

very high and the effluent will be largely broken down by microbial activity within 24 hours.

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The project has budgeted 20 metric tons (mt) of dry matter production of Kikuyu per acre. The average local temperature is in the ideal 43 and 70°F range for Kikuyu. Kikuyu yield ranges between 4 mt unfertilized and 20 mt DM/acre/year depending on levels of N fertilization. Kikuyu's response to fertilization is very good and linear combined with irrigation, anticipated growth rates in Maha'ulepu are estimated be some of the best in the world.

The current key hubs of Kikuyu-based dairy farms are Northland of New Zealand, Australia's Hunter Valley and in the Eastern Cape of South Africa (George and Knysna) where current farmers consistently achieve greater than 20 mt of dry matter production of Kikuyu per acre in the temperature ranges that best match those available in Hawai'i all year round.

Author	Quoted Metric Tons of Dry Matter per Acre per Year	Notes
Taylor et al (1976)	36.204	Irrigated Kaitaia NZ
Rojas (1999)	20.240	Costa Rica
Murtagh (1988)	34.580	CSIRO Australia

Local Hawai'i data is available for Kikuyu and similar C4 grasses:

Author	Quoted Metric Tons Dry Matter per Acre per Year	Notes
Fukumoto, Lee (2003)	13.450	Unfertilized
Roche (2010)	20.100	Peak Fertilized

The farm will be equipped with state-of-the-art technology, called Ag Hub, to ensure management systems and operational uses achieve optimal growth and environmental sustainability. Ag Hub technology will be deployed at HDF to ensure proper application rates and timing of all irrigation events. Ag Hub is a modular online farm management system that collects and displays automated irrigation data. Ag Hub data capture devices and soil tapes