

HORTICULTURAL DEVELOPMENT PROJECT

HOME ASSIGNMENT FOR PARTICIPANTS - MACADAMIA EXTENSION

TRAINING COURSE AUG. 23th ~ 28th. 1987

- Q. 1. How many macadamia nut trees are in your area of work
2. How many farmers in your area of work, own macadamia orchards?
3. What is the % arable land area (your area) is planted with macadamia?
4. How is macadamia expansion potential in terms of land availability?
5. What is the average yield per tree per farmer?
6. What common technical Questions do farmers ask about macadamia? List them.
7. Do you have farmers intending to expand macadamia production? How many? What are the limitations?
8. Which location in your district has the highest number of macadamia trees planted? (consult district crops officer).
9. In terms of climatological conditions, how is your area suitable for macadamia production?
10. Do you have access to FTC facilities for use with your staff or farmers?

TWO WEEK MACADAMIA EXTENSION TRAINING COURSE FROM JULY
5TH - 10TH AND JULY 19TH - 24TH, 1987.
HOME ASSIGNMENT REPORT FROM PARTICIPANTS

18TH SEPTEMBER, 1987

HORTICULTURAL DEVELOPMENT PROJECT

HOME ASSIGNMENT FOR PARTICIPANTS -MACADAMIA EXTENSION

TRAINING COURSE JULY 5TH - 10TH 1987.

ANSWERS BY GEORGE M. RIMBERE
-BARAGWI LOCATION
-GICHUGU DIVISION
-KIRINYAGA DISTRICT

1. There are 4986 macadamia trees in my area of work
2. There are 224 farmers owning macadamia orchards
3. 10% of the arable land is order macadamia
4. In terms of land availability macadamia extension can be increased because not all the land is order cash crops.
5. The average yield per tree per farmer is 20-25 kg.
6.
 1. Why does some trees dry?
 2. Why do some trees bear very small nuts?
 3. Why do some trees bear too many nuts on one raceme and only one to two only survive all other nuts falls before they are mature.
 4. Why do some trees don't bear too many nuts
 5. How can they control Mice, rats and squirrels which damage the nuts when they are on the trees and on the ground.
 6. How can they improve on the yields of their macadamia trees.
 7. Why do some branches die back esp. the tertiaryaries.
 8. How can they prune their M. plants to avoid shading of other crops.
 9. How is the relation between eating M. nuts and being infected with ring worms in children.
 10. How is the market developed to avoid the set backs of eaten '60 and '70s years.
 11. What is the Government doing to see farmers get money for their sweat
 12. Where to get high yielding macadamia seedlings
7. I have farmers intending to expand macadamia production there are 178 farmers although a lot more would like to intensify the production of the existing orchards.

The limitation are:-

1. There is the land problem owing to the nature of the nature of the areas of my working area, macadamia productions falls

- in this area where there is still competition between Dairy, coffee, Tea and other food crops.
2. Shading of other crops by macadamia trees.
 3. The yields are too little which are got from the M. trees (need for high yields)
 4. The pricing system of these trees ie the price should be increased as an incentive to expand macadamia production.
 8. Gichugu & Ndia Divisions are having the highest number of macadamia trees planted
 9. In terms of climatical conditions, my area is suitable for macadamia production in that it is the real coffee zone area it has right dail rainfall and temperatures suitable for macadamia trees.
 10. Yes. I have access to F.T.C. facilities.

JOHNSON N.KANTHIIRI
Runyenjes Division
D.AE.O Runyenjes
P.O.Box 32,EMBU.

Tel: 39 RUNYENJES

14th Sept. 1987.

Manager,
Macadamia Nut Project,
THIKA, RESEARCH STATION

REPORT ON SURVEY ON MACADAMIA NUT PRODUCTION

- | | | | | |
|-------|----|-------------------|---------------------------|-------------|
| Q. 1. | a. | Ngandori location | Kapingazi F.C.S. ltd | 6000 trees |
| | b. | Kagaari South | South Kagaari F.C.S.ltd | 1540 trees |
| | c. | Gaturi North | Kirurumwe F.C.S.ltd | 1000 trees |
| | d. | Kyeni South | New Kyeni F.C.S ltd | 980 trees |
| | e. | Kagaari North | Central Kagaari F.C.S.ltd | 1000 trees |
| | f. | Gaturi South | Gaturi F.C.S LTD | 1200 trees |
| | | | Total = | 11720 trees |
- Q. 2. Kapingazi -800, Kirurumwe -480, S.Kagaari-180,N.Kyeni-120
Gaturi FF.C.S - , Central Kagaari -385;
- Q. 3. 10% planted.
- Q. 4 Over 10 farmers in terviewed in each Society said that improved variety seedlings if released to them would increase acreage to the existing.
- Q 5. 10-20 kgs per tree
- Q 6. Top working to unbearing tetra sps;(b) More grafted hybrids availability (c) Fertilizer recommendations (d) Increase price to about 6/= per kg. (e) Rodents control squirrels, bats (f) Pruning techniques and the Technical field staff(Agri) to have skills and tools for pruning and topworking/grafting. (g) Paymen! delay in Society and farmers complain.
- Q 7. About 150 farmers: Grafted materials availability
- Q 8. Ngandori location.
- Q 9. Coffee zone area - Macadamia Nut trees are on rain feed.
- Q 10. Messages on Technical are given to staff & farmers on traching and visit programme(T & V)

JOHNSON N.KANTHIIRI.

OLUOCH, E.B.
KISUMU DISTRICT
(NYANDO DIV.)

- Q.
1. How many macadamia nut trees are in your area of work?
- None noticed.
 2. How many farmers in your area of work, own macadamia orchards?
- None.
 3. What is the % arable land area (your area) os planted with macadamia?
- Suitable arable land = 80%
 4. How is macadamia expansion potential in terms of land availability?
- Macadamia potential is there, as orchards can be established established at appropriate places.
 5. What is the average yield per tree per farmer?
- N.A.
 6. What common technical questions do farmers ask about macadamia? List them.
A lot of farmers are not aware that it is suitable, and do not grow it.
 7. Do you have farmers intending to expand macadamia production? How many? what are the limitations?
- I believe a lot of farmers; after education will want to plant it. I can approximate 10 farmers to start with.
 8. Which location in your Division has the highest crops of macadamia trees planted? (consult district crops officer)
- N.A.
 9. In terms of climatical conditions, how is your area suitable for macadamia production?
- The area is suitable for macadamia production:
vizi:- Temperatures = 26-33°C; Rainfall = 1100-1200mm annually; Altitude = 100-1200m above sea level.
 10. Do you have access to FTC facilities for use with your staff or farmers?
- Yes.

Comment

- Maseno } Very suitable areas & have already
- Nyakash } planted coffee.

OKACHA J.S. JAIRUS
BAHARI DIVISION
KILIFI DISTRICT

- Q. 1. How many macadamia nut trees are in your area of work?
- Seven 7 (Division)
2. How many farmers in your area of work, own macadamia orchards?
- One (1)
3. What is the % arable land area (your area) is planted with macadamia?
- NIGLIGIBLE
4. How is macadamia expansion potential in terms of land availability?
- HIGH
5. What is the average yield per tree per farmer?
- OLD TREES - YIELDING NOTHING
6. What common technical Questions do farmers ask about macadamia? List them.
- NONE
7. Do you have farmers intending to expand macadamia production? How many? What are the limitations?
- YES (10) TECHNICAL KNOW HOW
8. Which location in your district has the highest number of macadamia trees planted? (consult district crops officer).
- MTWAPA (4)
9. In terms of climatical conditions, how is your area suitable for macadamia production?
- MARGINAL
10. Do you have access to FTC facilities for use with your staff or farmers?
- YES (has one seedling)

Comments:

- Has an old tree (hybrid) very low yield.

- Q. 1. How many macadamia nut trees are in your area of work?
- NONE
2. How many farmers in your area of work, own macadamia orchards?
- NONE OF THEM
3. What is the % arable land area (your area) is planted with macadamia?
- NIL = 0%
4. How is macadamia expansion potential in terms of land availability?
- LAND AVAILABILITY ISN'T A PROBLEM
5. What is the average yield per tree per farmer?
- NOT APPLICABLE.
6. What common technical Questions do farmers ask about macadamia? List them.
- They in most cases don't know the plant.
7. Do you have farmers intending to expand macadamia production? How many? What are the limitations?
8. Which location in your district has the highest number of macadamia trees planted? (consult district crops officer).
- There is no macadamia.
9. In terms of climatical conditions, how is your area suitable for macadamia production?
- It could be suitable - Rainfall = 1100mm
Temp. = 32 C during day time.
10. Do you have access to FTC facilities for use with your staff or farmers?
- Yes.

Comments:

- Interested - But wild animals are a problem. Farmers need new crops because cashewnuts does not have high yield & farmers are already decreasing acerage.
- Needs assistance to bring farmers to this area.
- * - Has Government land to establish 50 seedlings test orchard.

附属資料 12. プロジェクトサイト見学者一覧表

VISITORS TO HORTICULTURAL DEVELOPMENT PROJECT.
JANUARY, - July 1987.

DATE OF VISIT	NO OF VISITORS/ TRAINEES	WHERE FROM
23/1/87	48	Egerton College students(Horticulture)
29/1/87	30	Kiambu extension officers
20/1/87	44	Egerton College students(HORTICULTURE)
27/2/87	80	Nairobi University students(EDUCATION)
5/3/87	45	Githunguri girls high school(F.6)
6/3/87	8	Thika school for the blind (GEOGRAPHY)
11/3/87	30	Jomo Kenyatta College of Agriculture and Technology
23/3/87	35	Thika high school students
30/4/87	6	Museums of Kenya(EDUCATION OFFICERS)
6/5/87	38	Egerton College students(HOME ECONOMICS)
15/5/87	44	Kyuso Community resource centre.
17-22/5/87	24	All over Kenya(EXTENSION OFFICERS).
25/5/87	18	International Women Association
15-19/6/87	3	K.N.C and JKCAT Trainees
3/6/87	10	Kilifi Extension Officers
4/6/87	20	Zambian high Commissioner
24/6/87	37	Tanzania Esan group mission
2/7/87	87	Parent-Teacher association of Nairobi Japanese School.
10/7/87	80	Chania High School
13/7/87	40	Kamahuha girls high school
15/7/87	40	" " " "
17/7/87	40	" " " "
27-31/7/87	3	Bungoma (trainees)
3-7/8/87	1	K.N.C. (trainee)
13-7-87	100	Makongo Primary School
14-7-87	100	" " "
17-7-87	100	" " "
21/9/1987	6	Home Economics Eastern Province
25/9/1987	60	Githembe Secondary School
2/10/1987	60	Githembe Secondary School
5-9th/10/1987	1	Farm Manager K.N.C Naivasha
16/10/1987	60	Thome Anov Secondary School
23/10/1987	60	Githembe Secondary School
23/10/1987	38	Egerton University College (Horticulture).

Expats 'drain research kitty'



Mr Ayah: "They return home".

By NATION Reporter
Expatriate labour consumes up to 80 per cent of the funds donated to Kenya for research in certain fields, a Cabinet Minister said yesterday.

The Minister for Research, Science and Technology, Mr Ndolo Ayah, told a group of prospective donors at a meeting in Nairobi. "About 40 per cent of donor funding goes to the expatriate personnel and maintaining their operational costs and in some research projects over 80 per cent of the donor funds are allocated to such costs."

He said he was not against foreign technical personnel, but it must be remembered that in the

end they return to their homelands with all the skills and experience, leaving projects that may never succeed or return the investments".

He said Kenya needed Sh2.4 billion for agricultural research up to 1991.

Mr Ayah said the Kenya Agricultural Research Institute (KARI) needed a lot of money.

He asked donors to re-think their reluctance to shoulder recurrent costs at research projects, estimated at Sh1.5 billion.

The national agricultural research system has approximately 500 scientists out of whom 20 have PhDs and over 200 have masters degrees.

Kenya Times

10/9/80

Minister tells donors not to dictate terms

By JEREMIAH AURAH

DONOR agencies should reconsider some of the conditions they give when financing projects to enable the recipients enjoy full benefits of the donation, the Minister for Research, Science and Technology, Mr. Ndolo Ayah said yesterday.

The minister said about 80 per cent of donations given was mostly used in maintaining the expatriates, leaving very little for the intended projects.

Mr Ayah said this when he received in his office a team of donors who aid the Kenya Agricultural Research Institute (KARI).

Thanking the donors for their assistance to Kenya, Mr Ayah who was together with his permanent secretary, Dr. Wilfred Koinange and KARI chairman, Mr Joe Wanjui,



Mr Ayah ... "Talent exists"

appealed to the donors not to insist on sending their nationals to do research in Kenya, because "such talent already exists in the country".

"You will agree with me that foreign nationals undertaking research in Kenya will eventually depart and take with them all the

knowledge acquired in the course of their research", the minister said adding that "it will not be possible to sustain development if we do not retain such knowledge in the country."

He told the donor team research system in the country "currently has about 500 scientists, of whom about 20 hold PhD and over 200 have MSc degrees."

The team which is blended with donors from US, World Bank, CIDA, Netherlands embassy, West Germany, embassy, Swiss embassy, FAO, ODA, EEC and ACIAR of Australia was also informed that a large number of Kenyan scientists "are currently in local and overseas universities studying for PhDs and MScs".

国際協力事業団

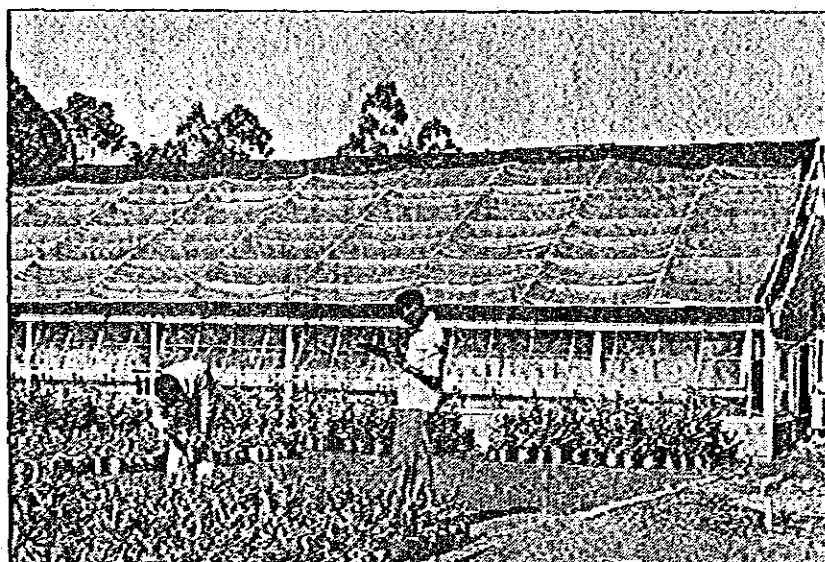
INFORMATION ON

Macadamia



Propagation of Macadamia.

What is plant propagation?



Plant propagation is an art as well as a science which basically involves the control of different types of developmental cycles i.e. sexual and asexual as a basis of preserving the unique characteristics of the plant from one generation to another.

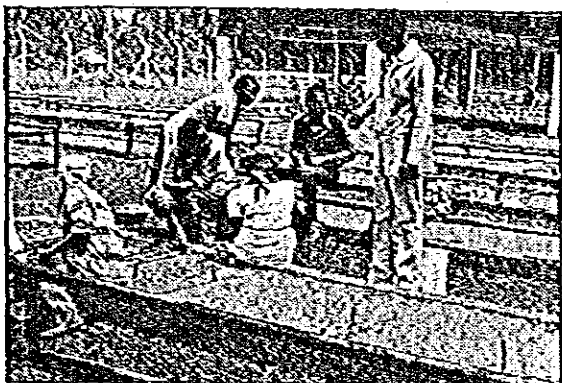
In macadamia both sexual part (seed) used for raising rootstocks and asexual (vegetative) for reproducing clones with high yielding and good quality nuts.

The crop is highly heterozygous hence grafting is a must for getting true to type clones.

I. PROPAGATION OF MACADAMIA.

(1) Raising of Rootstocks.

Seednuts are soaked in water for about 96 hours then seeded in sandbeds.



1. Seedlings of seed nuts in sandbeds for Rootstocks

Within 2 - 3 months the seedlings are transplanted in tins and kept under shade for 1 - 2 months. The seedlings are then raised in open shade till time of grafting.

(2) Grafting

Grafting is the joining of the scion with the root stocks so as to get the desired characteristics of both. This is done on 6 months - 1 year seedlings by either cleft, side wedge, and splice grafting. Grafting of macadamia need high technical skill for obtaining high percent takes. Technical staff is advised to call at N.H.R.S. Thika, for training and necessary information of the same.

Why Graft?

- (a) To perpetuate clones that breed true to type.
- (b) To obtain benefits of certain rootstocks.
- (c) To hasten reproduction maturity.
- (d) To get high yielding clones with good quality nuts.
- (e) To change cultivars of already established trees (top working).
- (f) To screen diseases and viruses.



2. Grafting of Rootstock with selected clones.

II. AFTER-CARE OF GRAFTED SEEDLINGS.

Grafted seedlings are kept in Green-house for 2 - 3 months, temperatures of 25 - 28°C, humidity of over 90% and light intensity of 40 - 50% are maintained.

Completely healed and hardened seedlings are transferred to shade house allowing 40 - 50% light intensity where they stay till they are transferred and transplanted in the field.

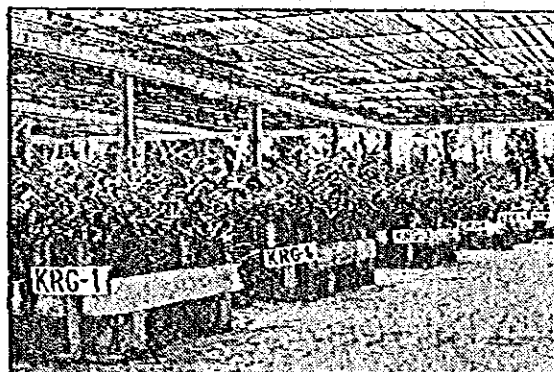
III. WHAT TO DO BEFORE TRANSPLANTING SEEDLINGS TO THE FIELD.

If the material has been transported to far areas, first keep them in the shade to recover from shocks and any disturbances. Water them well and observe them till they look healthy and vigorous. Then transplant to the prepared holes as per instructions.

IV. WHERE TO GET GRAFTED SEEDLINGS.

- (a) N.H.R.S. (H.D.P.)
P.O. Box 1377
Tel: 21593 - 4 THIKA
- (b) Kenya Nut Company Ltd.
P.O. Box 1369
Tel: 21123 THIKA

The government policy requires that only grafted seedlings should be planted.



3. Seedlings ready for transplanting to the field.

V. CHANGING LOW PRODUCTIVE TREES TO HIGH YIELDING WITH GOOD QUALITY NUTS.



4. Top working of old or low productive trees.

Old and unproductive trees can be changed by top-working with selected clones of recommended varieties.

VI. WHERE TO GET NECESSARY INFORMATION.

N.H.R.S., K.N.C., F.T.C's, D.A.O.'s and extension office within reach.

Submitted by T. Iwasaki / W.N. Mokaya
Propagation of Macadamia Research Programme. (H.D.P. Thika)

Project News

Expert and counterpart information.



Dr. **KUNIIHIKO SUZUKI** is yet another short-termed Expert who has been working in the Project from 21 / 5 / 1987. In the Pomology section. We sincerely thank him for the good work he did on the macadamia agronomy for the short time he was with us.



Mr. **J. G. Manyara** left for Japan on 27th July 1987 for three months training in Agricultural Extension course. He graduated from Egerton College 1983 with a diploma in Horticulture.

It will be beneficial to know that now our two green houses in the main station N.H.R.S. are now operational and will be available for Trainees to learn propagation techniques

Editor's Comments

This fourth edition avails the best methods of propagating Macadamia. It explains on seeding, transplanting before grafting and grafting operations, after care of grafted seedlings and transportation of grafted seedlings to the field. All these operations are aimed at perpetuating high yielding genetic materials.

A. TANAKA

20th August, 1987 Kenya-Japan Horticultural Development Project
(Training Section)
N.H.R.S. P.O. Box 220, THIKA, Tel: 21593-5

INFORMATION ON

Macadamia

Macadamia Cultivation



1. Varieties

Macadamia Spp are easily distinguished by three different types of shell, which are rough shell, smooth shell and hybrid.

Rough shell types are poor quality for commercial purpose, because of low kernel and low oil percentage. However, smooth shell types which are round in shape are of good quality and further more kernel and oil percentage is high.

The quality of hybrid is a bit inferior than smooth shell types but they have good harvesting at high altitudes. Existing macadamia trees grown in Kenya have very low yield because they are planted by the seed itself and about 75 percent are of rough shell type.

Production is between 5 kg to 12 kg per tree a year

Therefore, a good production is when the yield is four or five times the present and in this case macadamia will be a good cash crop.

(i) Tentative Recommended Varieties

The following six varieties are recommended at different altitudes KRG-1, KRG-3, KRG-4, MRG-20, EMB-1 (All smooth) and KMB-3, (hybrid).

These varieties can produce between 38kg and 55kg per a year, when they are 15 years old.

(ii) Suitable Places for growing Macadamia

Macadamia can grow in coffee-tea growing areas. These areas are between 1450-1900m above sea level with 1200mm to 1600mm precipitation. However, the most suitable place for growing macadamia is same as main coffee growing areas. Each of the recommended varieties have their own suitable places, but, when orchards have irrigation systems macadamia can be planted in a more wider region. It is very important that each variety should be planted in it's own suitable place. Therefore when you want to establish new macadamia orchard, contact your nearest F.T.C. or extension worker.

2. Seedlings for planting

Macadamia seedlings should be propagated by Grafting. Seedlings obtained directly from seeds are low in yields. Good rootstock for grafting should be selected from mother trees which are high yielding and have medium to big nuts. After germination, only good seedlings are used.

Scions should be used from selected varieties. When you want to renew already planted trees, it can be done by topworking using bark grafting method and it takes a shorter time to bear nuts than when new seedling are planted. This method is complicated, therefore please get guidance from extension workers.

When you want grafted seedlings for planting, please contact your nearest agricultural extension office, N.H.R.S. or K.N.C.

3. Cultivation

(i) Planting

Macadamia has two seasons for planting, the long rain and short rain seasons. Planting during long rain season is suitable (from March to June).

Seedling plants which are between 6 and 8 months after grafting are suitable for planting. Level orchard is better than sloping orchard for planting because harvesting and other maintenance are easier.

Preparation of planting holes should have a minimum dimension of 2 by 2 ft for considerable root expansion and organic manure, fertilizer and lime is added.

Generally, the spacing is 7.5m by 7.5m or 10m by 10m. It is very important to give water at least once a week after planting the seedling until it takes well.

(ii) Pruning

Pruning is very important as the trees grow. First pruning is done after three to six months of trans-planting. The branches are pruned between 60 to 100cm above the ground. Many water shoots appear when plants are young. Therefore it is important to train these branches so that it promotes an early fruit setting. All the branches which shoot below 60cm should be pruned. Branches growing towards the inner side are also pruned.

(iii) Flowering Season

The main flowering season of smooth shell type is between May and August, and rough shell types between end of August and September. Trees of sexual propagation do not have many fruit set. During the flowering season there is high incidences of diseases (e.g. Anthracnose) and pest attack (e.g. Stink bug). Therefore, we should spray fungicides (e.g. Anthracol) and Insecticides (e.g. malathion) just at the onset of fruit set. This is to prevent premature drop.

(iv) Watering

It is desirable to do watering once a week for especially young trees during dry season.

However, watering is also important for mature trees in order to get good yield.

In case water is not enough, flowers don't bear properly and even in many nuts which appear the shells become thick. Mulching is important for keeping moisture and control of weeds. Dry grass can be utilised for mulching. But it should not be put so near (5cm) to the stem of the plants to avoid the white ants attack.

(v) Soil Conservation

Mulching also prevents erosion especially on sloping areas. Sloped areas should be leveled to form stairs, and napier grass and other leguminous plants planted at edges of the stairs.

Growing beans or other leguminous plants are useful for covering the surface of orchard and soil conservation. When planting flat areas about 1m deep ditches should be dug between trees, for the prevention of water stagnancy during rainy season.

(vi) Manure

Fertilization with e.g. N.P.K. 17:17:17, should be done more than two times a year for productive trees just before rainy season. Quantity of fertilizer is 120g per cm of the diameter (for example; if the tree is 5cm in diameter, then it will be $5 \times 120g = 600g$ per year). The amount of fertilizer depends on soil condition.

(vii) Harvesting

After seven-eight months from flowering, the macadamia nut is mature for harvesting. The method of harvesting is to wait until the natural drop of the mature fruit and then collect as soon as possible at least once every week especially during rainy season.

The fruits must not be picked before dropping. Keep the ground under the trees clean always for easy gathering.

4. Insect Pests

(i) Stink Bug

A kind of stink bug is one of the most serious pests in lower regions. This bug feeds on a wide variety of plants including macadamia nuts, coffee and various legumes.

This bug mainly attacks the developing stage of nut. It is a sucking insect; therefore, it can cause mold to grow in kernel as secondary infection. The bug is attacked by some parasitic wasps, which lay their eggs inside the eggs of the pest.

More than 60% of eggs were attacked by these parasites in the Orchard of Horticultural Development Project in dry season of 1986. However, they can not attack nymphs and adults. The bug migrates to other types of fruit trees and vegetables. In the macadamia orchard, spraying is not very effective because the bugs can easily migrate from other plants.

(ii) Nuts borer

Nuts borer also give a lot of damage for macadamia. Actual name is false codling moth. The Larva of moth eats the nut. Mainly they eat husk but often they bore some parts of shell, and into kernel when mature nuts are not collected soon.

(iii) Cystates Weevil

Cystates weevil is a pest of leaf. Especially young trees are heavily damaged by this insect.

(iv) Other Pests

Scale insects and thrips attack the surface of the husk. But these pests are minor.

Sometimes you can observe naked branches on macadamia trees. This is a damage of some kinds of caterpillars of a moth.

5. Diseases

(i) Anthracnose

This is a disease of nuts and cluster. In the rainy season nuts are covered by pinkish spores and in dry season covered by black spores. Affected nuts or clusters treated with hot water or fire is effective to control them.

(ii) Root rot

Another disease is root rot. Few years after transplanting, the tree suddenly dries up. Affected trees should be removed as soon as possible then destroyed by fire.

Don't plant new seedlings again around the affected trees.

6. Finally

The above is an outline of growing macadamia nuts. If you want to know more about it, please ask the Extension worker in your area.

20 February 1987 Kenya-Japan Horticultural Development Project
(Training Section)
N.H.R.S. P.O. Box 220, THIKA.

附属資料 15. 日本からケニアへの果樹の輸出と植物検疫について

関 係 各 位

1987年11月17日

農林水産省果樹試験場保護部長

大 竹 昭 郎

日本からケニアへの果樹の輸出と植物検疫について

標記の件について農林水産省蚕園芸局植物防疫課の見解を聞きましたので、下記にその要約を記します。

国際間の植物検疫は、とかく問題を起こしがちですから、関係者は相手国ケニアの植物検疫当事者、ケニア政府の他の関係部局などに事情を十分認識してもらうとともに、わが国農林水産省の植物防疫課との連携を密にし、植物の輸入後に検疫について誤解や不満が生じないよう格段の配慮をお願いします。

なお、この文書の原稿は、予め植物防疫課の担当官（複数）に目を通していただいたことを申し添えます。

記

日本からケニアへの果樹の輸出にあたって、植物検疫に関する農林水産省農蚕園芸局植物防疫課の見解。

- (1) ケニアの輸入植物検疫規則 Plant Protection (Importation) Order, 1948 as amended によれば、果樹は同国の輸入禁止品目になっている。ただし、試験研究用など特殊な場合には、輸入が認められるであろうが、それには、輸入許可を明記した公文がケニア検疫当局から発行される必要があると考えられる。試験研究用という目的ならば、輸入が許可される苗木の本数は制限されるであろう。
- (2) 日本の検疫当局は、ケニア側から要請があれば、要請された対象病害虫に関して栽培地検査 (field inspection) を行なうことができる。栽培地検査とは、輸出が予定されている植物の栽培地（たとえば、種苗業者の圃場）に検疫官が出張し、輸出予定植物について該当病害虫の目による検査を行なうことである。この肉眼検査 (visual inspection) で異常なければ、最終的に輸出時の検査を経て発行される検疫証明書内に、生育中の栽培地検査においても該当病害虫（病害虫名が挙げられる）は発見されなかった旨の記載がされる。
- (3) 特定の病害虫について、栽培地検査とは異なる特別な検査が要求された場合には、その

要求に植物防疫課が応えることができるかどうかを検討するため、事前にその病害虫名と樹種を同課に連絡されたい。

〔参 考〕果樹の樹種とウィルスの組み合わせで対応できるものの例。

リンゴ	高接病 ・ Apple chlorotic leafspot virus ・ Apple stem pitting virus ・ Apple stem grooving virus	接木検査 ・ <i>Mobus scheideckeri</i> , マルバカイドウ, ミツバカイドウの いずれか
モモ オウトウ スモモ	Prunus necrotic ringspot virus Prune dwarf virus	接木検査 ・ 白普賢(サクラ品種)

ウィルスの種類によってはELISA法も可能である。

以 上

JICA