

# A Feasibility Study of Setting up Non-GM Planting Zones in Hong Kong



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Organisers:



綠田園基金  
PRODUCE GREEN FOUNDATION

Supported by:



Hok Tau Village

Sze Tau Leng Village

San Uk Tsai Village

Fung Yuen Village

# **A Feasibility Study of Setting up Non-GM Planting Zones in Hong Kong**

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## **Editors**

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**Cover photo: Non-GM papaya seedlings, Kadoorie Centre, Shek Kong**

## Executive Summary

In the light of the prevalence of genetically modified (GM) papaya in Hong Kong, the HKSAR government introduced an exemption for all varieties of GM papaya from the application of Section 5 of the Genetically Modified Organisms (Control of Release) Ordinance, Cap. 607, and its subsidiary legislation, the Genetically Modified Organisms (Documentation for Import and Export) Regulation on 23 June 2012. This exemption has stirred up huge controversy among local organic farmers, environmental groups and the public who share concerns about its possible adverse impacts on food safety, organic agriculture and genetic pollution in the local environment.

Subsequently, Kadoorie Farm and Botanic Garden (KFBG), the O-farm, Produce Green Foundation and the Environmental Association (formerly Tai Po Environmental Association) jointly initiated a 'NO GMO' participatory action research project to investigate the feasibility of setting up GMO-free planting zones in Hong Kong. The project has engaged near 100 papaya growers at four villages in the New Territories (Hok Tau, Sze Tau Leng, San Uk Tsai and Fung Yuen). Over 1,000 papaya plants of unknown GM status were replaced with non-GM papaya provided by the organizers. The overall percentage of GM-positive papaya samples in the four villages was reduced sharply from 69.1% to 13.9% in November 2012 after the project had run for one year.

In contrast to the government's opinion that *'the widespread and scattered presence of home-grown papayas in the territory was considered as impractical and highly undesirable for the authority to undertake enforcement against the maintenance of the released GM papayas'* (AFCD, 2011), findings of the NO GMO project indicated that:

1. The majority of papaya growers (>60%) are willing to act collaboratively to clear sources of potential GMO contamination;
2. The low-cost '1: 1 Replacement' and 'Purchase at Cost' schemes are widely accepted by papaya growers and can effectively engage community participation in removing the widespread and scattered home-grown and farm-grown papaya of unknown GM status;
3. The progressive replacement of papaya plants of unknown GM status with non-GM papaya seedlings is effective in controlling and lowering the spread of GMOs in the environment;
4. The replacement of papaya plants of unknown GM status with non-GM papaya can reduce the risk of potential GM contamination in papaya production; and
5. A protocol for production of non-GM papaya seedling is established in this project.

The exemption of GM-papaya from the terms of the ordinance is to be reviewed by mid-2015. To facilitate the removal of GM papaya from the list of exemptions to the ordinance, we recommend that the government should make reference to the NO GMO project in developing a programme as soon as possible to systematically remove GM papaya in Hong Kong.

## 1. Background

The Genetically Modified Organisms (Control of Release) Ordinance, Cap. 607 (the ordinance), and its subsidiary legislation, the Genetically Modified Organisms (Documentation for Import and Export) Regulation (Regulation), were enacted on 1 March 2011. The objectives of the ordinance are to give effect to the Cartagena Protocol on Biosafety of the Convention on Biological Diversity, and to control the release into the environment and the import and export of Genetically Modified Organisms (GMOs).

In November 2011, the Environmental Protection Department proposed the exemption of GM papaya from the application of Sections 5 and 7 of the ordinance. Exemption for all varieties of GM papaya from the application of Section 5 of the ordinance, and two commercial varieties of GM papaya (GM papaya with the unique identifier code of CUH-CP551-8 (viz. Hawaii Rainbow) and GM papaya with the transformation event code of Huanong 1) from Section 7 of the ordinance commenced on 23 June 2012. Prior approval is still required from the Director of Agriculture, Fisheries and Conservation Department (AFCD) for the import for environmental release of unexempted GM papayas, including newly developed GM varieties.

The justifications for exemption include:

*‘(The Ordinance) aims to protect local biological diversity from possible adverse impacts arising from the transboundary movement of GMOs intended for release into the environment’* (Para 2, EP CR 9/150/26). *‘...the food safety aspect of GM food has to be dealt with separately...’* (Para 4, Annex B, EP CR 9/150/26). The possible adverse impacts to organic agriculture are regarded as *‘outside the ambit of the Ordinance’* (Item 8, Annex B, Discussion Paper of Panel on Environmental Affairs dated 26 March 2012) and thus not taken into account.

According to the risk assessment conducted by AFCD *‘to assess the possible adverse effect of GM papaya on conservation and sustainable use of biological diversity in the local environment’* (Para 6, EP CR 9/150/26), it was concluded that exemption of GM papaya under the Ordinance is acceptable, *‘mainly because papaya is an exotic species, and that it does not have any close relatives in Hong Kong, making it unlikely for the release of GM papaya to the environment to affect the local biodiversity’* (Para 6, EP CR 9/150/26). *‘The risk assessment was endorsed by the Expert Group...the Secretary is satisfied that the possible adverse biosafety effect that may result from the exemption is acceptable’* (Para 8, EP CR 9/150/26).

*‘The Secretary...reiterated the Government’s intention to exempt GM papaya from the control of the Ordinance, particularly in the light of the prevalence of GM papaya in Hong Kong... during a debate, a Member recommended that GM Papaya shall be exempted as soon as possible so as to avoid affecting members of the public who are growing papayas as a hobby and could not*

*possibly distinguish whether it is a GM papaya*’ (Para 7, EP CR 9/150/26) and ‘*given the highly technical nature of the matter* (the requirement of submitting an application to AFCD with risk assessment and application fee for approval), *the process would cause considerable frustration to the person who is simply growing papaya as a hobby*’ (Para 17 of Discussion Paper of Panel on Environmental Affairs dated 26 March 2012).

The exemption of GM papaya has stirred up huge controversy among local organic farmers, environmental groups and the public concerned about its possible adverse impacts on food safety, organic agriculture and genetic pollution in the local environment. Friends of Organic Farmers Society Limited and the 支持香港無基改種植聯盟 are two alliances established to campaign against the exemption. The dispute was widely covered by local news media, and involved the following key points:

1. The risk assessment and the decision making process for the exemption of GM papaya had taken only a relatively narrow focus on the possible effect on ‘the local biodiversity’, rather than ‘the local environment’. There was no definition of the ‘acceptability of the risk to the local environment’ provided in the assessment of the acceptability of GMOs intended for release into the environment.
2. The exemption legalises the release of GM papaya into the local environment. The potential of genetic contamination of non-GM papayas by GM papayas due to cross-pollination deprives citizens of the choice of growing non-GM papayas and jeopardises the local organic growers’ right to cultivate papaya.
3. The government’s intention to exempt GM papaya from the control of the ordinance was ‘*due to the prevalence of GM papaya growing in the local environment*’ rather than addressing any application to release GM papaya into the environment. On the contrary, there was clear pressure from local organic farmers, environmental groups and their supporters (including consumers and hobby farmers) urging for control on the release of GM papaya to the environment.
4. Over 30% of imported papaya fruits from the local markets and about 40% of the home-grown/locally produced papayas were found to be of GM stock (2011, AFCD). In the absence of commercial GM papaya production and a GM food labelling system in Hong Kong, the prevalence of GM papayas in the local environment is likely a cumulative result of unintentional releases of GMOs through planting of the seeds of GM papayas that were imported as food and/or papayas that were contaminated by GM papayas due to cross-pollination.

A NO GMO project was initiated by Kadoorie Farm and Botanic Garden (KFBG), the O-farm, Produce Green Foundation and the Environmental Association (formerly Tai Po Environmental



Association) in late 2011. In contrast to the government's opinion that '*the widespread and scattered presence of home-grown papayas in the territory was considered as impractical and highly undesirable for the authority to undertake enforcement against the maintenance of the released GM papayas*' (AFCD, 2011), organisers of the NO GMO project consider the situation an important opportunity for public education and community engagement to raise awareness of the importance of biosafety and the possible impact of uncontrolled release of GMOs into the environment.

## **2. Project Introduction**

### **2.1 Objectives**

NO GMO is a three-year community participatory action research project investigating the feasibility of setting up non-GMO planting zones in Hong Kong. Focusing on papaya, the project also aims to develop recommendations for the government to review the exemption of GM papaya when due in 2015. Core objectives of the project include:

1. Assessing the willingness of home-growers, hobby farmers and production farmers in acting collaboratively to clear sources of potential GMO-contamination;
2. Assessing effectiveness of reducing the risk of GM-contamination of papaya by the field replacement of papaya plants of unknown GM status with non-GM stock; and
3. Developing a protocol for non-GMO papaya production.

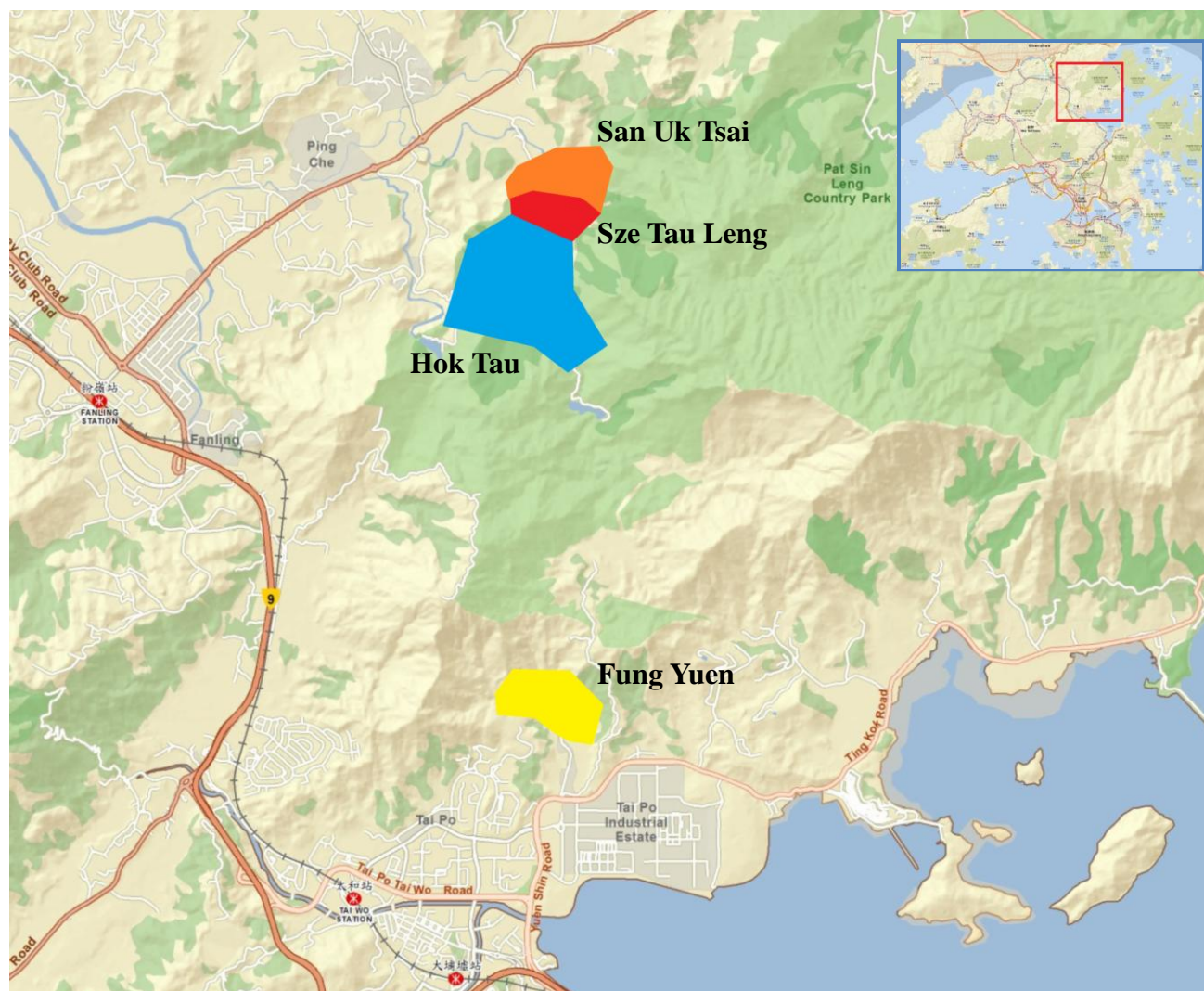
### **2.2 Selection of Project Sites**

The following criteria were taken into account in selection of project sites:

1. The organisers have a solid community network to engage active participation of local communities;
2. The chosen site should be relatively 'protected' from possible contamination by GM papayas grown outside of the project site boundary; and
3. The chosen site should have widespread and scattered papayas that could be home-grown, hobby-farming and/or agricultural production.

Based on these criteria, four villages, namely Hok Tau, Sze Tau Leng, San Uk Tsai and Fung Yuen were identified as project sites. Support from New Territories Heung Yee Kuk (NTHYK) and the village heads was sought to enhance community engagement.

Map 1: Location map of project sites



### 3. Methodology

#### 3.1 Monitoring tools

##### Baseline Study

Upon confirmation of project sites, a baseline study was conducted from August 2011 to January 2012 to gather key information about the status of papaya growing in the four pilot zones. The study included mapping the distribution of papaya plants and assessing the spread of GM papaya in the four villages.

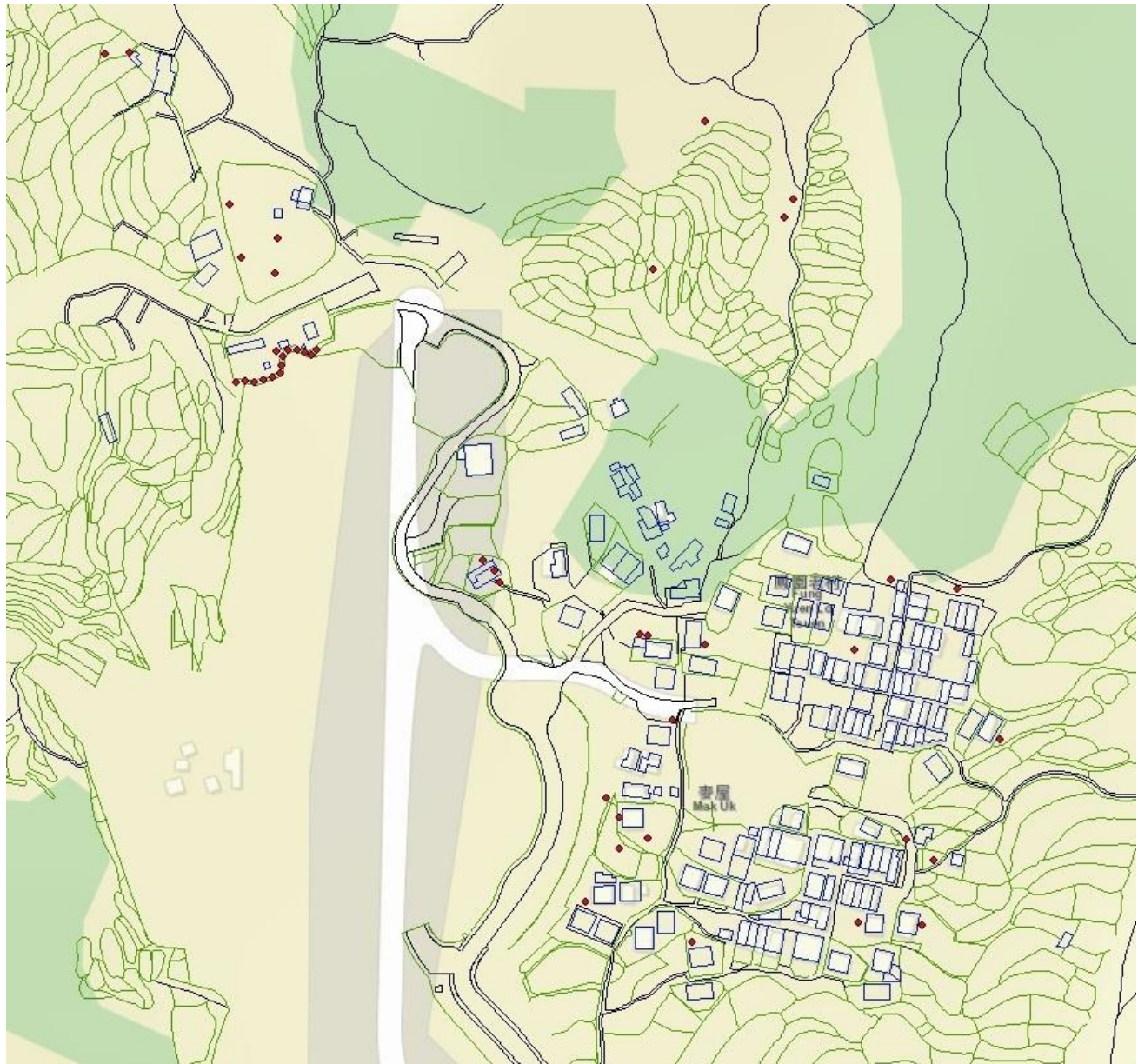
##### 1. Mapping papaya plant distribution

The mapping exercise was conducted jointly with local partners familiar with the environment of their respective villages. In the first stage, the location and number of papaya plants observed in a walk along paths and main roads in each village were recorded on a paper map. In the second stage, more detailed counting and mapping of papaya plants was undertaken, with permission from the



owners, in fields and household backyards in the villages. The locations of papaya plants were recorded and mapped.

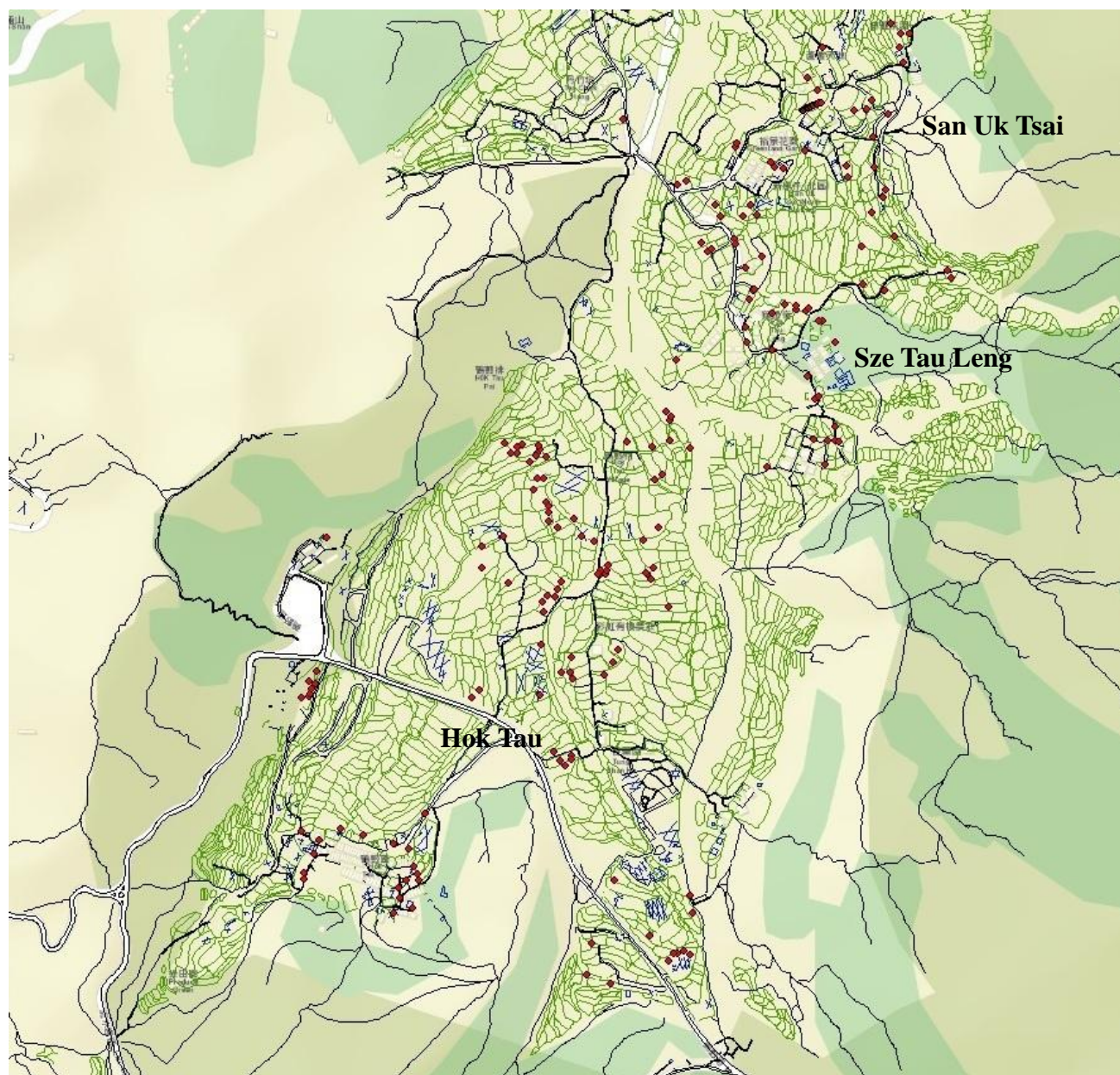
Map 2: Spread of papaya plants at Fung Yuen in December 2011



● Cluster of papaya plants



Map 3: Spread of papaya plants at Hok Tau Village, San Uk Tsai Village and Sze Tau Leng Village in December 2011



● Cluster of papaya plants

## 2. Assessing the spread of GM papaya in the four villages

Random samples of 97 papaya plants were collected from the four villages for laboratory testing of their GM status. The frequency of occurrence of GMOs in the samples indicated the spread of GM papaya in the four villages before replacement of papaya plants proceeded.

The exercise will be repeated annually to monitor the changing occurrence of GM papaya in the four project sites over time. The first such assessment was conducted in November 2012.

### Sampling

All recorded papaya plants at the project sites were given a number. A computer program was used to generate a random list of these identification numbers, and then the researcher went to the field to collect samples from the randomly selected plants.

The number of samples to be taken from each village was decided on a pro rata basis with reference to the total number of papaya plants in each village. The quota for total number of samples collected from the four villages was set as 100.

Fruit flesh and its seed were the preferred tissues for sampling. A leaf sample was collected if fruit was not available on the selected papaya plant.

If the owner of the selected papaya plant refused to permit collection of a tissue sample, or the owner could not be reached, the researcher went down to the next plant number on the randomly generated list.

### Laboratory testing of the presence of GMOs in papaya samples

Samples collected were sent to a registered laboratory for GMO qualitative testing to assess the presence of GMO. Both fruit flesh and leaf samples were subjected to the same test. Should any fruit flesh sample be assessed as negative for the presence of GMO, the seed which was collected with the flesh sample was subjected to the same test.

A negative result indicates the papaya plant is not genetically modified, while a positive result indicates the opposite.

For samples with the fruit flesh tissue testing negative but the seed tissue testing positive, occurrence of genetic contamination from a separate GM papaya plant is indicated.

## **3.2 Preparation of non-GM papaya seedlings**

### Selection of variety

Five varieties of non-GM papaya seeds were sourced from a Taiwan-based supplier of seed named 'Known-you' (農友). The variety named 'Red Lady' (紅妃) was chosen for use in this project because its yield is better and it is more suited to the local climate than other varieties. Only one variety of non-GM papaya was chosen for the project, to avoid possible confusion.

### Preparation of non-GM papaya seedlings

The seed supplier provided certifying documentation to guarantee the non-GM status of the seeds purchased for use in this project.

Papaya seedlings were propagated using the purchased seeds in Hong Kong. Further laboratory

testing, of one in 25 seedlings (combined as a single sample), was conducted to reconfirm the non-GM status of the papaya seedlings before distribution, using the same laboratory test as mentioned in 3.1.

Seed propagation was confined to two nurseries located at the O-farm and the University of Hong Kong Kadoorie Centre. Two rounds of seedling cultivation were arranged, in summer and winter of each year. Seed propagation and seedling cultivation were undertaken in accordance with organic practice.

### **3.3 Community Engagement**

#### Scope

The scope of the NO GMO project is confined to the villages of Hok Tau, Sze Tau Leng, San Uk Tsai and Fung Yuen. Residents and farmers operating within the boundaries of the villages were entitled to join the project.

#### Invitation and orientation

Project banners were put up at village entrances and project information was posted on notice boards at each of the four villages. With assistance from the local partner organisations and village heads, visits to villagers and farmers were arranged from December 2011 to January 2012 to invite participation.

#### Community participation

To join the NO GMO project, villagers and farmers of the four identified villages must commit to:

1. Not growing papaya other than the non-GM papaya seedlings provided by the project organizer; and
2. Agree to supply papaya tissue samples annually for laboratory testing in the monitoring programme.

Participation was arranged through the following schemes:

#### **1. 1:1 Replacement Scheme**

Papaya-growers already operating at the time when the baseline survey was conducted were eligible to join this scheme. The applicant had to commit to removing all of his/her existing papaya plants of unknown GM status. In return, the project organiser provided the applicant with an equal number of non-GM papaya seedlings. If the seedlings died within the project period, the applicant was entitled to claim a one-off replacement.

Should the applicant wish to obtain more seedling than their existing number of papaya plants, they could do so through the Purchase at Cost Scheme.



## 2. Purchase at Cost Scheme

This scheme was provided to all villagers and farmers of the four villages, including those not growing papaya at the time the baseline survey was conducted. Non-GM papaya seedlings were supplied at cost to applicants.

Enrollment to the schemes and the papaya seedling orders were confirmed prior to the seedling propagation season for the planning of seedling production.

### Awareness raising

On 4 March 2012, the organisers held a press briefing at the Farmers' Market @ Central (No.7 Star Ferry Pier, Hong Kong) to draw media attention to this project.

In order to raise wider public awareness of the issue of controlling release of GMO to the environment, a series of publicity materials including posters and leaflets was published and widely distributed. A project Facebook page (<http://www.facebook.com/NoGMPapaya>) and website (<http://gmofreepapaya.blogspot.hk>) were launched in March 2012 to provide up-to-date news about the project.

Table 1: A Summary of NO GMO Project Timeline

Timeline	Preparation & Publicity	Community Engagement	Monitoring/Laboratory Test
2011			
July	Project sites identified	Partnership established	Baseline Study (mapping)
Aug	Non-GM papaya seed sourced		
Sep	1 <sup>st</sup> non-GM papaya seedling propagation		
Oct			
Nov			
Dec			
2012			
Jan	Press briefing session and other publicity	Recruitment of participants	Baseline Study (sample collection)
Feb		1 <sup>st</sup> non-GM papaya seedling distribution	Testing seedling samples
Mar			Review findings of Baseline Study
Apr			
May			
Jun			
July	Confirmation of seedling orders		
Aug	2 <sup>nd</sup> non-GM papaya seedling propagation		Y1 Assessment (mapping)
Sep			Testing seedling samples
Oct	3 <sup>rd</sup> non-GM papaya seedling propagation	Y1 Assessment (sample collection)	
Nov		Confirmation of seedling orders	
Dec			
2013			
Jan	3 <sup>rd</sup> non-GM papaya seedling propagation		Review findings of Y1 Assessment
Feb			
Mar			
Apr			
May		3 <sup>rd</sup> non-GM papaya seedling distribution	
Jun			
July			
Aug			
Sep	4 <sup>th</sup> non-GM papaya seedling propagation		Testing seedling samples
Oct			
Nov			
Dec			
Jan	Non-GM papaya seedling propagation	4 <sup>th</sup> non-GM papaya seedling distribution	Y2 Assessment (mapping)
Feb			
Mar			
Apr			
May	Confirmation of seedling orders	Y2 Assessment (sample collection)	
Jun			
July			
Aug			
Sep	6 <sup>th</sup> non-GM papaya seedling propagation		Y3 Assessment (mapping)
Oct			
Nov			
Dec			
Jan	5 <sup>th</sup> non-GM papaya seedling propagation	5 <sup>th</sup> non-GM papaya seedling distribution	
Feb			
Mar			
Apr			
May		Confirmation of seedling orders	
Jun			
July			
Aug			
Sep	6 <sup>th</sup> non-GM papaya seedling propagation		Y3 Assessment (mapping)
Oct			
Nov			
Dec			
Jan	Non-GM papaya seedling propagation	6 <sup>th</sup> non-GM papaya seedling distribution	Testing seedling samples
Feb			
Mar			
Apr			
May	Confirmation of seedling orders	Y3 Assessment (sample collection)	
Jun			
July			
Aug			
Sep	6 <sup>th</sup> non-GM papaya seedling propagation		Y3 Assessment (mapping)
Oct			
Nov			
Dec			

## 4. Findings

This section documents the project findings over the period July 2011 to November 2013.

### 4.1 Rates of participation

Table 2 and Table 3 show the rates of community participation in NO GMO over the project period. In November 2011, there were totally 927 papaya plants of unknown GM status grown at the four villages, owned by 88 different growers. Among these, 65.9% agreed to join the project and to replace totally 635 existing papaya plants of unknown GM status with non-GM papaya seedlings supplied by the project organisers. The overall replacement rate was 68.5%. In March 2013, there was an overall increase in the number of papaya growers joining the project from 58 to 73. The overall percentage of non-GM papaya plants in the project sites was increased to 81.6%.

The findings suggest that the majority of papaya growers (>60%) are committed to acting collaboratively to clear sources of potential GMO-contamination by replacing their papaya plants of unknown GM-status with non-GM papaya seedlings.

Table 2: Community participation to the NO GMO project in November 2011 (combined data of the four project villages)

Papaya growers in the four project villages	No. of papaya plants	No. of papaya plants (%)	No. of units <sup>1</sup>	No. of units (%)
Agreed to join	635	68.5	58	65.9
Refused to join	26	2.8	6	6.8
Could not be reached	86	9.3	15	17.1
Undecided	180	19.4	9	10.2
Total	927	100	88	100

<sup>1</sup> The 'Number of Units' was counted in terms of the number of households and farms that own the papaya plants

Table 3: Community participation in the NO GMO project in March 2013 (combined data of the four project villages)

Papaya growers in the four project villages	No. of papaya plants	No. of papaya plants (%)	No. of units <sup>1</sup>	No. of units (%)
Agreed to join	959	81.6	73	61.9
Refused to join	112	9.5	13	11
Could not be reached	75	6.4	25	21.2
Undecided	29	2.5	7	5.9
Total	1175	100	118	100

<sup>1</sup> The 'Number of Units' was counted in terms of the number of households and farms that own the papaya plants



## 4.2 Prevalence of GM-papaya

Table 4 shows the laboratory test result of samples collected from the four project sites for testing the presence of GMO. The overall percentage of GM-positive samples in the four villages was reduced sharply from 69.1% to 13.9% in November 2012 after the project had been running for one year. Consistently, the trend for a falling percentage of GM-positive samples was observed in each of the four project sites (Table 5). The level of reduction was particularly significant in San Uk Tsai Village and Sze Lau Leng Village.

The findings suggested that replacement of papaya plants of unknown GM status with non-GM papaya seedlings can effectively reduce the prevalence of GM papaya.

Table 4: Test results for the presence of GMO in papaya samples (combined data)

Time of sample collection	January 2012		November 2012	
Total number of tested samples	97	100%	101	100%
Samples with positive result	67	69.1%	14	13.9%
Samples with negative result	30	30.9%	87	86.1%

Table 5: Test results for the presence of GMO in papaya samples collected from the four villages

	Time of sample collection			
	January 2012		November 2012	
Fung Yuen Village				
Total number of tested samples	12	100%	11	100%
Samples with positive result	5	41.7%	1	9.1%
Samples with negative result	7	58.3%	10	90.9%
Hok Tau Village				
Total number of tested samples	55	100%	57	100%
Samples with positive result	35	63.6%	6	10.5%
Samples with negative result	20	36.4%	51	89.5%
San Uk Tsai Village				
Total number of tested samples	10	100%	18	100%
Samples with positive result	9	90%	4	22.2%
Samples with negative result	1	10%	14	77.8%
Sze Tau Leng Village				
Total number of tested samples	20	100%	15	100%
Samples with positive result	18	90%	3	20%
Samples with negative result	2	10%	12	80%

### 4.3 GM-Contamination by Cross-Pollination

The presence of GM papaya plants in fields may pose a contamination risk to the surrounding non-GM papayas through cross-pollination. A reduction in the prevalence of GM-papaya in fields is expected to reduce the potential risk of GM-contamination.

In the laboratory testing of fruit samples, samples with the flesh tissue testing negative would have their seed tissue further tested for the presence of GM substance. Fruit samples with flesh tissue testing GM-negative but seed tissue testing GM-positive were indicative of genetic contamination from a separate GM-papaya plant. Findings in Table 6 show a lower GM contamination rate in November 2012 after the NO GMO project had been implemented for one year.

Table 6: Test results of seed tissue from samples in which the fruit flesh tissues were GM-negative

Time of sample collection	No. of fruit samples with flesh tissue being GM-negative	No. of fruit samples with flesh tissue being GM-negative but the seed tissue being GM-positive	Rate of fruit samples with flesh tissue GM-negative but seed tissue GM-positive
January 2012	20	1	5%
November 2012	16	0	0%

### 4.4 Limitations

Papaya sample collection: A minority of papaya growers could not be contacted (Tables 1 and 2). If a papaya sample was needed from them, project staff had to visit their homes on the sampling date to ask them for permission to collect samples. However, commonly nobody was at home and the staff had to skip to the next papaya target. As project participants were easier to contact and their papayas were more likely to be GM negative, the overall GM test result may be shifted towards negative.

### 4.5 Conclusions

The mid-term findings of the NO GMO project covering the period of July 2011 to November 2013 indicated that:

1. The majority of papaya-growers (>60%) are willing to act collaboratively to clear sources of potential GMO-contamination;
2. The low-cost '1:1 Replacement' and 'Purchase at Cost' schemes were widely accepted by papaya growers and can effectively engage community participation in removing the widespread and scattered home-grown and farm-grown papaya of unknown GM status;
3. The progressive replacement of papaya plants of unknown GM status with non-GM papaya seedlings is effective in controlling and lowering the spread of GMOs in the environment;
4. There is indication that the replacement of papaya plants of unknown GM status with non-GM papaya can reduce the risk of potential GM contamination in papaya production; and
5. A protocol for production of non-GM papaya seedlings has been established through this project.

## **5. Recommendations**

At the time of writing, the government has exempted GM papayas and GMO contained in live recombinant veterinary vaccines from the control of the Genetically Modified Organisms (Control of Release) Ordinance. GM papaya has aroused wide public concern and caused far-reaching impacts as it is related to a direct release of GMOs to the environment and papaya is a popular fruit widely consumed in Hong Kong.

The prevalence of GM papaya in Hong Kong is one of the issues that the government considered in exempting GM papaya from the control of the ordinance. The NO GMO project undertaken by KFBG, the O-farm, Produce Green Foundation and the Environmental Association has demonstrated that the situation is reversible and has established a practical protocol to engage community participation in removing the widespread and scattered home-grown and farm-grown papayas of unknown GM status.

The ordinance is critical in controlling the release of GMOs into the environment and the import and export of GMOs, which are important in terms of safeguarding biological diversity. Given the rapid development in GM-biotechnology and GMOs, community education and compliance with the ordinance are as important as enforcement of the ordinance in keeping the movement of GMOs under control. While the exemption of GM papaya from the ordinance is due to be reviewed by mid-2015, it is recommended that the government should make reference to the NO GMO project in developing a programme as soon as possible to systematically remove GM papaya in Hong Kong. The programme will lead to a win-win-win situation by raising public awareness of biosafety for conserving biological diversity to a new level, reversing the prevalence of GM papaya in the Hong Kong environment, and providing an instructive process for farmers, gardeners and the public to learn how to avoid unintentional release of GMOs into the environment. When such a programme is in place, the government can remove GM papaya from the list of exemptions to the ordinance.



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## Appendices

### Appendix 1: History of establishing GMO (Control of Release) Ordinance, Cap 607

Date	Event
10 Dec 2010	Commencement Notice of the ordinance was gazetted. 1 Mar 2011 appointed by the Secretary of Environment as the day on which the ordinance came into operation.
1 Mar 2011	The day on which the ordinance was enacted and start of a six-month transitional period.
31 Aug 2011	End of the transitional period.
23 Jun 2012	Exemption to all varieties of GM papaya from the application of section 5 of the ordinance.

### Appendix 2: Registration Form (Chinese)



#### 《正版木瓜》登記表格（2012年8月）

謝謝閣下支持《正版木瓜》計劃。請閣下填妥下列資料，以便工作人員與閣下聯絡。為了更有效向公眾推廣《正版木瓜》計劃，我們在網絡上建構了一個臉書(Facebook)專頁，以及一個博客(Blog)。只有在參加者同意的情况下（於表格右欄選擇「是」），我們才會將參加者的資料上載至以下兩個網址。所有資料，只會用於《正版木瓜》計劃。

臉書(Facebook): <http://www.facebook.com/NoGMPapaya>

博客(Blog): <http://gmofreepapaya.blogspot.com>

項目	請提供以下資料：	上載至《正版木瓜》的臉書(Facebook)及博客(Blog)？*
登記地址		是 / 否
地址性質	農場 / 住宅 / 社區園圃 / 其他*	是 / 否
參加者姓名	(先生 / 女士)*	是 / 否
聯絡電話		是 / 否
電郵		是 / 否
郵寄地址		是 / 否
現時登記地址內生長中的木瓜植株數目		是 / 否
種植《正版木瓜》苗的方式	閣下的《正版木瓜》苗將會以(有機方法 / 常規方法)*種植。	是 / 否
《正版木瓜》收成的用途	如果將來閣下培育的《正版木瓜》有收成，閣下會將該批果實(自用 / 出售 / 自用及出售)*。	是 / 否

\* 請選擇合適項目。

除了以地址內的木瓜植株換取有機木瓜苗外，閣下還希望訂購更多有機木瓜苗嗎？

☐ 是，請註明數量及品種：紅妃\_\_\_\_\_棵（\$15/棵） ☐ 否

謝謝閣下回覆，請將表格傳真(2483-7198)、電郵(sla@cfbg.org)或交回嘉道理農場暨植物園永續生活及農業部。如對計劃有任何疑問，請電 2483-7192 與嘉道理農場暨植物園永續農業主任曾尚然聯絡。

### Appendix 3: Memo to participants (Chinese)



## 參與「正版木瓜」 營造鶴藪為香港首個無基改木瓜種植區

參加者須知(2012 年 7 月更新)

歡迎閣下參加「正版木瓜」計劃！請細心閱讀下列有關本計劃的內容及時間表：

1. 「正版木瓜」計劃將會以一換一形式，以非基改木瓜苗取替參加者現有種植之木瓜植株，參加者須承諾以下兩點：
  - a. 移除原本之木瓜植株；以及
  - b. 在「正版木瓜」計劃期間，不能種植其他來源的木瓜。
2. 由「正版木瓜」計劃提供之「取替木瓜苗」，如在計劃期間因病害或其他損傷而死亡，大會會補贈一株無基改木瓜苗替代。
3. 本計劃將於區內每年隨機抽驗木瓜，以評估試點整體基改污染狀況，屆時或有需要向閣下索取一隻木瓜作樣本。大會將不會披露個別樣本的檢測結果。
4. 如參加者希望多種非基改木瓜，可以每株\$15 的價錢向大會訂購。唯「訂購的木瓜苗」在生長期間死亡，將不獲替代補贈。

如對計劃有任何疑問，請電 2483-7192 與嘉道理農場暨植物園永續農業主任曾尚然聯絡。

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#### 參加者報名資料（參加者存根）

1. 住戶姓名：\_\_\_\_\_
2. 需移除的原有木瓜植株/「取替木瓜苗」，數目：\_\_\_\_\_
3. 額外的「訂購的木瓜苗」數目：紅妃\_\_\_\_\_棵

感謝閣下支持！



#### Appendix 4: Project photos



Photo 1: Seedlings of non-GM papaya “Red Lady” in the nursery



Photo 2: Seedlings of non-GM papaya “Red Lady”





Photo 3: Removal of originally grown papayas with unknown GM status



Photo 4: Distribution of “Red Lady” to project participants





Photo 5: Planting of “Red Lady” by project participants



Photo 6: Planting of “Red Lady” by project volunteer





Photo 7: “Red Lady” growing at Hok Tau village



Photo 8: “Red Lady” growing at San Uk Tsai village



Photo 9: The project was launched in early March 2012