

VANILLA CULTIVATION IN NEW GLOBAL REGIONS

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Global Vanilla Growing Regions

V. Planifolia

Madagascar
Comoros
Indonesia: (Java,
Bali, Sulawesi,
Lombok, Sumatra,
Flores)
Uganda
India
PRC
Tonga
Mexico
Costa Rica
Jamaica
Guatemala
Sri Lanka

V. tahitensis

Tahiti
Polynesian Islands

V. pompona

Guadalupe
Martinique
Dominica

PNG Beans *(V.politi, V.haapape?)*

Papua New Guinea

Vanilla Import Export Numbers – 2002 (MT)

MAJOR IMPORTERS	USA	FRANCE	GERMANY	UK	JAPAN
MAJOR EXPORTERS					
Madagascar*	694	255	93	52	44
Indonesia**	287	6.5	9.5	6	1
Comoros	24.5	36.5	26		5
Uganda	54	7	6.5		3.5
India	28			1	
Papua New Guinea***	3	8	6	1.5	1.2

* Madagascar exports to all other countries – 30 MT

** Exports to all other countries – 13 MT

*** Other Major Export to Australia – 15 MT

World Vanilla Imports 1995-2002 (MT)

YEAR	USA	EU	OTHERS	TOTAL
1995	1480			
1996	1524			
1997	1530	702	60	2292
1998	1475	656	65	2196
1999	1240	923	65	2228
2000	1185	816	80	2081
2001	1470	625	85	2180
2002	1117	542	95	1754

Vanilla Cultivation Parameters

- Weather and Soil
- Shade (Natural or Man made)
- Support (Trees, Posts)
- Planting (Material, Procedures or Techniques)
- Maintenance of Vines and Vanillery
- Vanilla Diseases and Pests
- Flowering
- Pollination
- Harvesting and Yields
- Pruning after Harvest

Weather and Soil

- Thrives in a warm moist tropical climate
- Average rainfall 75-90” per year
- Average temperature max. 85°F/min.70°F
- Grows from sea level to an altitude of more than 2500 ft above sea level
- Grows well in sandy loam soil rich in humus
- Optimum pH between 6-7
- Gently sloping land with eastern exposure appears ideal

Shade

- Vanilla vines need 50:50 sun and shade
- Unprotected vines lose moisture, buds shrivel, growth is stunted
- Heavy shade weakens vines, poor flowering and fruiting
- Banana, Coffee, Black pepper, Annatto are used as shade trees
- In many areas vanilla is grown as inter crop with Coffee, Banana

Support

- Vanilla vines need support for climbing and growth
- Fast growing, partial sunlight filtering & low branch bearing trees are preferred
- Casurina, physicnut, Erythrina, Glyricidia, Kinowa and Jobo are common support trees
- Trellis, Bamboo posts, and Cement poles are also used
- Lath houses can be used efficiently to control sunlight, moisture and mulch

Planting

- Vanilla is exclusively propagated from cuttings
- Cuttings with 8 to 10 nodes are planted near a support
- Planting is done when the soil is not too wet or dry
- Mulch is extremely important and provides nutrients, retains enough moisture and keeps soil light and open
- One hectare of land can grow 1500-2000 vines
- Vine looping is important for easy reach and root system

Vanilla Diseases

- Fusarium (*Fusarium*)
- Anthracnose (*Calospora*)
- Black rot (*Phytophthora*)
- Excessive prolonged rainy conditions, poor soil drainage and heavy shade favor diseases

Flowering

- Vine must reach certain maturity. Usually 3 years after planting to start flowering
- On an average 75% (range 60-80%) vines flower in a season

Stress Factors:

- The dry season
- Reduction of shade
- Removal of 6 inches of apical buds from hanging vines

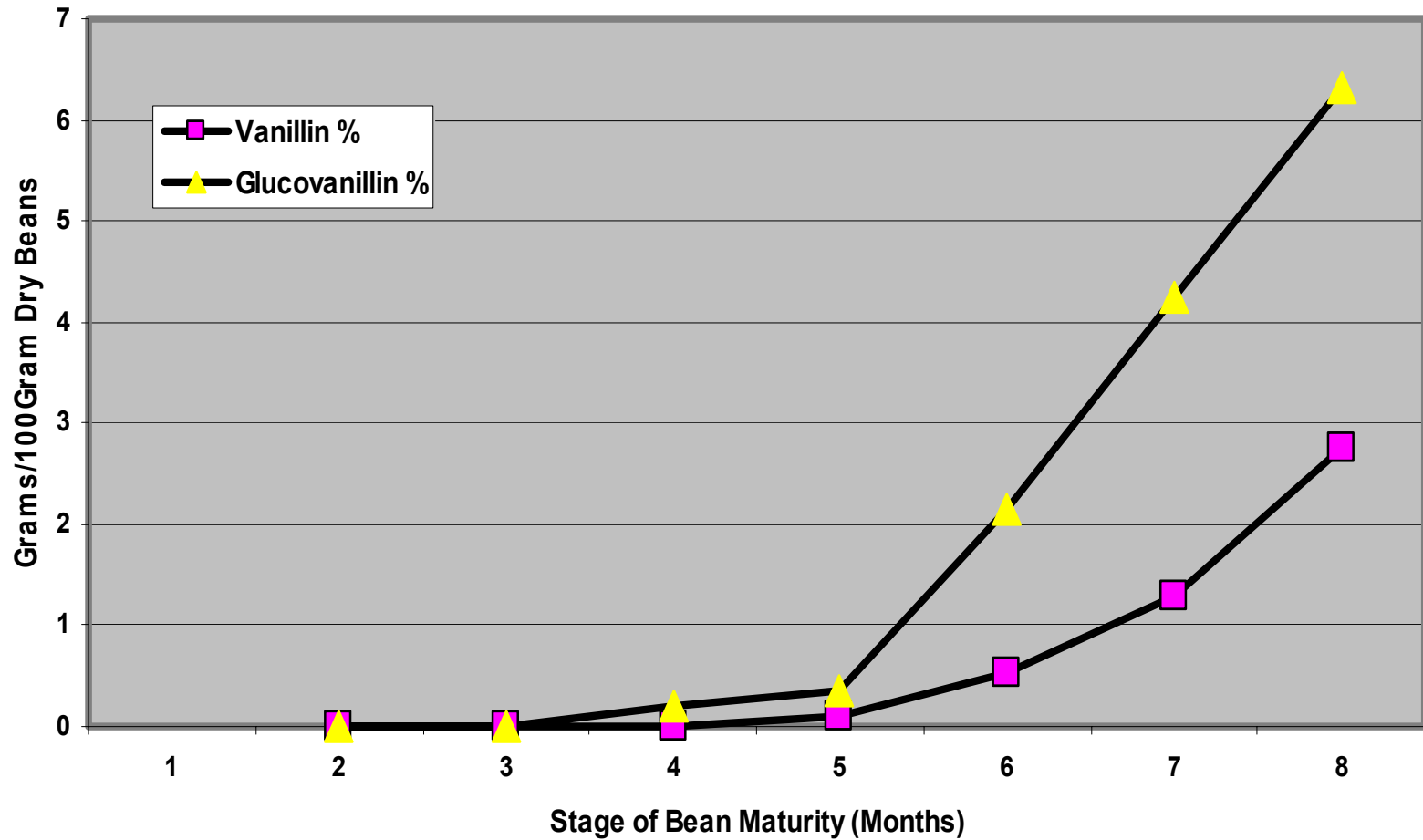
Pollination

- Laborious process
- Each flower individually pollinated by hand
- Flowers open in the morning and must be pollinated by mid-day
- Vines blossom for 1-2 months
- Each vine needs to be observed every day for open flowers during flowering season

Harvesting and Yields

- Determining bean maturity – Experience Science and Luck
- Beans reach Harvest Maturity 8 months after pollination
- Each full grown mature bean weighs 25-35 grams with the moisture content of 80-85%
- Early picked beans (EPB) lack vanillin and good aroma
- Ripe beans left on the vines will split and lose flavor components
- A healthy vine should produce 1.5-2 Kg green beans per season
- Well managed fields produce 3000 Kg green beans per year

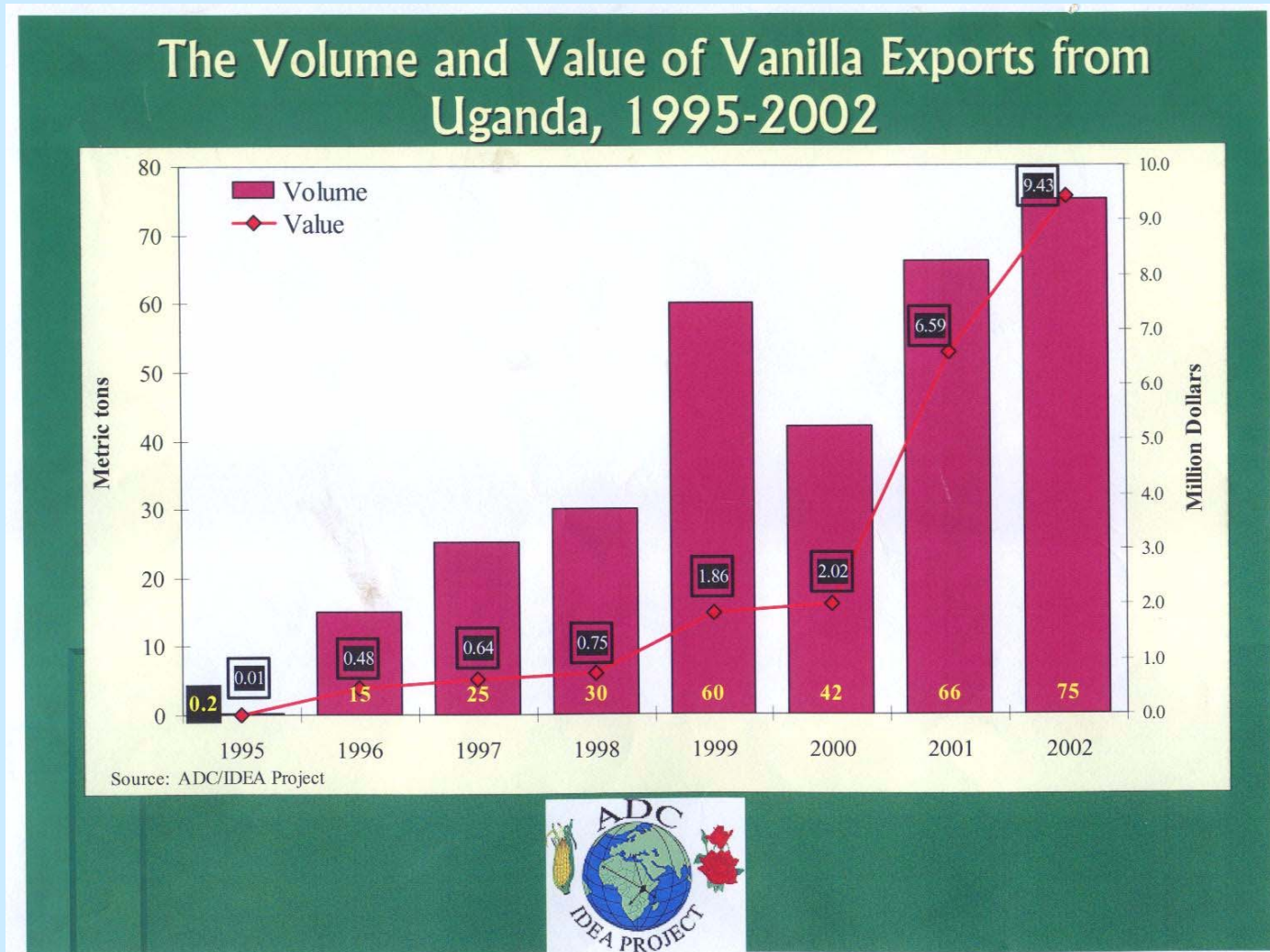
Green Bean Maturity and Vanillin Content of Vanilla Bean



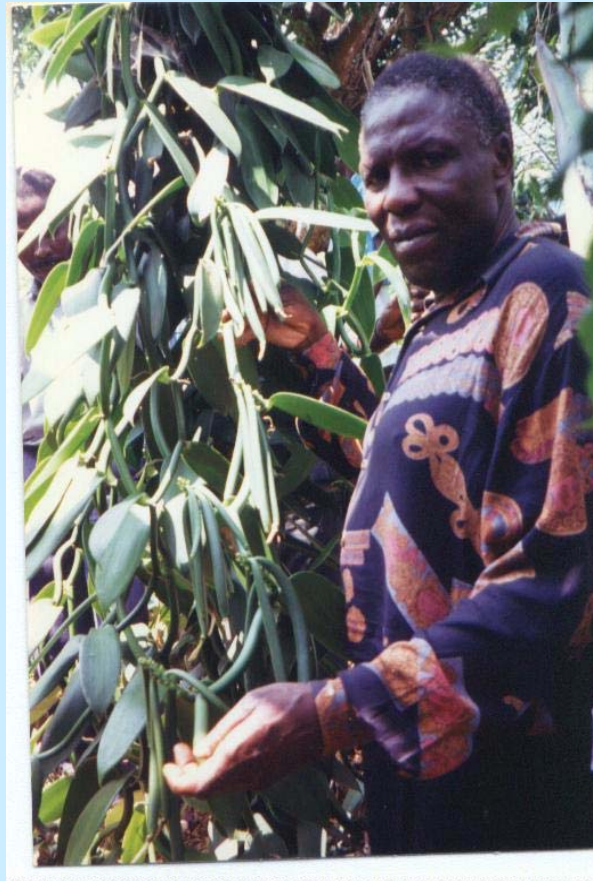
USAID Funded Uganda's Idea Project Work

- Reviewed production practices, yield and quality of beans
- Made practical recommendations concerning shade level, soil conditions, vine training, looping and pruning, importance of mulching, disease control and keeping vines healthy by controlling the crop yield per vine.
- Held ½ day workshops to explain and demonstrate above recommendations.
- Provided field training to the extension workers of UNVA.

Uganda's Vanilla Production 1995 - 2002



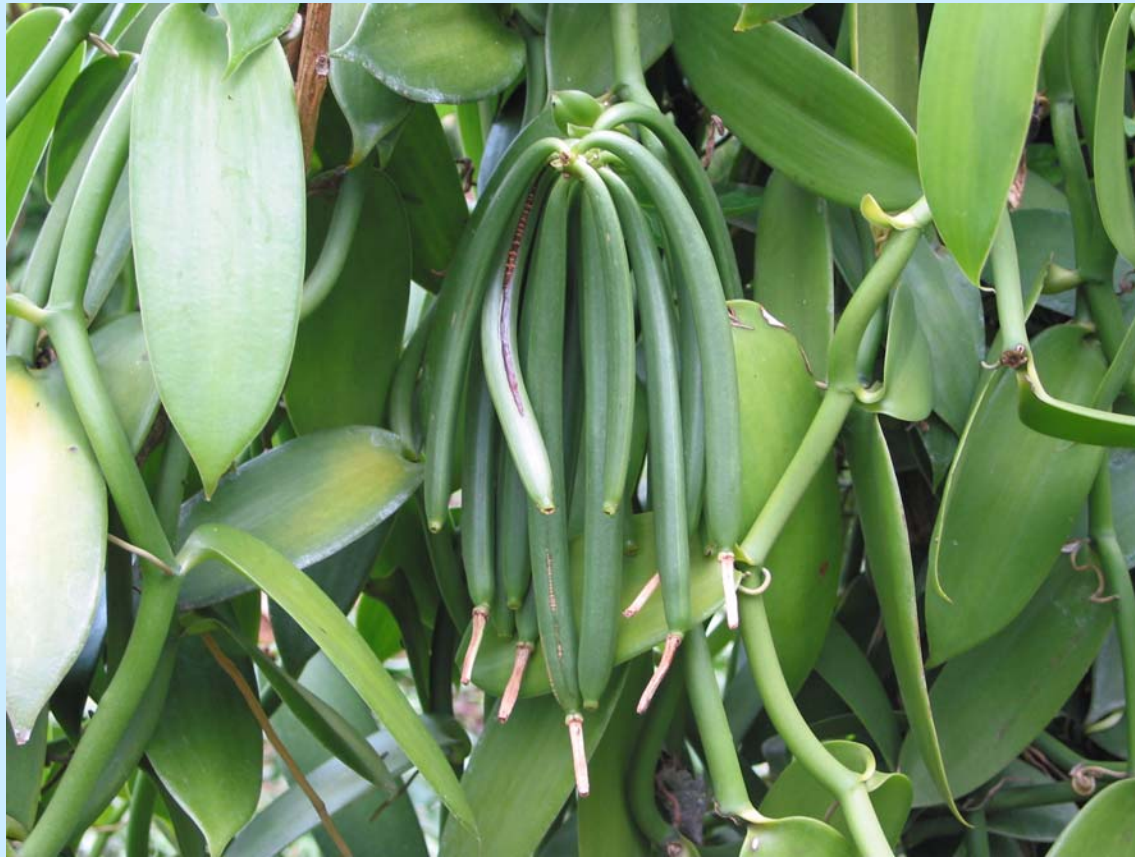
Vanilla Extension Specialist Uganda



Uganda Vanilla Vines



Uganda Vanilla - June 2003



Curing Facility In Uganda - June 2003



Important Considerations for Emerging Vanilla-growing Countries

- Production should be based on relatively small scale smallholder outgrowers. At this level, individual investment is very small and mainly family labor. Easy to adjust farm gate prices to reflect market prices.
- Processors must maximize processing efficiency and maintain quality while keeping low labor cost.
- Should not ignore low end bean market – it accounts for 40% of total market.

Organic Agriculture Movement Taking Hold In Uganda



Vanilla Nursery In Guatemala – May 2003



Unknown Variety of Vanilla Growing Wildly in Guatemala



Vanilla Pods of Unidentified Variety in Guatemala



Farm Preparation for Planting Vanilla - Guatemala

