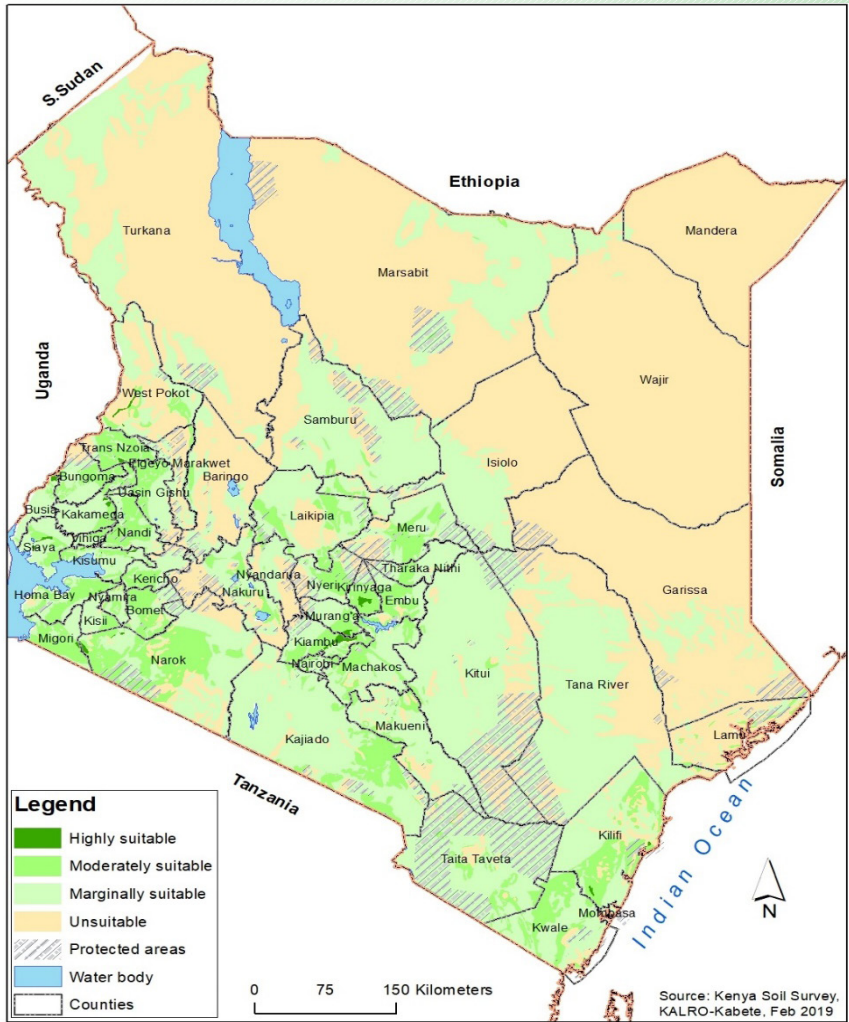




# WHERE TO GROW AVOCADO IN KENYA





*Land suitability for avocado growing in Kenya*



## CLIMATIC REQUIREMENTS

The main commercial varieties of Avocado grown in Kenya are Hass, Fuerte, and Pinkerton, with Fuerte and Puebla also recommended as rootstocks. Additionally, the country also has other varieties including Choquette (jumbo type) Entenger, G755, Simmond, Tonnage and Zutano.

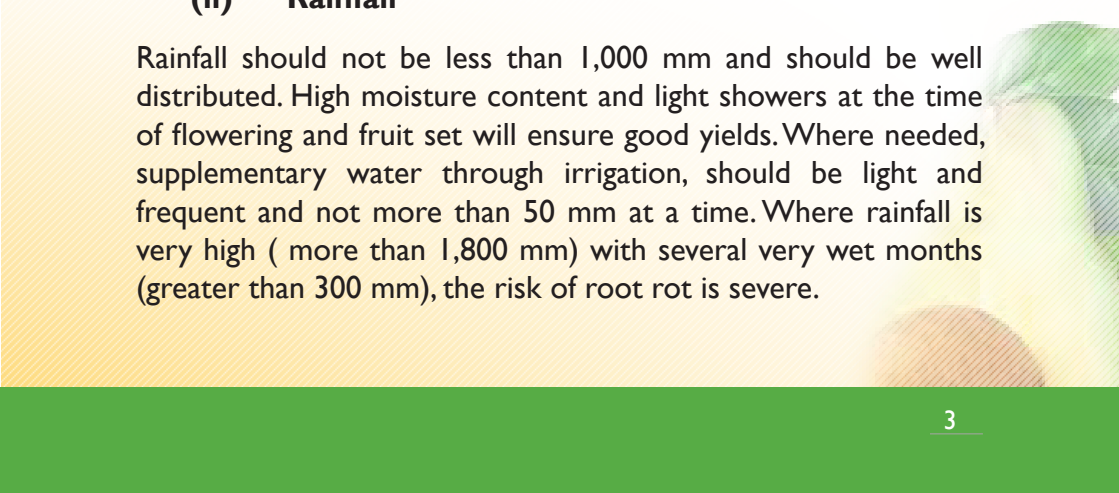
In terms of geographical distribution, the avocado suitability map shows the main avocado growing areas in Kenya. There are two types of avocado that flower at different times of the year (type A and B). Farmers are advised to mix both types in an orchard so that type A pollinates type B and vice versa.

### (i) Temperature

Globally, avocados are grown across a wide range of temperatures. There are different temperature requirements for “subtropical” (Mexican, Guatemalan, Mexican hybrids) and “tropical” (West Indian and West Indian Guatemalan) cultivar). Hass avocado requires an optimum temperature of 25–28°C. For most avocado varieties, the maximum temperature should be less than 30°C. Temperature above 35°C is tolerated but with a negative effect on fruit yield and size.

### (ii) Rainfall

Rainfall should not be less than 1,000 mm and should be well distributed. High moisture content and light showers at the time of flowering and fruit set will ensure good yields. Where needed, supplementary water through irrigation, should be light and frequent and not more than 50 mm at a time. Where rainfall is very high (more than 1,800 mm) with several very wet months (greater than 300 mm), the risk of root rot is severe.



### (iii) Relative humidity

Relative humidity is important in avocado growing through its role in aggravating (low RH) or alleviating (high RH) physiological stress. High RH and cool temperatures during the growing season result in minimal environmental stress and excellent performance of “Hass”, but cause problems with uptake of boron and calcium, which play a key role in fruit growth and quality.

### ALTITUDE

In Kenya, avocados can be grown at an altitude of about 1,500 to 2,100 metres above sea level. However, they can grow at any altitude less than 2,500 m. In Kenya, the crop is generally grown in highland areas between 1,000 and 2,101 m.

### WATER

Avocados have variable water requirements depending on varieties or races. In tropical/subtropical areas, a total of 1,000 mm is regarded as the minimum desirable amount of rainfall per annum and should be well distributed. However, supplementary irrigation is often recommended during flowering and fruit set. Too much rain during flowering can also lead to flower shedding and reduced cropping. A “moderate” annual rainfall of 1,250–1,750 mm, preferably with good distribution and some form of supplemental irrigation during dry periods, is recommended

### SOIL

#### (i) Soil structure, texture and depth

Avocado grows successfully in many types of soils provided the soil is deep, permeable and well drained. Good soil aeration is needed and a depth of at least one metre of topsoil is recommended. One soil condition to be definitely avoided is water-logging because root rots, such as *Phytophthora* can be a serious problem for avocado trees.



## **(ii) Soil pH**

Optimum soil pH appears to be around 6.2 to 6.5 but they are grown successfully at pH from 5 to 8. If Phytophthora root rot is known to be a problem in the area, soil pH should be checked. Gypsum ( $\text{CaSO}_4$ ) may be necessary if the pH is higher than 6.5 and soil calcium levels appear to aid suppression. Deep cultivation and supplements of lime (where necessary) and superphosphate are recommended to adjust soil pH before planting.

## **(iii) Organic matter content**

A reasonable organic matter content of the soil is good for avocado, but if the levels are a bit low at the stage of planting, this can be supplemented by mulches and manures during the lifetime of the crop.

## **(iv) Salinity**


Avocados are salt sensitive, and are particularly susceptible to excessive chlorine levels. Growing avocados in arid / semi desert conditions increases the risk of high salinity levels in ground water.

## PRODUCTION SEASONS IN DIFFERENT REGIONS IN KENYA

PROVINCE	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
CENTRAL												
R/VALLEY												
NAIROBI												
EASTERN												
NYANZA												
WESTERN												
COAST												

## PRODUCTION SEASON OF MAJOR COMMERCIAL VARIETIES

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
FUERTE												
HASS												



---

**Compiled by:** Nyaga A., Njuguna J., Wasilwa L., Ndambuki J., Gatambia E., Khavi S., Ndungu J. N., Mulwa J., Odhiambo H., Ong'awa M., Amata R., Otipa M., Ochieng V and Kasina M.

**Edited by:** Editors: Nyabundi K.W., Mukundi K.T., Maina P., Wanyama H.N., Kedemi R.M., Otieno A.S. and Biegon A. K.

For further Information, contact:  
The Institute Director  
KALRO Horticulture Research Institute,  
P O Box P.O. Box 220-01000Thika  
[Director.hri@kalro.org](mailto:Director.hri@kalro.org)

*Design and layout by Emma Nyaola*

**KALRO/NAVCDP/PAMPHLET No..129/2024**

---

