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Seed Handling Manual Guidelines and Logbook for Seed Processing

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SEEDLOT DIARY

Seed source (no. and name):

Species: Seed lot no:

1. Seed Maturity

a. Maturity criteria: .

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b. Cutting test to determine maturity: yes no

Date of sampling:

Sample size (no. of seeds): Percentage mature: %

c. Estimated mature seeds (without sampling): %

d. Cutting test: yes no

Date of sampling: Date of testing:

Sample size (no. of seeds):

% filled and good: %

% empty: %

% damaged/dead: %

% immature or not developed: %

e. Moisture content: yes no

Date of sampling: Date of testing:

Method:

No. of replicates: Size of replicate:

Material (fruit/seed):

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Moisture content: % (fresh weight basis)

2. Collection

a. Collection dates:

b. Collection method: from the tree from the ground
from a cover on the ground

If from a cover on the ground, state maximum number of days from shedding to collection: days

c. Describe the method of collection and the material collected (e.g. clusters of pods, fleshy fruits):

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d. No. of trees collected from: Mixed in the field:.....

e. Is the size of the crop: Good Intermediate Poor

f. Condition of the material (e.g. pests, mechanical damage, maturity):

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g. Describe any selection/cleaning of collected material done at this stage:

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h. Yield:

Total quantity collected: unit (litres, kg, other):

Total quantity of fruit collected: unit (litres, kg, other):

Quantity of seed (or other unit ready for selling): kg

3. Transport/storage before processing

a. If any **processing steps** (item 4) were made **in the field** state their numbers (see numbers in diagram, item 4):

b. **Number the processing steps done at the central unit** i.e. where the seed will be finally stored (see numbers in diagram, item 4):

c. Temporary storage and transport conditions

<i>Temporary storage (TS) & transport (T)</i>	<i>Duration (dates)</i>	<i>Container type</i>	<i>No. of kg per container</i>	<i>Temp./ °C</i>	<i>Air exchange possible (Yes/No)</i>
<i>TS between collection and processing in field or transport</i>					
<i>TS after processing in field and before transport</i>					
<i>T to central seed centre</i>					
<i>TS at seed centre before processing</i>					

4. Processing

a. Type of storage physiology (known or suspected):

Recalcitrant Intermediate Orthodox Unknown

b. Initial testing before processing:

Date of sampling	Seed mc/%	Normal seed-lings/%	Abnor-mal seedl.%	Empty seeds/%	Fresh seeds/%	Insect attacked seeds/%	Other/%	Days to 50% germ.

<i>STEP</i>	<i>DATE(S)</i>	<i>MACHINE/METHOD</i>
c. Pre-cleaning		
d. After-ripening	% mature % filled and good
e. CONES		
<u>1. Drying cones</u>		
<u>2. Tumbling cones</u>		
<u>3. Dewinging seed</u>		
<u>4. Other</u>		

<i>STEP</i>	<i>DATE(S)</i>	<i>MACHINE/METHOD</i>
f. FRUITS, DRY		
<u>1. Drying fruits</u> <u>2. Threshing</u> <u>3. Separation</u> <u>4. Dewinging</u> <u>5. Other</u>		
g. FRUITS, WET		
<u>1. Soaking</u> <u>2. Maceration</u> <u>3. Washing</u> (state whether sinkers/ floaters are removed)		
h. Drying of seed (or other unit stored/sold)		
i. Cleaning		
j. Upgrading		

5. Testing during processing

a. Moisture content:

Method:

No. of replicates: Size of replicate:

Subsequent determinations of moisture content:

<i>Date of sampling</i>	<i>Step no</i>	<i>Moisture content/%</i>

b. Cutting tests

Sample size (no. of seeds):

Filled and good: F

Empty: E

Damaged/dead: D

Immature or not developed: I

<i>Date of sampling</i>	<i>F%</i>	<i>E%</i>	<i>D%</i>	<i>I%</i>	<i>During/after step no</i>

6. Pretreatment

a. Type of dormancy (known or suspected):

Physical (water-impermeable) Chemical Mechanical

Embryo dormancy Not dormant Unknown

b. Method of pretreatment before germination testing (describe details e.g. temperature, duration, machine):

c. Other pretreatment methods tested and their applicability:

7. ISTA-testing after processing, before storage/selling

a. Date of sampling: b. Date for initiation of germination test:

c. Moisture content: % d. 1000 seed weight: no./kg

e. Purity: %

f. Germination capacity: % normal germinants % abnormal
..... % fresh not germinated % insect attacked % empty
..... % other

g. Germination speed:

First germinant: days (after initiation of germination test)

Last germinant: days 50% germination: days

8. Evaluation of seed quality

Very good Satisfactory Not satisfactory Poor

Conclusions, causes of dissatisfactory results, procedures to be changed, tests/research to be made:

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9. Storage conditions

Date for initiation of storage	Container type	Seed per container/kg	Temperature/ °C	Seed moisture content/%

10. Pesticide treatment or other precautions

Method:

Applied during/after step:..... Date of treatment:

11. Testing during storage

<i>Date</i>	<i>MC/%</i>	<i>Normal seedlings/%</i>	<i>Abnormal seedl.%</i>	<i>Empty seeds/%</i>	<i>Fresh seeds/%</i>	<i>Insect attacked seeds/%</i>	<i>Other/%</i>	<i>Days to 50% germ.</i>

Evaluation of storability

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12. Comments

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