



PHILIPPINES RECOGNITION AS A PEST FREE AREA FOR MANGO PULP WEEVIL AND MANGO SEED WEEVIL

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STATUS OF THE PHILIPPINE MANGO INDUSTRY

- Mango is the 3rd most important fruit crop of the country based on export volume and value next to banana and pineapple.
- In 2013, Philippines has an existing production area of 187,838 hectares that has produced a volume of 816,199 MT (BAS).
- Philippines' exported volume in 2013 was 5,076 MT for fresh mango and for dried about 11,429 MT;
- For fresh mango top major export destinations include Japan (34.4% of total volume), Hongkong (27.4%) and South Korea (25.3%). For dried , top export market include USA, Japan, Hong Kong, Canada and China.



THREAT



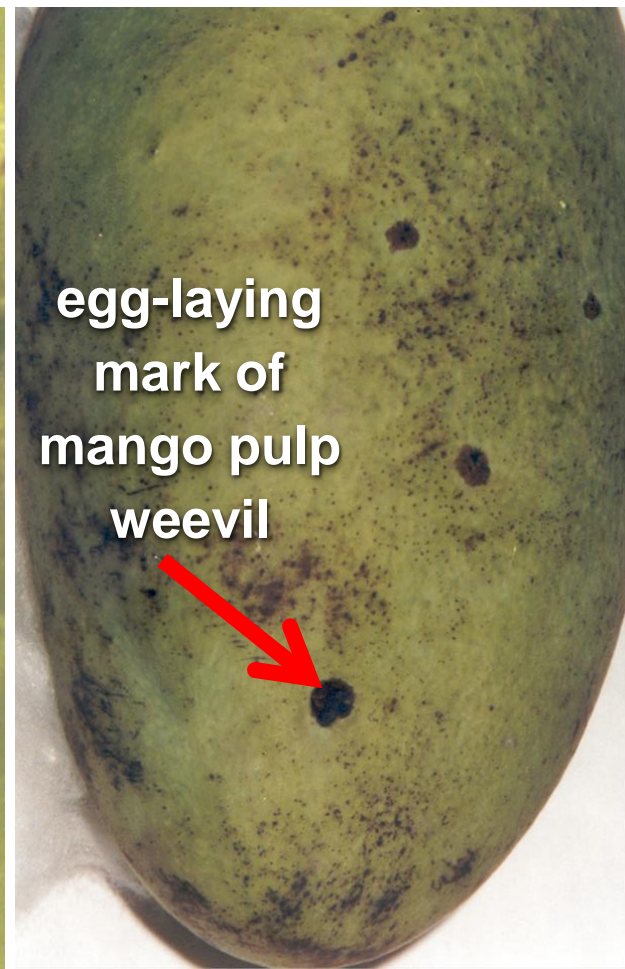
THREATS RELATED TO MANGO EXPORT:

- Irregularity of production/supplies
- Short shelf-life
- Strict quarantine requirements imposed by importing countries particularly with regards to insect pests:
 - Fruit flies – VHT, EHWD, Irradiation
 - Mango Pulp Weevil (MPW, *Sternochetus frigidus* Fabr.)
 - Mango Seed Weevil (MSW, *Sternochetus mangiferae* Fabr.)

WHY ARE IMPORTING COUNTRIES SO CONCERNED WITH MPW?

- Distribution of the pest is still confined in Asia and not yet present in other parts of the world (North, South, Central Americas, Canada and Europe)
- Damage to fruits is not visible, hence, the pest could be carried/transfered from infested to non-infested areas.
- Damage is high and no appropriate control measure





MANGO PULP WEEVIL ENTRY INTO THE FRUIT

EGGS ARE LAID IN IMMATURE FRUITS FROM WHICH LARVAE OVERLAP AND TUNNEL THROUGH THE FLESH FORMING PUPAL CHAMBERS ADJACENT TO THE SEED.



Adult weevils mate (a) and lay eggs (b) on the fruits when it reached 3.5 cm (photo from video record in night shot mode)



1ST INSTAR



4TH INSTAR



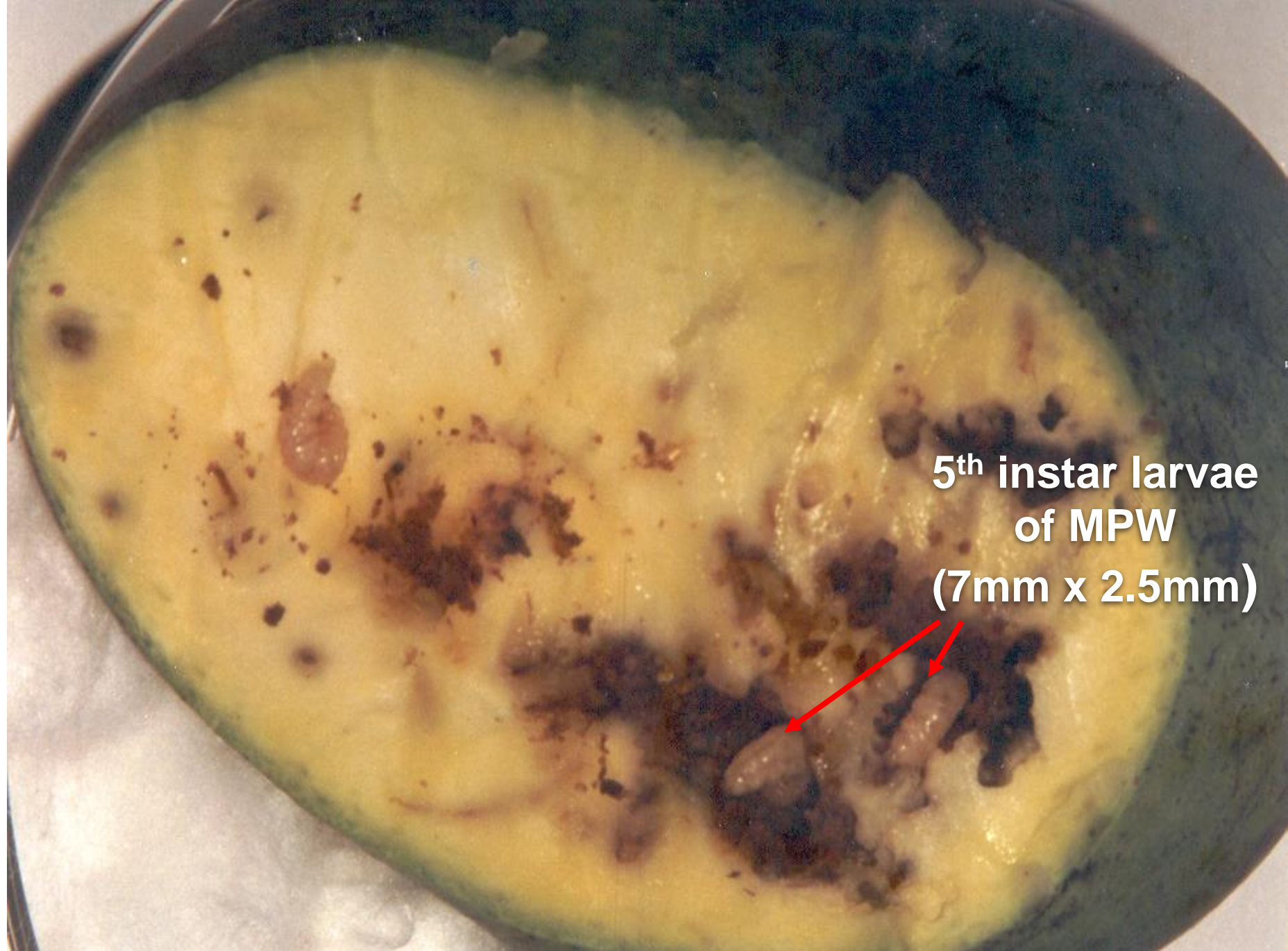
**Prepupa
(12mm x 3mm)**



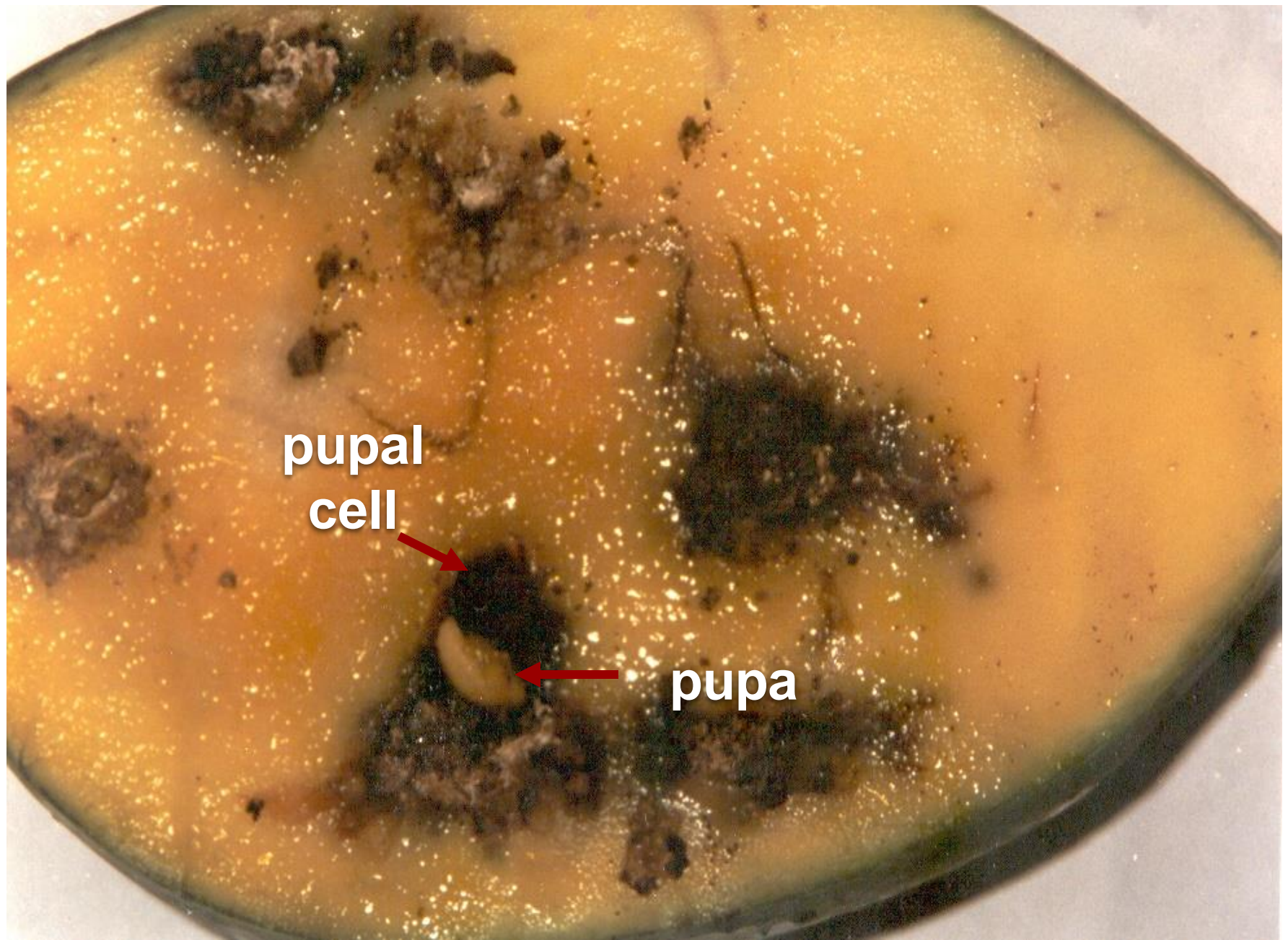
**Pupa
(8mm x 4mm)**

LARVAE OF MANGO PULP WEEVIL

THE LARVA CONTINUOUS TO TUNNEL THROUGH THE FLESH AND DISCOLOR THE FRUIT.



**5th instar larvae
of MPW
(7mm x 2.5mm)**





(5.5 – 6.0 mm)

ADULT MANGO PULP WEEVIL

EGG TO ADULT: 32 DAYS
MPW ADULT LIFE SPAN > 400 DAYS

NATURE OF DAMAGE

FRUIT SHOWING NO VISIBLE SYMPTOM OF PULP WEEVIL DAMAGE



UPON DISSECTION, LARVAE AND OTHER STAGES OF DEVELOPMENT ARE PRESENT IN THE FLESH FOR MPW AND IN THE SEEDS FOR MSW.



HOW DO WE ADDRESS THESE MANGO
EXPORT THREATS SPECIFICALLY THE
QUARANTINE PEST?

ENHANCING THE EXPORT COMPETITIVENESS OF
FRESH PHILIPPINE SUPER MANGO

ENHANCING THE EXPORT COMPETITIVENESS OF FRESH PHILIPPINE SUPER MANGO PROGRAM COMPONENTS:

- **Component 1:** Establishment of an effective irradiation dose for Philippine mango pests (fruit fly and MPW) **P 9,424,160**
- **Component 2:** Nationwide survey for the presence of MPW and MSW producing areas in the Philippines other than Palawan **P 55,000,000**
- **Component 3:** Upgrading the Pilot scale gamma irradiation facility at PNRI **P 23,808,562.90**
- **Component 4:** Strengthening of Plant Quarantine on the IPPC related concerns on the use of irradiation technology as a phytosanitary measure **P 4,705,972**

Research and Development

Survey/Monitoring

Marketing and Commercialization

Regulatory

STUDIES TO DETECT AND MONITOR MSW/MPW IN THE COUNTRY

Year	Place	Agency	No. of fruits collected/ dissected	Result
1984	Eastern Visayas	DA-RCPC	2,200	No. MPW/MSW
1987	Philippines (33 provinces)	FAO-DA	82,500	No MSW but a relative sp., MPW was found in Palawan. DA Adm. No. 20
1993	Guimaras	DA-BPI, USDA	6,141	No MSW/MPW. Area freedom certification was given. Export to US.
1999	Guimaras	DA-BPI, Aus Aid	48, 600	No MSW/MPW. Area freedom certification. Export to Australia.
2006	Davao del Sur	AusAid/ ACIAR	180,968	No MPW/MSW. Area freedom certification. Export to Australia
2007	Sarangani	AusAid/ ACIAR	84,800	PH did not pursue recognition
2007	Samal Island	AusAid/ ACIAR	16,120	No MPW/MSW. Area freedom certification. Export to Australia

IN 2006-2009 BPI-USDA CONDUCTED A NATIONWIDE DETECTION SURVEY FOR MPW AND MSW FUNDED BY USDA FOOD FOR PROGRESS.

OBJECTIVES:

- To determine the presence/absence of MPW and MSW in different mango growing provinces of the country.
- To provide greater market access for Philippine mangoes through area freedom certification.
- To increase mango export especially to countries requiring area freedom certification from the pests.
- To formulate quarantine plans and programs to secure the areas declared as free from the weevils.
- To improve socio-economic lives of mango growers through income derived from sales of mango.



Meeting with stakeholders



Training of survey enumerators



Randomization of the 5% sample trees using the grid system



Marking of trees in the field



Fruit collection



Fruit dissection



Canopy beating



Bark examination

LUZON

☐ Luzon detection survey (Sep. 06 to Jun. 07)

- Covered 7 regions (CAR, Reg. 1, Reg. 2, Reg. 3, Reg. 4A, Reg. 4B and Reg. 5)
- Actual trees examined – 120,650 (109.37% accomplishment)
- Actual fruits dissected – 1,335,523 (100.89% accomplishment)

☐ Luzon low monitoring survey (Jan. to Jun. 08)

- Covered 5 regions (CAR, Reg. 1, Reg. 2, Reg. 3 and Reg. 4A)
- Actual trees examined – 3,001 (101.21% accomplishment)
- Actual fruits dissected – 35,952 (101.05% accomplishment)

VISAYAS

□ **Visayas detection survey (Oct. 07 to Jul. 08)**

- Covered 3 regions (Reg. 6, Reg. 7, Reg. 8)
- Actual trees examined – 33,694 (96.84% accomplishment)
- Actual fruits dissected – 408,267 (97.78% accomplishment)

□ **Visayas low monitoring survey (Jan. to Jun. 09)**

- Covered 3 regions (Reg. 6, Reg. 7, Reg. 8)
- Actual trees examined – 19,864 (104.34% accomplishment)
- Actual fruits dissected – 238,257 (104.30% accomplishment)

MINDANAO

□ **Mindanao detection survey (Nov. 08 to Aug. 09)**

- Covered 6 regions (Reg. 9, Reg. 10, Reg. 11, Reg. 12, CARAGA and ARMM)
- Actual trees examined – 79,962 (107.67% accomplishment)
- Actual fruits dissected – 945,185 (106.05% accomplishment)

□ **Low Monitoring Survey for Luzon, Visayas and Mindanao (March to August 2010)**

- Covered 16 regions (Reg. 1 to 12, CARAGA, ARMM & CAR))
- Actual trees examined – 99,101 (92.61% accomplishment)
- Actual fruits dissected – 1,188,296 (92.53% accomplishment)

SURVEY RESULT

Of the surveys conducted in Luzon, Visayas and Mindanao, **not a single specimen (egg, larva, pupa and adult) of MPW (except Palawan) and MSW was found**, proving the absence of these pests in our country.

DA AC NO. 06 SERIES OF 2014

Declaring the whole Philippines as
Area Free from Mango Seed Weevil
(MSW) *Sternochetus mangiferae* Fabr.
And Except for Palawan, Area Free
From Mango Pulp Weevil (MPW)
Sternochetus frigidus Fabr. and
Prohibiting Importation from
Countries where Pests Exist

REQUEST FOR PFA RECOGNITION

- February 8, 2010 – USDA
- BPI submitted the final report of the survey
- requested for area freedom certification declaring the Philippines as area free from MPW (except Palawan) and MSW.
- July 15, 2013 - DAFF
- BPI made the request for recognition
- BPI submitted the detection survey result and data
- October 21, 2014
- BPI informed Australia that USDA issued the final rule recognizing the Philippines except Palawan as an area free from MPW and MSW

RECOGNITION OF THE PHILIPPINES AS A PEST FREE AREA

OCTOBER 1, 2014 – USDA ISSUED THE FINAL
RULE DECLARING THE PHILIPPINES AS AREA FREE
FROM MPW (EXCEPT PALAWAN) AND MSW



DECEMBER 18, 2015 - DAFF RECOGNIZED THE
WHOLE PHILIPPINES, EXCEPT PALAWAN, AS
MPW AND THE WHOLE PHILIPPINES AS MSW
FREE AREA.



Australian Government

**Department of Agriculture,
Fisheries and Forestry**

IMPACT AND SIGNIFICANCE
OF THIS RECOGNITION?

WITH THIS RECOGNITION:

- Expansion of areas to source mangoes for export from different parts of the Philippines (except Palawan)
- Greater market access for Philippine mangoes to trading partners that would also require sourcing mangoes from PFA
- Export mangoes whole year round

IT IS IMPORTANT TO CONTAIN THIS PEST AND STRENGTHEN THE PHYTOSANITARY MEASURES IN PALAWAN.

The National Plant Quarantine Services Division is doing its best to ensure that **movement of mango fruits, plants and plant parts from Palawan to other areas in the Philippines is strictly PROHIBITED** to prevent the spread of Mango Pulp Weevil (Administrative Order No. 20, Series of 1987).

LOW MONITORING SURVEY (LMS)

- LMS for MPW is undertaken all year round (on and off fruiting season)
- LMS is a requirement to provide information to support the maintenance of pest freedom status of the Philippines except Palawan

HOW CAN WE HELP IN PROTECTING THE PHILIPPINE MANGO INDUSTRY?

Strict implementation of Administrative Order No. 20, Series of 1987 and DA ADMINISTRATIVE CIRCULAR No. 06 Series of 2014.

Report illegal transport or trade of mango fruits from Palawan to other areas of the Philippines.

HELP IN PROTECTING OUR PHILIPPINE
MANGO INDUSTRY!

THANK YOU FOR LISTENING!