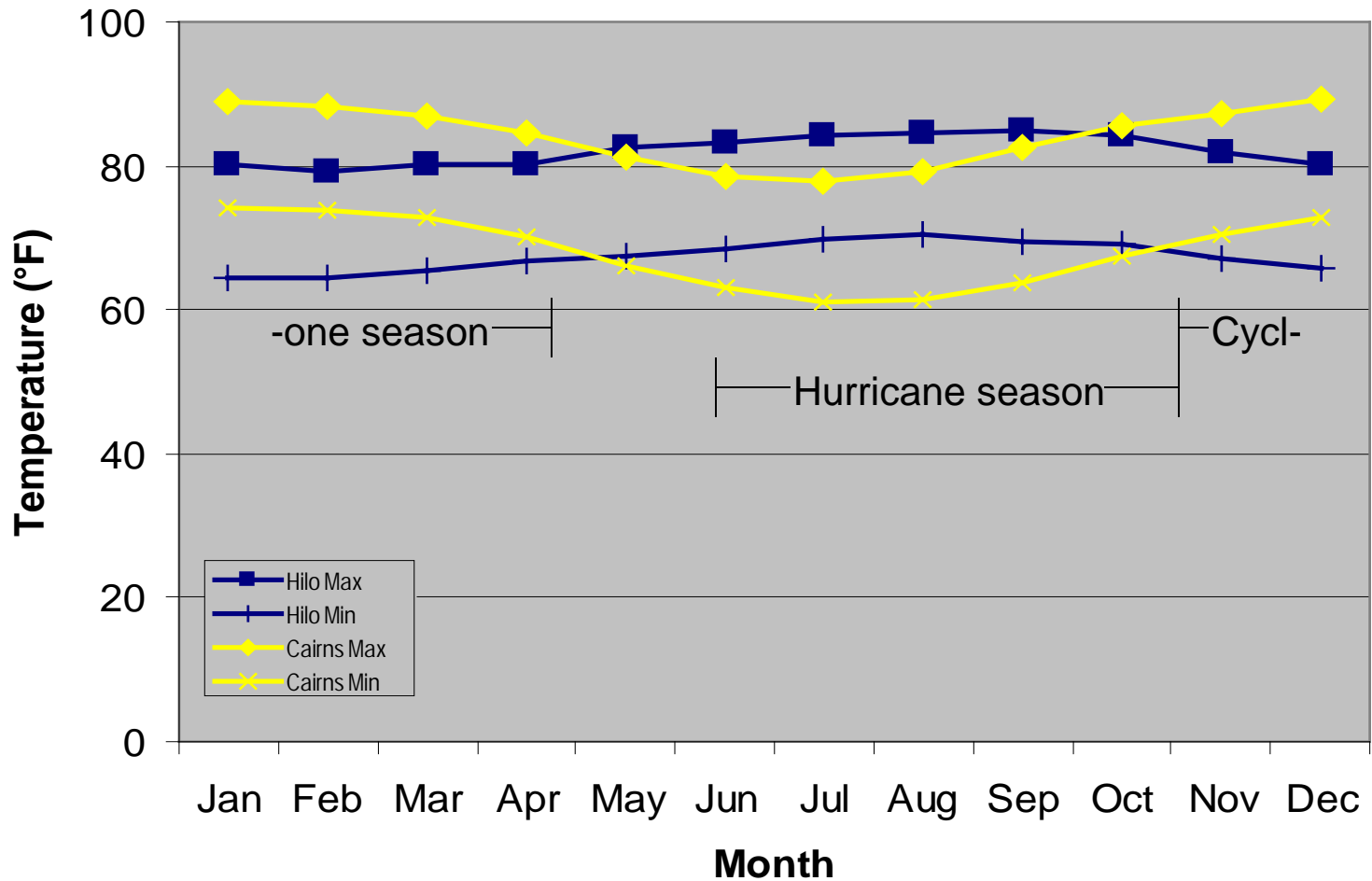
Chanthaburi, Thailand



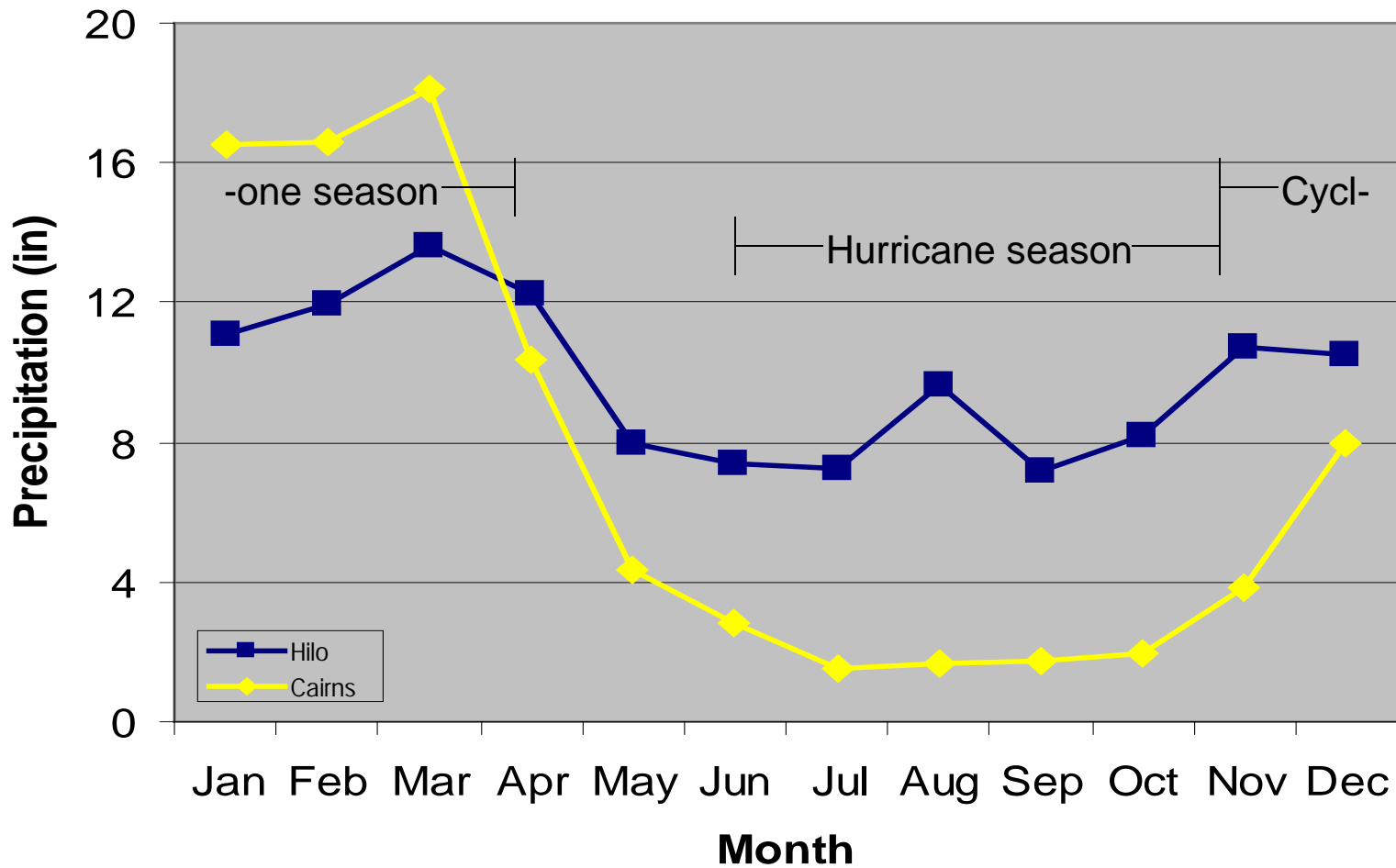
Chanthaburi Rainfall



Cairns, Australia



Cairns Rainfall



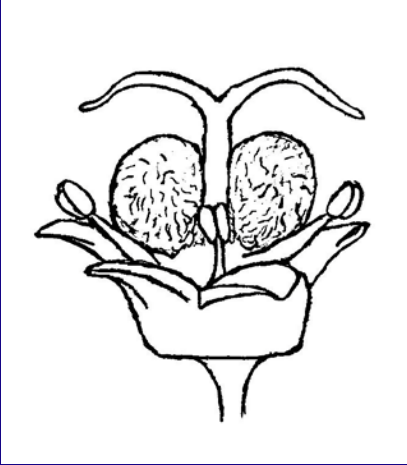
Comparisons

	Chanthaburi	Cairns	Hawai'i
Flowering Seasons	October to December	July to August; December to January; thru April	July to August; thru Nov.; March to May;
No. of Flowering Seasons	1	1; extended	2
Flushing Seasons	Oct. to Dec.; Sept. (after harvest), May (monsoon)	Nov. to Dec.; Feb. to March (after harvest); May; Jul. to Aug.	Aug. to Sept.; May to June (after harvest); Oct.
No. of Flushing Seasons	2; maybe 3	4 to 5	3 to 4
Harvesting Seasons	February to June	December to January; thru March; thru August	Dec. to Jan.; thru Mar.; Aug. to Sept.; thru Oct.
No. of Harvesting Seasons	1	1; extended	2

Flowering in Hawai'i

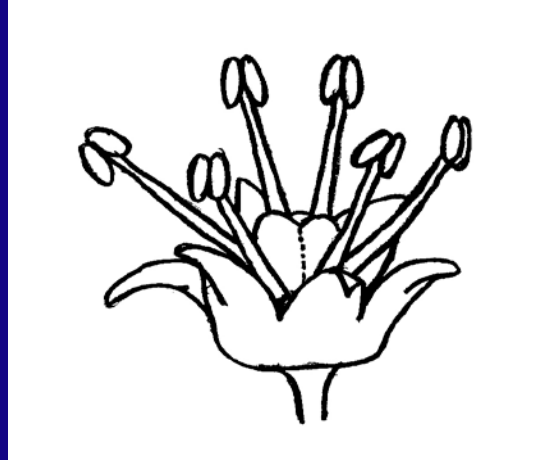
- **Response to water stress**
- **Symptom = Leaf curling**
- **Main season (July to August)**
- **Minor season (April to May)**
- **Anthesis takes 2-3 months, up to 9 months**
- **Anthesis of a panicle takes 3-7 weeks, up to 23 weeks**

Rambutan Flowers



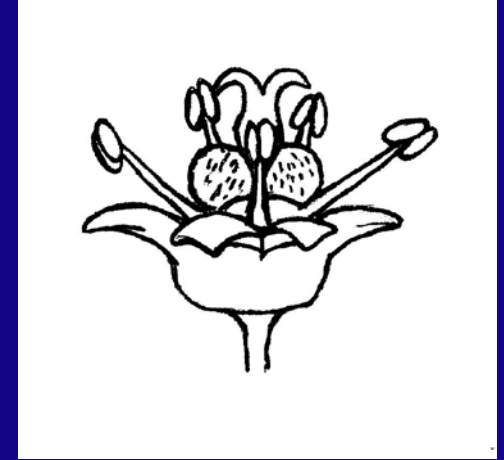
Female

21-52 days



Male

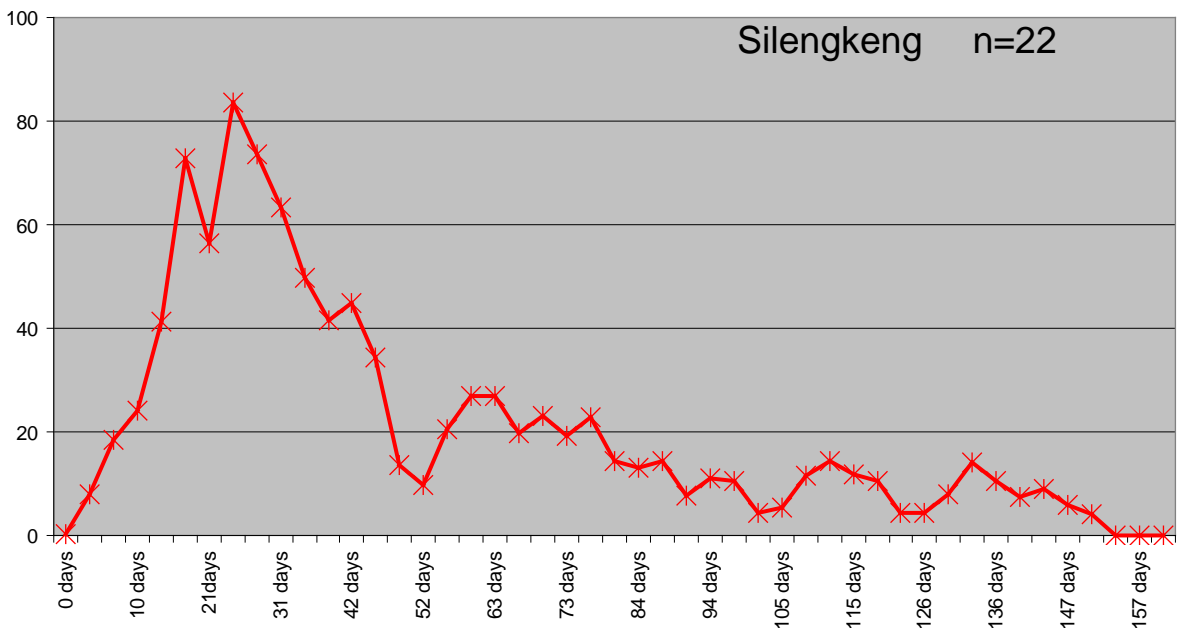
24-46 days



Induced Male

12-15 days

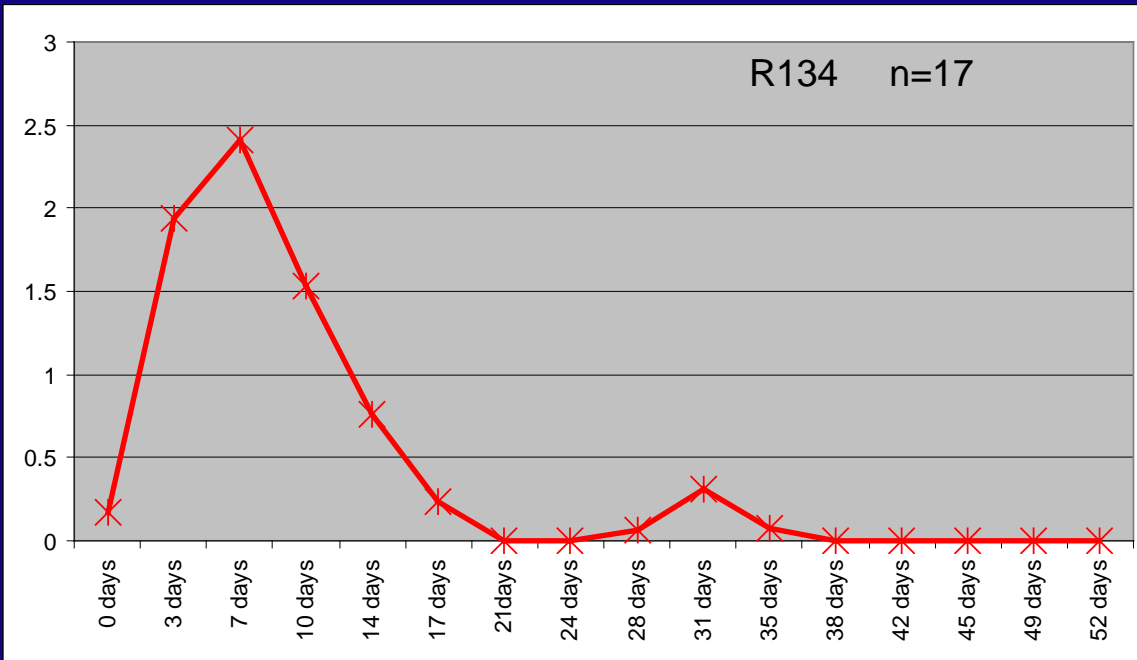
Silengkeng n=22



Naturally produced
hermaphroditic
male flowers



R134 n=17



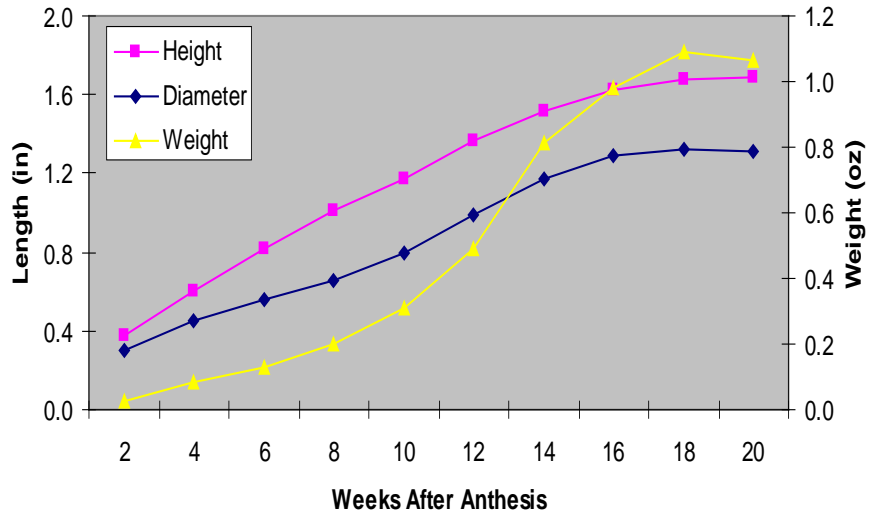
Flushing in Hawai'i

- **Response to rainfall, heavy irrigation, pruning, harvest**
- **Reduced by cool weather, heavy fruit set and flowering even in presence of rainfall**
- **Non-synchronous**
- **Takes 3-4 months to mature**
- **Flushes must be mature at time of floral induction**
- **Main seasons (May-Jun.; Aug.-Sept.)**

Fruiting in Hawai'i

- **Seed filling 8-10 weeks after anthesis**
- **Aril/flesh development 10-12 weeks after anthesis**
- **Harvest 16-20 weeks after anthesis**
- **BRIX readings >18%**
- **Main season (December-January)**
- **Minor season (August to September)**
- **Extended drought prolongs harvest 3-6 months longer**

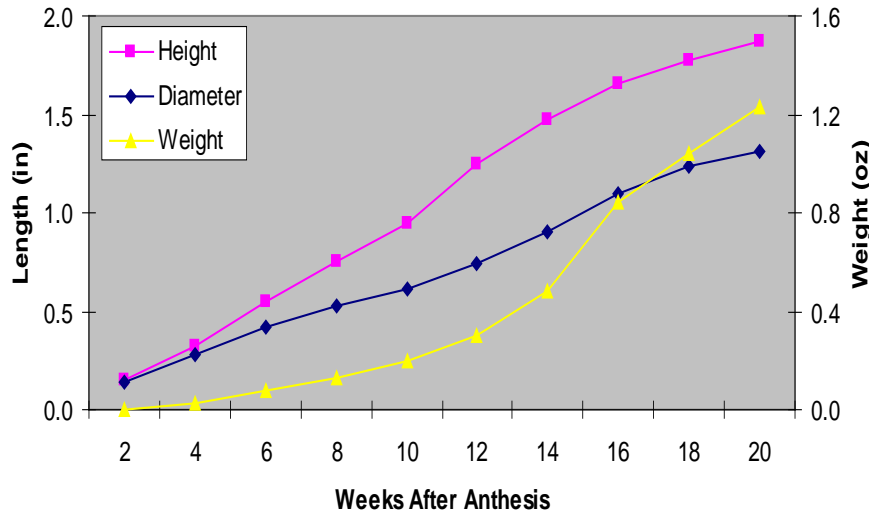
Binjai - Main Season (90 ft elevation)



BRIX

Weeks After Anthesis	14	16	18
BRIX	14.9	18.2	19.1

Binjai - Minor Season (810 ft elevation)



Weeks After Anthesis	16	18	20
BRIX	14.4	16.2	18.4