行政院及所屬各機關出國報告

（出國類別：參加國際會議）

APEC「連結農民至市場－農民組織之角色研討會」

服務機關：行政院農業委員會

出國人 職　　稱：簡任技正兼科長

姓　　名：詹德榮

出國地區：日本東京

出國期間：92 年 3 月 11 日至 15 日

報告日期：92 年 3 月 26 日

系統識別號:C09201240

公 務 出 國 報 告 提 要

頁數: 9　含附件: 是

報告名稱:

APEC「連結農民至市場－農民組織之角色研討會」

主辦機關:

行政院農業委員會

聯絡人／電話:

蔡慶雄／23126988

出國人員:

詹德榮　行政院農業委員會　輔導處　簡任技正兼科長

出國類別: 其他

出國地區: 日本

出國期間: 民國 92 年 03 月 11 日 -民國 92 年 03 月 15 日

報告日期: 民國 92 年 03 月 26 日

分類號/目: F4／農品產銷　F4／農品產銷

關鍵詞: APEC農業技術合作工作小組會議

內容摘要: 本次APEC農業技術合作工作小組（ATCWG）於本（二〇〇三）年三月十二日至十四日在東京舉開「連結農民至市場－農民組織之角色研討會」，主題包括(一)檢視農產運銷之多元化及待解決之問題；(二)農民生產團體及組織研討交換意見；(三)食品行銷通路之變遷與產銷組織之角色與觀點；(四)研討如何透過生產組織支持農村婦女及貧農。此次研討會希望針對協助輔導農民組織整合小農戶及產品進入市場，提出探討並歸納出輔導機制與作業程序，作爲APEC會員國之學習與改進之參考。

本文電子檔已上傳至出國報告資訊網

APEC「連結農民至市場－農民組織之角色研討會」

目　　次　　頁次

壹、緣起及目的

APEC 農業技術合作工作小組（ATCWG）於本（二〇〇三）年三月十二日至十四日在東京舉開「連結農民至市場－農民組織之角色研討會」，主題包括(一)檢視農產運銷之多元化及待解決之問題;(二)農民生產團體及組織研討交換意見；(三)食品行銷通路之變遷與產銷組織之角色與觀點；(四)研討如何透過生產組織支持農村婦女及貧農。

此次研討會希望針對下述重點提出交流探討，作為 APEC 會員國之學習與改進之參考。

1. 生鮮農產品之配銷體系（包括主要買者、市場角色與功能，交易法規與相關主管單位）及其地理與歷史背景。
2. 生鮮農產品配銷體系之演變（包括超級市場之角色與功能及批發市場與農產加工業者之重要性）。
3. 小（貧）農及農村婦女在行銷其農產品面臨之挑戰與競爭。
4. 生產者組織在農產品運銷之角色及其運作主軸。
5. 政府對於協助生產者組織、產品市場行銷及提昇其效率等政策與服務措施。

貳、行程及紀要（如附件一）

三月十一日（星期二） 台北到東京

三月十二日（星期三） 1.報到、開幕式（Dr. Mitsugi Kamiya, Workshop Morderator）

2.重點提示與演講（FAO 總部 Dr. Edward Seidler）

3.第一至三階段會員國代表報告（Country Paper Presentation）

4.專題報告

三月十三日（星期四） 現地訪視（Field Excursion）

1. 日本琦玉縣農協產銷設備與作業

2. Kawajima 鎮農產品直販店

三月十四日（星期五） 1.現地訪視檢討

2.第四階段會員國代表報告

3.評核與總結

三月十五日（星期六） 東京至台北

參、會議與研討

本次研討會共計有我國、中國大陸、日本、韓國、越南、泰國、馬來西亞、巴布亞新幾內亞、菲律賓等九個國家十一位代表出席，另外我國駐東京辦事處經濟組周立先生列席；會中邀請聯合國農糧組織（FAO）總部

之 Dr. Edward S. Seidler 專題演講「農民與直銷市場之優勢劣勢分析」；並由日本琦玉縣（Saitama Prefecture）之 Aiko Ka Kehata 女士專題報告「農村婦女行銷班成就」。會中有九個參加國代表分四個階段提出各國之專題報告，並分別由我國，菲律賓、新幾內亞、日本代表擔任主席主持各階段報告與研討。本次研討會除室內研討並赴琦玉縣農協參訪農村婦女行銷組織及農協直販店之實際運作狀況。

由於我國報告針對本次研討會主題提供具體經驗與措施，極獲 FAO Dr. Seidler 之重視與好評，極可作為其他開發中國家之參考（報告書資料如附件二）。由於出席之會員國除我國、日本、韓國之農民組織與運銷制度較先進，其餘國家在農民組織與市場結構及運作方面均較弱，因此提出甚多意見交流與探討。

肆、現地訪視研討

琦玉縣農協小型米食加工場與農產品直銷店

琦玉縣農協附設小型米食加工場，並由農協輔導 50 歲至 60 歲之農村婦女組成三班產銷班，每班 6 人，合計 18 人，3 班輪流進行米食加工，每人每週工作二天，每天工作 5 小時，每天上午六點至十一點工作，上午收工回家料理家務及準備午飯，因此不影響家庭作息；加工場一律使用當地生產之麥、米、紅豆等產品為加工原料，製作手工麵、紅豆包子、糕點等產品；該加工場設定年營運目標為六百八十萬日圓，而至 2002 年已突破

一千五百五十萬日圓；加工場至營運以來每年有盈餘，盈餘之分配其中 50 % 提撥農協，其餘提撥作為薪資；薪資之核計，於 2001 年（第一年）初期每人每天 1000 日圓，2002 年每人每天 2000 日圓，本（2003）年度每人每天可獲 3000 日圓，合計每人每月可收入 24,000 日圓；農村婦女除了可增加收入之外，主要是透過共同工作、活動，彼此增加接觸機會促進友誼交流，因此日本農協輔導婦女參與食品加工或產品分級、選別、包裝等活動，除了增加家庭收入，更可透過工作建立社區活絡與和諧。又所有加工品一律採用當地之米、麥、紅豆等原料，可提供當地農產品原料銷售出路。

琦玉縣農協直銷中心販售之產品其中 50% 由本地農民提供，另 50% 由直銷中心購入自其他農協，以求充實貨品品項滿足消費者選購需求，並可與其他地區農協交流產品，建立「地產地銷」及產品支援體系。

直銷中心所需土地由縣農協提供，硬體建築由政府補助 50% ，農協自籌 50% 經費。

直銷中心由農民供應展售之產品均由農民自行定價，直銷店收取 10 % 之場地設備使用及服務費；如果有殘貨則由農民自行攜回，因此農民通常控制進貨數量並隨時機動補貨，鮮有殘貨損耗情形發生。由於直銷可節省運輸成本，減少中間費用，因此能以低價格及高品質吸引消費者。據該直銷中心之統計，前往採購之消費者以來自 20 公里半徑區域內之居民為主。

農民自行將產品包裝好後決定售價，再運至直銷中心製作條碼，條碼

內容包括品項名、生產者名、價格等要素，因此產品可追蹤至供應之農民，對產品控管建立良好責任體制。直銷中心之設立對小農民生產產品之出路有極大助益；目前已有160位農協會員農民經認可，只要付許可費即可提供產品至直銷中心展售。

在農村勞動力缺乏之情況下，農村婦女扮演的角色更形重要，除了要料理日常瑣碎家務以外，更要協助從事農業之生產、採收、處理甚至銷售之工作：日本農村婦女所提供農村勞動力已達約40% ，由於婦女在先天條件上較具耐性與細心，如果加以組織並提供多元化教育或專業化訓練，將是不可忽視的人力資源；在農村勞動力缺乏及老化的情況下，農村勞力性別之分界線越來越淡化，因此應該要提高農村婦女的水準與地位；日本政府與琦玉縣農協對於農村婦女加以組織訓練，協助農產品之生產與行銷，透過互相鼓勵、學習，提昇工作效率；農協提供設備供農村婦女從事米食、美食、農特產等加工，加工後之產品則提供農協所設立之直販店銷售；因此，輔導農村婦女加工計畫不但可使農家增加收入，更可因產品之銷售與好評而享受成就感，又藉由共同工作可彼此協助建立友誼，促進家庭及社區之活絡和諧；在經濟功能方面可建立小規模生產產品之直銷通路；產地直銷是以強調其以價格合理、高品質、具地方特色之市場區隔吸引顧客，可有效解決小農戶產品銷售之困難，如再配合觀光休閒農業，更可擴大產品銷售之誘因與機會，創造更大商機。

日本是高物價的國家其農業所受 WTO 的衝擊遠較其他國家更大，外

國農產品大量進口分蝕市場已無法避免，日本農政單位及農協為確保其國內農產品市場競爭力，近年來全力輔導、協助生產者建立產品品牌與特色，提昇加工層次與水準，突顯其產品風味、特色與安全，創造市場區隔，俾與進口產品競爭；台灣的生鮮農產品主要仍以內銷市場導向為主，更要在消費者心中建立品牌、品質、衛生、安全的特色，增加消費者購買國產農產品之信心與意願，方能確保我國農產品市場，保障農家收益，農業得以永續經營。

為了整合生產、行銷、市場與農民組織為目標，日本及 FAO 專家亦提出建議，應以產品項目與地緣關係將生產者整合，使同類產品之生產規模、採收後作業及市場行銷能形成基礎之經濟規模，並充分運用人力及設備，穩定並確保產品品質與供應能力，才能提昇市場競爭力；反觀台灣目前不斷出現農民組織（合作社場）及產銷班相繼成立並各自為政，抵消了資源整合之力量，增加市場內部競爭與調節供貨之困擾，此實值得檢討。

伍、研討會總結

批發市場之設立與存在是不可缺的，即使其操作方式愈形多元化、現代化，但是對於生鮮農產品快速集中、均衡、分散及價格形成之基本功能是不變的；針對此次 APEC 研討會議之主體與內容，我國、日本等經驗可充分提供其他會議之開發中國家參考；在經過二天的研討報告與實地訪視日本農協及地方政府對於小農戶及農家婦女、農產品產地直銷等輔導措

施，FAO 之 Seidler 博士主持總結檢討，共同凝聚成下述建樹性之結果。

針對要如何整合個別小農成為大團體以提昇產品集貨，採收處理、倉儲、市場行銷等功能，可依序建立標準作業規範：

一、 歸納出所面臨之挑戰與競爭（Challenge）：包括市場、人力、資訊、技術等問題。

二、 規劃出所需要整合與強化之機制：

1. 市場通路與相關附屬設備之整合、運用與興設。
2. 農產品採收後處理之設備、技術與運作。
3. 農民組織體系之建立與運作。
4. 對於農民組織功能之改善與體質之強化措施。
5. 經費之支援與運作，例如政府補助、自籌、貸款等。
6. 市場資訊及產銷等資訊之建立與報導，使個別農民、產銷班及農民團體能快速獲得正確資訊。
7. 教育訓練制度之建立與執行、推廣。
8. 各產銷流程（從生產者→組織→市場）之約束方式以及落實執行。
9. 農村人力之調適與規劃，例如勞力缺乏下如何動員中高齡之農村及婦女勞力之計劃。
10. 企劃與經營管理，引進效率化、企業化之管理與運作模式，將有限之人力、設備、經費等資源加以整合運用。

三、 相關週邊組織支援體系之建立與策略聯盟之整合。

陸、結論及建議

一、由於貿易自由化後，市場競爭愈形激烈，但亦是產業轉型之機會；市場之競爭包括國內自己產品互相競爭及與進口產品之競爭；要確保產品市場競爭力就要注意品質追蹤、檢疫、食品安全，確保產品特性，並整合建立供應鏈體系，再配合銷售通路提昇競爭力。

二、直銷之特點與誘因是低成本、高品質並可有效運用農村勞動力，促進農村經濟活絡；隨著交通之便捷及休閒與觀光農業之發展，城鄉交流將更為平頻繁密切，「地產地銷」將逐漸形成農特產品之重要銷售通路，唯為保障消費大眾之權益，首先要確立對於直銷門市、攤位之設立與產品品質安全之輔導與管理等機制，並嚴格執行與追蹤。

三、我國及日本、韓國、東南亞等國家主要仍為小農制，由小農主導農業生產，但小農卻是較弱勢，個別農民之產品無法進入市場，產品銷售管道受到限制，因此要解決小農戶的產品產銷問題及勞力、技術問題，唯有靠組織的運作，整合小農戶成為大的作業體系。

四、要解決農村勞力問題除了提昇自動化、科技化、效率化的產銷技術與設備之外，亦要吸引高知識水準之現代青年農民投入農業產、製、儲、銷等相關業務，因提昇農村勞動力必須要有高度之誘因，除了經濟收入以外，年輕農民更注重與現代社會之融合及知識、資訊之獲得與更新，不要令其感覺與繁榮社會脫節或孤立跟不上時代，因此要加強擴大農村與都市消費者接觸面與機會，在精神上、知識與心理上皆需與都市環境結

合，此乃是鄉村都市化重要考量因素；以農村產業結合觀光、休閒、農產品行銷等誘因，可吸引人潮湧入農村不但帶進商機更帶來知識與資訊，使農村經營者與社會更密切交流結合，激發其留農之信心、勇氣與意願，對於農業之轉型與經營能產生更大的希望，創造更好成就；人潮湧入農村就帶來商機，整合農民設立農特產直銷站及假日農市展售場，推動地產地銷，不但有助於解決小農產銷問題，更可有效運用中、老年勞動力創造就業機會，不但可增加經濟收入，以工作提供年長者健康有意義之生活，以團體活動取代個別家庭照顧與看護年長者之困擾；將產地直銷與提供高齡農民工作機會結合起來，對於促進農村家庭經濟與活絡農村社區有極大助益。

附件一

APEC ATCWG Workshop: Linking Farmers to Markets – The Role of Farmers Organizations
12-14 March 2003
Mita Kaigisho Tokyo,Japan

Tentative Program

March 12th (Conference Room 1)

08:30 Departure from Shinagawa Prince Hotel

09:00 Registration

09:15 Opening Remarks by Dr. Mitsugi Kamiya, Workshop Moderator

09:30 Welcome Address by Mr. Akihiko Nishiyama; Director, Office of External Policies Coordination, Ministry of Agriculture, Forestry, and Fisheries, Japan.

09:45 Keynote Speech by Dr. Edward S. Seidler

10:45 Self Introduction of the Workshop Participants

11:15 Coffee Break

11:30 Session One: China and Japan

12:30 Lunch (Mita Room)

14:00 Session Two: Korea, Malaysia and Papua New Guinea

15:30 Coffee Break

15:45 Session Three: Philippines and Chinese Taipei

16:45 Special Report from a Women's Marketing Group by Ms. Aiko Kakehata

17:15 Orientation to the Field Excursion

17:30 Group Photograph

18:00 Reception (Reception Hall)

March 13th (Field Excursion at Kawajima-Town in Saitama Prefecture)

09:00 Departure from Shinagawa Prince Hotel

10:30 JA Saitama Central-East Keizai Center

13:30 Kawajima-Town agricultural produce direct-sale store

March 14th (Conference Room 1)

08:30 Departure from Shinagawa Prince Hotel

09:00 Debriefing of the Field Excursion

09:30 Session Four: Thailand and Vietnam

10:30 Coffee Break

10:45 Wrap-Up Session

11:45 Evaluation

12:00 Farewell Lunch (Mita Room)

附件二

Linking Farmers to Markets : The Role of Farmers Organization

Teh-Yung Chan

Chief

Agricultural Marketing Division

Farmers' Service Department

Council of Agricultural

Chinese Taipei

I. Introduction

Agricultural marketing systems in Taiwan are in a progress of change. Food retailing is a final stage of an agricultural marketing system. Retailing is a linkage between retailers and ultimate consumers. During the past two decades, the food retailing market has become increasingly competitive in Taiwan. New food store formats were successively developed for competing food retailing market share. At the same time, the structure of food retail industry has also been dramatically changed. Traditional retailing food formats are facing highly aggressive challenges. These changes are influenced not only by intense competition and changes of consumer needs and expectation, but also by social, cultural, and technology factors.

Agricultural produce market supervising institutions in Taiwan referred to the Agricultural Products Market Transaction Law include: the Council of Agriculture (COA) for the level of the central government; the municipal (city) government for the level of the municipality (city); the prefecture (city) government for the level of the prefecture (city).

The supervising institution of the central government shall shape a national plan for the production and marketing and international trade of agricultural products, based on the national policy of agricultural production and marketing. The local supervising institution shall shape an annual implementation plan for agricultural production and marketing.

The supervising institution of the central government shall provide agricultural production and marketing updates and agricultural information reports of the international market. The supervising institution of the municipality and prefecture (city) shall provide agricultural production and marketing updates and agricultural information reports of the local market.

II. Distribution system of fresh produce

Taiwan's agricultural marketing system is highly complex, interrelated, concentrated, and integrated. Agricultural markets in Taiwan are remarkably diverse in their structure and organization. There is an increasing number of activities between the producers and the consumers. The final products received by consumer are highly processed and packaged produces. Taiwan's agricultural marketing system can be concisely illustrated as Figure 1. Some more detail marketing channels for selected agricultural products are presented in appendix.

Fresh agricultural produces are moved to domestic markets through many different channels. Generally speaking, there are four major stages within the whole marketing channel. These consist of shipping point operations, long distance transportation, wholesale operations at terminal markets, and food retailing service to the final consumer. Most of agricultural products are shipped through all four stages. However, some produces can be transported by skipping one or two stages in its own channel. The agricultural marketing system is undergoing change as a result of vertical integration, decentralization, and the growth of direct marketing. In the near recent years, some fresh produces especially for organic produces and branded fruits shipped directly from farms to consumers are becoming popular. In addition, farmers' associations and cooperatives frequently collect fresh produces from local farmers and process them to become packaged prepared foods, then directly deliver them to retail store and food services operation, without involving destination wholesaling. These changed distribution operations are also being prevailing.

Based on the statistic of Taiwan area agricultural products wholesale market yearbook, at the end of 2001, there are 145 agricultural wholesale markets including 2 composite agricultural product wholesale markets, 62 fruit and vegetable wholesale markets, 23 meat products wholesale markets, and 59 fish wholesale markets.

Figure 1:The Major Marketing Channel of Agriculture Products in Taiwan

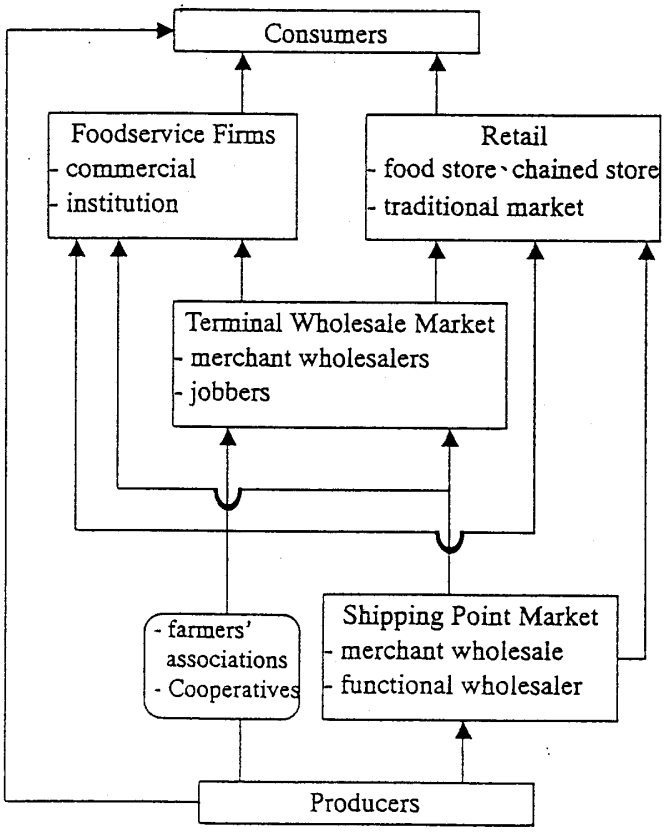


Table : 1 The Geographical Distribution of Agricultural Product Wholesale Markets in Taiwan

Market / Region	Market					
	Fruit and Vegetable	meat products (Livestock)	Fish	Compost Agri	Flower	Total
Total	61	23	58	2	3	147
Taipei City	2	1	1	-	1	5
Kaohsiung City	1	1	2	-	-	4
Keelung City	1	-	1	-	-	2
Hsinchu City	1	-	1	-	-	2
Taichung City	1	1	1	-	1	4
Chiayi City	1	1	1	-	-	3
Tainan City	-	1	1	1	-	3
Taipei Hsien	1	1	5	-	-	7
Yilan Hsien	-	1	4	-	-	5
Taoyuan Hsien	1	1	4	1	-	7
Hsinchu Hsien	1	1	-	-	-	2
Miaoli Hsien	1	1	3	-	-	5
Taichung Hsien	3	1	1	-	-	5
Changhua Hsien	8	1	3	-	1	13
Nantou Hsien	5	1	3	-	-	9
Yunlin Hsien	6	1	3	-	-	10
Chiayi Hsien	2	1	3	-	-	6
Tainanung Hsien	8	1	6	-	-	15
Kaohsiung Hsien	8	3	6	-	-	18
Pingtung Hsien	8	1	4	-	-	13
Taitung Hsien	1	1	3	-	-	5
Hualien Hsien	1	1	1	-	-	3
Penghu Hsien	-	1	1	-		2
Taichung Hsien	3	1	1	-	-	5
Changhua Hsien	8	1	3	-	1	13
Nantou Hsien	5	1	3	-	-	9
Yunlin Hsien	6	1	3	-	-	10
Chiayi Hsien	2	1	3	-	-	6
Tainanung Hsien	8	1	6	-	-	15
Kaohsiung Hsien	8	3	6	-	-	18
Pingtung Hsien	8	1	4	-	-	13
Taitung Hsien	1	1	3	-	-	5
Hualien Hsien	1	1	1	-	-	3
Penghu Hsien	-	1	1	-		2

Wh

Wholesale Market

Wholesale markets play a critical role in the agricultural marketing system in Taiwan for providing concentrating, distributing and pricing functions. Wholesale markets for agricultural goods provide buyers and sellers with a place to conduct business and maximize the benefits of centralized regulation and distribution. Electronic auctions and computerized auctions for hog, flowers, seafood, fruits, and vegetables have also been promoted to increase efficiency and ensure fair trade in the market for many years and they have proven very effective.

Shipping point markets are wholesale distribution centers located in the major agricultural products growing areas. The main operations of these wholesale markets are to aggregate large volume of produce from numbers growers, to perform marketing functions such as sorting, grading, cleaning, packing, cooling, storing in these markets, and distribute the traded products to the various destination markets. The firms involved in the shipping point stage differ greatly from the service provided, the produces handle, and the buyer served. They can be classified into two major groups. One group are functional wholesalers including brokers, selling agents, and commission merchants. These middlemen sell on the account of their buyers for a commission and normally does not take the ownership right of the traded products. They specialize in exchange facilitating marketing functions. Another group are handlers whose function is principally offering the physical handling services of the product. These merchant wholesalers take possession right to the goods. They buy for resale and may grade, sort, and package after they take title. Shipping point firms have two alternative options for marketing the produce they handle. The first channel is to ship these traded products to terminal wholesale market in the urban areas. The second way is directly shipping to larger retailers or food service firms.

Terminal wholesale markets are generally located in metropolitan areas near the point of final consumption. Traditionally, the terminal wholesale markets have served as the focal point for price discovery of fresh agricultural products in Taiwan. The market price is

mostly determined by auction. The wholesaling function consists of the procurement, warehousing, and physical distribution of agricultural products. These are carried out by wholesalers and jobbers, although larger food retailers also perform some of these functions. In larger retail chains the buyers operate their own warehouse and may purchase their products directly from farmers' associations or cooperatives.

Wholesale Market Supervision

In according to the Agricultural Products Market Transaction Law, those with the qualification of one of the following may apply and register as suppliers of the agricultural products wholesale market:

(a) farmers;

(b) farmers' organizations;

(c) agricultural enterprises;

(d) agricultural products producers licensed by the supervising institution of the municipality or prefecture (city);

(e) shippers;

(f) agricultural products importers.

Those with the qualification of one of the following may apply and, after being approved by the supervising institution concerned, be licensed as buyers of the agricultural products wholesale market:

(a) retailers;

(b) jobbers;

(c) shippers;

(d) exporters;

(e) processors;

(f) institutional consumers.

The agricultural products wholesale market may collect managerial fees equally from suppliers and buyers at rates approved by the supervising institution of the central government. The rates for managerial fees should be set up by the wholesale market based on the following standards and ratified by the supervising institution of the municipality or prefecture (city):

(a) fruits and vegetables—no more than fifty-thousandths;

(b) livestock (meat)—no more than twenty-five-thousandths;

(c) poultry—no more than twenty-thousandths;

(d) other designated products—as proclaimed by the supervising institution.

Marketing information

The government have implemented the market news report upgrade program to extend the area of marketing information and enhancing the system of marketing information, WEB system has been utilized with internet technology, to expand service areas, and to improve service since 2000.Reporting items including vegetables, 357 items; fruits, 181 items; fish products, 359 items ; livestock, 3 items; sheep 6 items; poultry, 6 items; and flowers, 2,164 items. The system of BBS base to speed up communication channels. In 2000, to meet the popularity of internet and the needs of users, BBS was upgraded to WEB system to provide service from the January of year 2001.

Ⅲ.Changes in the distribution system of agricultural produce

Agricultural produces retailing

Both fresh and processed agricultural products reach consumers through the same final type of market outlets. The two primary retail outlets to ultimate consumers are retail food stores and foodservice establishments. However, a small but growing share of fresh produces is being sold direct to consumers at roadside market and farmers' market, and through new electronic channel by some means of E-commence. These direct marketing

channels, of course, require growers to take more active part in the marketing process, including performing food retailing function.

● **Food store retailing**

For simplicity, we classify Taiwan retail food stores into two groups: modern forms food stores and traditional market stalls. Each group has different business operation methods and store physical environment. Alternative food store formats in Taiwan are illustrated as Figure 2.

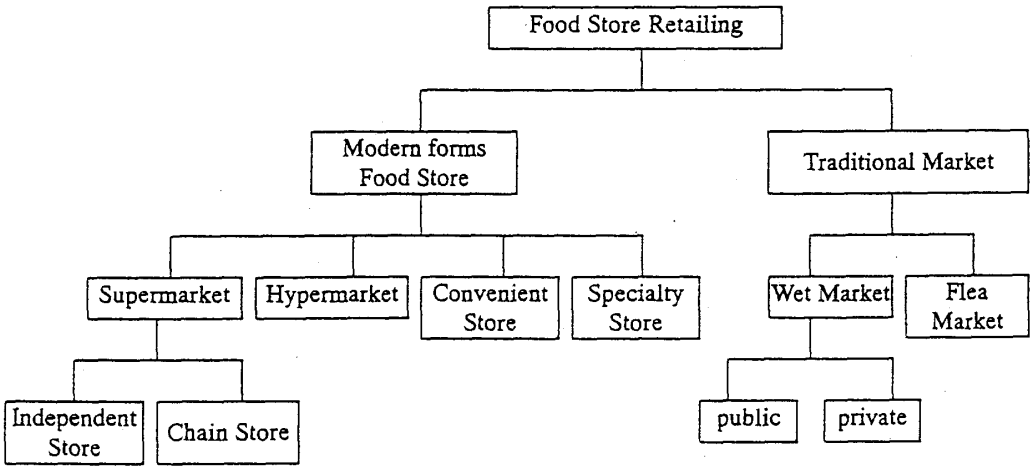


Figure 2 : Different Food Store Formats in Taiwan

Table 2 : Characteristics of Alternative Retail Food Stores in Taiwan

Store format	Characteristics	Examples
Independent Supermarket	•self-service •local market •variable size in scale •highest percent of food versus nonfood items •emphasizing fresh produces	•Farmers' Association Supermarket
Chained organization Supermarket	•self-service •medium to large scale •more product variety •home meal replacement provided •advertising promotion activities	•Wellcome •Yumaowu •Sinon •Far East
Hypermarket	•self-service •huge variety •food and non-food products •large trade floor space •free parking facilities •regional market •merchandise emphasis •advertising, promotion activities	•Makro •Carrefour •RT-Mart •Geant •Tesco •Costco
Convenient Store	•Neighborhood Located •Limited product •Prepared food and pastries assortment •Convenience oriented	•7-11 •Family •OK •Hi-Life
Specialty Store	•Premium quality products (branded, imported) •Limited number of products •high quality service	

● **Supermarket**

Supermarket is described as a full-line departmentalized, cash-and-carry food store. It emphasizes self-services and selling primarily food. The merchandize assortments include fresh produce, meat, fish, dairy products, prepared food and groceries, etc.

The first supermarket was set up in Taiwan in 1968. Until 1990s, the number of supermarket stores had rapidly increased due to the fact that foreign investors such as Wellcome corporate began to develop chained organization supermarket stores in urban areas in Taiwan. At the same time, the supermarket stores were widely popular by young couples and middle-class families. The success of supermarkets during the early of 1990s stemmed in part from the rise of disposal income, increases in women labor-force participation, changes in consumer life style, changes of consumer needs and expectations, and increases uses of mass media and promotions by supermarket retailers. At the end of 2001, there are 846 supermarket stores comprising of 361 independent supermarket stores and 478 chained organization supermarket stores. Besides, 86 supermarket stores owned by farmers' association are excluded.

● **Hypermarket**

Hypermarket is defined as a self-service store and selling a wide range of food and non-food goods, with a lager trading floor space and free parking area. There are large selections of multiple packs for customers to increase average transaction values.

At the end of 2001, 104 hypermarket store are popular among consumers in Taiwan. With the competitive advantages of hypermarket store in lower price, variety of product assortment, parking space, and promotional activities, the sales of hypermarket has been significantly increased in the recent economic recession periods. Popularity of hypermarket operations directly threaten the sales of supermarket stores and traditional wet market food retailing stores.

● **Specialty store**

A specialty store which may be also called limited assortment store provides good quality produces but only a few variety. Specialty stores generally offer many in-store services such as order and delivery, gift packing. As the economy improved, consumers will increased their interest in service and quality, then specialty store will be popular among high income consumers. Specialty stores selling organic produces and imported fruits have been successively opened in urban areas. They are the evidential examples.

Traditional food retail market

● **Wet market**

A traditional food retail market is also called wet market. Wet market consists of an agglomeration of small vendors, each deal with one fresh food line (pork, poultry, fish, fruit, vegetables) or eating affairs. Retailers complement each other, offering a full fresh food assortment.

Even there exists bad stereotype image of traditional food retail market, annual sales of food stalls in the wet market is still estimated to account for about one half of annual total food retail sales in Taiwan.

● **The flea market**

The flea market is not an area for the purpose of retailing trade, just a regular format for individual to conduct retail business at a specific time, especially in Sunday and holiday. Holiday flower market and agricultural products exhibition are examples of flea market in urban area. Lower prices and fresh produce directly from growers are the major attraction offered by flea market retailers.

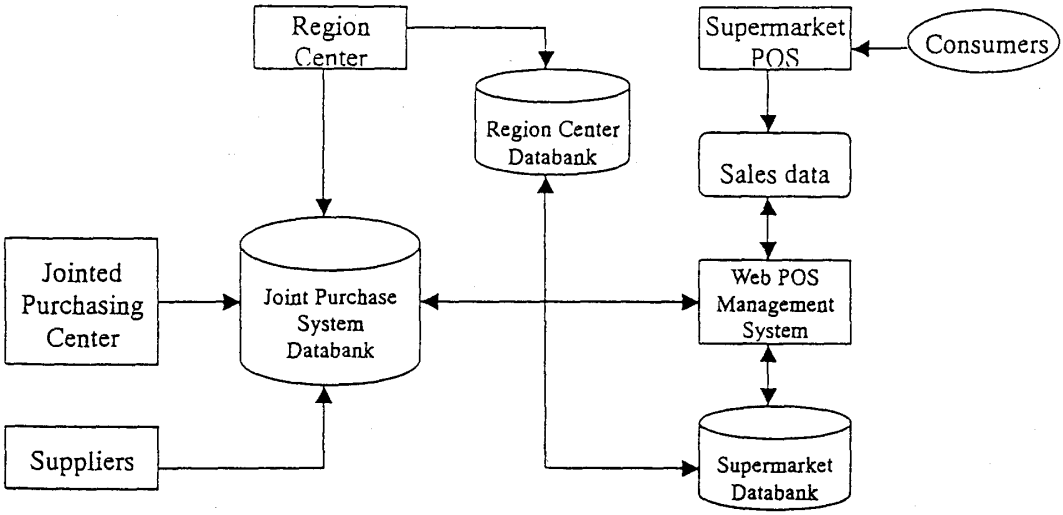


Figure 4 : The Databank System of farmers' Association Supermarkets

Ⅳ. Major challenges of poor farmers and women in their marketing fresh produces

Background of farming households

Agriculture in Taiwan has traditionally been dominated by family farms. Today, there are approximately 790,000 farming households, and each household has on average just over one hectare of land under cultivation. Of this total, only 13 are full-time farming households.

The per capita income of farmers has been lower than that of non-farmers (between 70.65-69.37 percent, from year 1987-97). According to studies, 86 percent of farm households take part in non-farm activities while 14 percent are full-time farm households. Like other women in farm households in Asian countries, women's labor contributes to both farm and non-farm income from home-based agribusiness and other activities. Table 2 shows the extent of women's participation in agriculture.

In order to strengthen farm management and promote marketing technology, COA has been initiating, promoting and implementing a program of agricultural production and marketing teams, aiming to integrate all existing resources, promote rationalized operation, establish efficient management and to enhance the competitiveness of the ROC agricultural

products. At the end of year 2000, there were 6,783 producer teams, with 130,970 team members. These teams are organized by commodity (such as rice, fruits, vegetables, flowers, poultry, dairy cattle, fishery products, sheep, geese, hogs, etc.). Table 3 shows there are 8.3 percent of female members of agricultural production and marketing teams in the five districts.

Table 3. Female Members of Agricultural Production and Marketing Teams in Taiwan

Name of Districts	Total Number of Teams	Number of Team Members	Percent of Female Team Members	Number of Female Team Members	Number of Female Team Leaders
Mioali	406	6,814	6.1	416	13
Taichung	1,755	35,861	5.7	2,044	21
Tainan	2,059	16,404	11.7	1,914	24
Kaohsiung	1,019	20,071	12.1	2,432	24
Taitung	299	5,034	11.8	593	3
Total	5,538	84,184	8.3	7,399	85

CONTRIBUTION OF RURAL WOMEN TO AGRICULTURAL ECONOMY

Although there is no discrimination against women farmers and they are very welcome to become team members and join all of team activities, the traditional division of labor in which women are responsible for family chores and men are responsible for external work and "bread winners", means women's workload is relatively very heavy. Generally agricultural households preserve more of traditional culture and values, so educational levels of most women of farm households (especially those women above 50 years) are lower than those of men. Each farm household normally allows only one member to register as a team member, so most team members are male.

Within farm households most women participate actively in varied farming activities. In the case of young and middle aged women they also go out to earn off-farm incomes. Researchers estimate that women provide 40 percent of the farm labor force, and there are women farmers team leaders of agricultural production and marketing teams. Many extension specialists observe that farm women are very good at management and are partners or even

"independent" agricultural producers sharing the role of management with male workers. They have proved successful in these endeavors because of their unique characteristics such as delicacy, ingenuity, brightness, and consideration.

MEASURES FOR ENHANCING RURAL WOMEN'S CONTRIBUTIONS TO The FOOD SECURITY

The Enhancement Project for Rural and Aboriginal Women in Taiwan is a project set up by COA. The Council recognizes the contribution of rural women to agricultural development in Taiwan and the need to initiate an integrated empowerment program for the integration of resources with women's multiple roles. This project is implemented by farmers' associations and related aboriginal township governments at local levels, aiming at strengthening the farming and family management capacity of women in farm and aboriginal households.

The program stresses sharing responsibilities among family members to improve the quality of life of farm and aboriginal families. The target populations are women of farm (including fishermen) and aboriginal households. In 1996 there were 360,000 aborigines, which comprised 1.7 percent of the total population of Taiwan. These are often left out of development programs, and seldom attend extension educational activities, and both husbands and wives are encouraged to participate.

V. Status of producer organizations in the agricultural produce marketing and their typical scopes of operations

Background of producer organizations

According to the Agricultural Products Market Transactions Law of Taiwan, "Farmers' organization" include all the legally organized farmer's association or fishermen' association, or cooperative or cooperative farm which deals with the production or marketing of agricultural products. The multifunctional organizations provide extension, marketing, credit, insurance and other such services, thus serving as a bridge between

farmers and fishermen, and the government. There were 290 Farmers' associations, 568 cooperatives, and 6783 producer teams (groups) in Taiwan at the end of 2001.

The farmer ' s association in Taiwan is a multi-purpose, non profit corporation for the interest of the farmers, and the development of agriculture and villages, with objectives of safeguarding farmers ' right and interests, raising farmers' knowledge and skill, promoting production and revenues, improving farmers ' livlihood, and developing rural economy.

The economic services provided by the farmers' associations contain the supply of production and marketing requisites, marketing and processing of agricultural and livestock products, the supply of daily necessities, and government-consigned food warehousing.

Farmers' organization deal with "Cooperative marketing" is the most important way of marketing in which agricultural products are accumulated by a farmers' organization from its members, or by individual farmers, and sold by wholesale after being assembled, classified, graded, packaged, warehoused, cold-stored, or processed. Farmers' organizations may charge necessary fees from suppliers for the operation of cooperative marketing at rates approved by the supervising institution of the municipality or prefecture (city).

The cooperative marketing by any farmers' organization shall be assisted and guided by the supervising institution. The agricultural products wholesale market shall give priority to the transactions of the products under cooperative marketing by farmers' organizations. For the above cooperative marketing, contracts may be made to regulate the relations between farmers' organizations and their members, and the relations between farmers' organizations and the wholesale market.

Producer Organization Cooperative Marketing

According to the "Agricultural products market Transaction Law":

- Agricultural products marketing may be conducted by way of cooperative marketing by farmers' organizations.

- The cooperative marketing by any farmers' organization shall be assisted and guided by the supervising institution concerned.
- The agricultural products wholesale market shall give priority to the transactions of the products under cooperative marketing by farmers' organizations.
- For the above cooperative marketing, contracts may be made to regulate the relations between farmers' organizations and their members, and the relations between farmers' organizations and the wholesale market.
- The supervising institution concerned shall reward model farmers' organizations for their effort on the operation of cooperative marketing.
- The assembly fields used for the purpose of cooperative marketing by farmers' organizations shall be seen as land for agricultural purposes, The reduction of taxes on the buildings on the fields shall be subject to this Law.

Agricultural produces cooperative marketing by Producer Organizations reached 55 in the Taipei market, it is still very low in the all the provincial markets. Cooperative Marketing was initiated in 1974. The Taipei market was the primary destination in the early days. Lately, annual volume and number of farmer co-ops under cooperative marketing have increased continuously. Over 400 units in the three main systems of farmer organizations, the Farmers' Association, the Agricultural Production Cooperative and the Taiwan Fruit Marketing Cooperative, cooperatively handle the marketing for agricultural produces. In 2001, the total volume of fruit cooperative marketing was 169,598 M.T., and the total volume of vegetable cooperative marketing was 277,206 M.T. The farmers' associations supply 223,000 tons of vegetables to the markets each year, of which 197,000 tons or 89% are shipped to Taipei.

VI. Government policies and services that support producer organization and produce markets

There has been strong competition and pressure from ever-increasing agricultural

imports. In light of the country's effort to join the World Trade Organization, current agricultural policy should focus on creating a more advanced agricultural industry to increase product competitiveness in the world market, as well as enhancing the well-being of farmers.

In order to strengthen the function of farmers ' associations, the Government promulgated the existing "Farmers ' Association Law" in 1974 as the legal ground of the establishment of farmers ' associations. As the present time, there are three levels of farmers ' association in Taiwan, namely, the provincial, county, the township, farmers' associations. The higher-level farmers' associations possess an advisory unit to assist the lower-level farmers ' associations in proving their organization and operational services.

The four-year Cross-Century Agricultural Development Plan has been implemented since July 1997. The main policy guidelines aim to:

- Adjust agricultural structure and to ensure food security; strengthen the planning of farmland use and facilitate the process of farmland release;
- Disseminate production and marketing information on agricultural products, and establish an efficient and secure production and marketing system;
- Improve production and marketing skills of farmers and fishermen;
- Assist farmers and fishermen's organizations to increase their efficiency;
- Promote traditional culture of farming and fishing villages as well as improve the welfare of farmers and fishermen, etc.

The adult farmers are encouraged to take the farm extension education to rectify their knowledge, skill, and know-how for improving production techniques, farm management, and marketing of their produces.

The training of talented agricultural personnel is a critical part of raising standards in agriculture. Agricultural extension activities and specialized training for all types of farmers

and fishermen will sharpen their business sense and enable them to adapt to changes in the overall environment.

The purposes of home economics extension education are to raise the quality of family living, to organize home clubs in every village, and to provide sustained adult education. To achieve these goals, the farm homemakers are educated to utilize more advanced knowledge, skills, ideas, and attitude to enhance home functions and to improve financial management and living environments.

Currently the farmers associations are assisting homemakers to enhance their farming ability, status , as well as their knowledge in nutrition and health.

The seniors are advised to adapt themselves to the changing society. In addition, the preservation of environments, including greening and beautifying the living quarters and the recycling of resources, are also subjects of home economics extension education so as to promote the happiness and satisfaction of the rural families.

Renovating (revitalization of) rural villages towards prosperity and promoting a harmonious and sustainable agriculture are emphasized. In rural areas of Taiwan there has been a great change in the socio-economic structure. The lower the agricultural income in the more remote and poor rural areas, the higher the emigration of young and middle-aged population seeking jobs in cities. This leads inevitably to the feminization of farming and the aging phenomenon among the agricultural employed population. In 2000 the percentage of farm managers aged 65 and above reached 15 percent.

Agricultural statistics reveal that by 2001 the agricultural employed population continued to decrease to 715,000 persons. The farming population thus accounted for 8.8 percent of total employment of which 210,092 were females comprising 29.4 percent of total agricultural employed .

In recent years home-based businesses and income-generating programs for rural and aboriginal women included rice, vegetables, and fruit processing, meal services, bakery,

beauty parlor, hair styling, flower arrangement, farmer's market, bed and breakfast, home care services (simple nursing care techniques) or nurses' aides, composting from household and agricultural residues, handicrafts, especially traditional or aboriginal handicrafts such as weaving, sculpture, carving, embroidery, pottery, etc. In an aboriginal township for example there are 30 organized aboriginal women who are interested in managing the traditional handicrafts. They work only on a part-time basis, and each one earns NT$ 5,000-10,000 per month.

The COA budget is used to subsidize training, equipment and devices for joint use. Staff supervise 20 home economics club members in one district fishery association for example, who are interested in fish processing. They buy raw fish for during peak production seasons at rather low prices, and process the fish for profit. The government budget subsidy fishermen' associations for training in fish processing and the provision of processing equipment allows courses to be affordable for rural women. On average each home improvement member earns about NT$15,000 per month.

Conclusion

Agriculture is important to the sustainable development of the country, but there is strong competition and pressure from the ever-increasing agricultural imports. Also, in light of our country's efforts to join the World Trade Organization, free trade will become inevitable and the development of agriculture in Taiwan will face an even greater challenge.

As the average farming scale in Taiwan is rat-her small, the farmers ' associations coordinate with the government in organizing the farmers to form joint operation groups and various production and marketing groups. The purpose of the organization is to raise the farmers' competitiveness and income through optimal combination- and utilization of land, labor, capital, and requisites, and the expand of production and marketing scales.

Technology will continue to play a very important role in Taiwan's agriculture. However agriculture will have to emphasize more on business management planning, marketing, financing and information dissemination, in which many farm women have a great interest and wish to learn more. Owing to low agricultural income the emigration of young and middle-aged populations flowing to cities for jobs will continue. The feminizing and aging phenomena of the agricultural employed population which has increased, will continue, so rural women will certainly still play important roles in food security.

Agricultural development in Taiwan has been marked by a number of distinctive features. The government has promoted a series of agricultural development programs in order to realize its policy objectives of developing agriculture, building up farming villages, and protecting the interests of farmers. Looking at the history of this development, we can see how development has evolved from the earliest stage, when efforts were concentrated on increasing crop production by raising productivity, to the present stage of modern agriculture which seeks to strike a balance between productivity, livelihood, and ecology.

REFERENCE

Andrews, Mary P., "Women in Agriculture : Contributions and Strategies", paper presented at the Seminar on Technology Transfer for Small Farmers, Asian Productivity Organization.

----------,1999. "Recognizing Socio-Economic Factors Affecting the Status of Rural Women, and Measures for Improving their Skills in Farm Management", paper presented at the Seminar on Strategies for Improving Women's Role in Farm Management, Asian Productivity Organization.

Chen, Hsiu-Ching,1995. "Empower of Form Women to Improve Farm Management", Agriculture Policy and Review, No.274 : 20-31,Council of Agriculture, Executive Yuan.

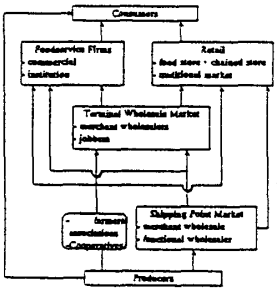
Chiang, Ying-Chih and Chao-Lin Tuan, 1999. "Strategies and Successful Factors to the Utilization of Women's Resources in Agricultural Management : ROC Experiences", paper presented at the Seminar on Strategies for Improving

Linking Farmers to Markets :
The Role of Farmers Organization

Teh-Yung Chan
Chief
Agricultural Marketing Division
Farmers Service Department
Council of Agricultural
Chinese Taipei

Generally speaking, there are four major stages within the whole marketing channel. These consist of shipping point operations, long distance transportation, wholesale operations at terminal markets, and food retailing service to the final consumer. Most of agricultural products are shipped through all four stages.

Figure 1:The Major Marketing Channel of Agriculture Products in Taiwan



The structure of food retail industry has also been dramatically changed. Traditional retailing food formats are facing highly aggressive challenges. These changes are influenced not only by intense competition and changes of consumer needs and expectation, but also by social, cultural, and technology factors.

Agricultural produce market supervising institutions in Taiwan referred to the Agricultural Products Market Transaction Law include: the Council of Agriculture (COA)for the level of the central government; the municipal (city) government for the level of the municipality (city); the prefecture (city) government for the level of the prefecture (city).

The agricultural marketing system is undergoing change as a result of vertical integration, decentralization, and the growth of direct marketing. In the near recent years, some fresh produces shipped directly from farms to consumers are becoming popular.

Farmers' associations and cooperatives frequently collect fresh produces from local farmers, then directly deliver them to retail store and food services operation, without involving destination wholesaling.

Wholesale markets play a critical role in the agricultural marketing system in Taiwan for providing concentrating, distributing and pricing functions. Electronic auctions and computerized auctions for hog, flowers, seafood, fruits, and vegetables have also been promoted to increase efficiency and ensure fair trade in the market for many years and they have proven very effective.

Shipping point markets are wholesale distribution centers located in the major agricultural products growing areas. The main operations of these wholesale markets are to aggregate large volume of produce from numbers growers, to perform marketing functions such as sorting, grading, cleaning, packing, cooling, storing in these markets, and distribute the traded products to the various destination markets.

Terminal wholesale markets are generally located in metropolitan areas near the point of final consumption. Traditionally, the terminal wholesale markets have served as the focal point for price discovery of fresh agricultural products in Taiwan.

The following may apply as suppliers of the agricultural products wholesale market:

(a) farmers;
(b) farmers' organizations;
(c) agricultural enterprises;
(d) agricultural products producers licensed by the supervising institution of the municipality or prefecture (city);
(e) shippers;
(f) agricultural products importers.

The following may apply as buyers of the agricultural products wholesale market:

(a) retailers;
(b) jobbers;
(c) shippers;
(d) exporters;
(e) processors;
(f) institutional consumers.

The agricultural products wholesale market may collect managerial fees at rates approved by the supervising institution of the central government.

(a) fruits and vegetables—no more than 5.0%;
(b)livestock (meat)—no more than 2.5 %;
(c)poultry—no more than 2.0 %;
(d)other designated products—as proclaimed by the supervising institution.

Taiwan retail food stores as classified into two groups: modern forms food stores and traditional market stalls.

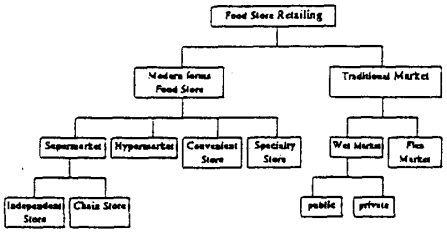


Figure 2 : Different Food Store Formats in Taiwan

At the end of 2001, there are 846 supermarket stores comprising of 361 independent supermarket stores and 478 chained organization supermarket stores. Besides, 86 supermarket stores owned by farmers' association are excluded.

Agriculture in Taiwan has traditionally been dominated by family farms. Today, there are approximately 790,000 farming households, and each household has on average just over one hectare of land under cultivation. Of this total, only 13 percent are full-time farming households.

In order to strengthen farm management and promote marketing technology, COA has been initiating, promoting and implementing a program of agricultural production and marketing teams, aiming to integrate all existing resources, promote rationalized operation, establish efficient management and to enhance the competitiveness of the ROC agricultural products.

At the end of year 2000, there were 6,783 producer teams, with 130,970 team members. These teams are organized by commodity (such as rice, fruits, vegetables, flowers, poultry, dairy cattle, fishery products, sheep, geese, hogs, etc.).

Within farm households most women participate actively in varied farming activities. Researchers estimate that women provide 40 percent of the farm labor force, and there are women farmers team leaders of agricultural production and marketing teams. Many extension specialists observe that farm women are very good at management and are partners or even "independent" agricultural producers sharing the role of management with male workers.

The Council recognizes the contribution of rural women to agricultural development in Taiwan and the need to initiate an integrated empowerment program for the integration of resources with women's multiple roles. The Enhancement Project for Rural and Aboriginal Women in Taiwan is implemented by farmers' associations, aiming at strengthening the farming and family management capacity of women in farm and aboriginal households.

"Farmers organization" include all the legally organized farmers' association or fishermen' association, cooperative or cooperative farm which deals with the production or marketing of agricultural products. The multifunctional organizations provide extension, marketing, credit, insurance and other services, thus serving as a bridge between farmers, fishermen, and the government.

The farmers' association in Taiwan is a multi-purpose, non profit corporation for the interest of the farmers, and the development of agriculture and villages, with objectives of safeguarding farmers' right and interests, raising farmers, knowledge and skill, promoting production and revenues, improving farmers' livlihood, and developing rural economy.

Farmers' organization deal with "Cooperative marketing" is the most important way of marketing in which agricultural products are accumulated by a farmers' organization from its members, and sold by wholesale after being assembled, graded, packaged, pre-cooled, or processed.

Agricultural products marketing may be conducted by way of cooperative marketing by farmers' organizations.

The cooperative marketing by any farmers' organization shall be assisted and guided by the supervising institution concerned.

The agricultural products wholesale market shall give priority to the transactions of the products under cooperative marketing by farmers' organizations.

In 2001, the total volume of fruit cooperative marketing was 169,598 M.T., and the total volume of vegetable cooperative marketing was 277,206 M.T. The farmers' associations supply 223,000 tons of vegetables to the markets each year, of which 197,000 tons or 89% are shipped to Taipei.

In light of the country's effort to join the World Trade Organization, current agricultural policy should focus on creating a more advanced agricultural industry to increase product competitiveness in the world market, as well as enhancing the well-being of farmers.

The four-year Cross-Century Agricultural Development Plan guidelines aim to:

- Adjust agricultural structure and to ensure food security; strengthen the planning of farmland use and facilitate the process;
- Disseminate production and marketing information on agricultural products;
- Improve production and marketing skills of farmers and fishermen;
- Assist farmers' and fishermen's organizations to increase their efficiency;
- Promote traditional culture of farming and fishing villages as well as improve the welfare of farmers and fishermen, etc.

The purposes of home economics extension education are to raise the quality of family living, to organize home clubs in every village, and to provide sustained adult education. The farm homemakers are educated to utilize more advanced knowledge, skills, ideas, and attitude to enhance home functions and to improve financial management and living environments.

Renovating rural villages towards prosperity and promoting a harmonious and sustainable agriculture are emphasized. In rural areas of Taiwan there has been a great change in the socio-economic structure. The lower the agricultural income in the more remote and poor rural areas, the higher the emigration of young and middle-aged population seeking jobs in cities. In 2000 the percentage of farm managers aged 65 and above reached 15 percent.

Agriculture is important to the sustainable development of the country, but there is strong competition and pressure from the ever-increasing agricultural imports. Also, in light of our country's efforts to join the World Trade Organization, free trade will become inevitable and the development of agriculture in Taiwan will face an even greater challenge.

Technology will continue to play a very important role in Taiwan's agriculture. However agriculture will have to emphasize more on business management planning, marketing, financing and information dissemination, in which many farm women have a great interest and wish to learn more.

Looking at the history of this development, we can see how development has evolved from the earliest stage, when efforts were concentrated on increasing crop production by raising productivity, to the present stage of modern agriculture which seeks to strike a balance between productivity, livelihood, and ecology.

附件三

Briefing of the Development of Rural Social Economic Structure and Cooperatives in China

Wang Zhanlu

Agricultural Trade Office
Ministry of Agriculture, People's Republic of China

I. Introduction

As a traditional agricultural country, development of agriculture in China dates back to more than five thousand year ago. Since the foundation of new China in 1949, particularly during the period of twenty and more years of reform and opening-up, notable achievements have been made in agriculture of China. The shift from chronic food deficiency to general balance of demand and supply and surplus in bumper harvest year has been successfully realized. With only 7% of world arable land, agriculture in China successfully feeds more than 22% of world population. Moreover, the living standards in rural areas and farmer's income have been significantly up-lifted. Rural population under poverty line has been cut down to less than 30 million in 2002 from about 200 million at the early stage of reform and opening-up (in late 1970s). On average, rural per capita income has increased from less than RMB 200 in 1978 to more than RMB 2400 in 2002. Consequently, agriculture in China is playing an ever-important role in whole country's economic development.

Despite the achievements we made, compared with many countries, China, as a developing country still has a significant distance to cover in many aspect of agriculture development. As a major step of rural reform, family responsibility system is implemented and welcome by farmers. This system entitles farmers to use the contracted arable land for a long term, and gives them the right to decide on what they grow and how they market their products. As a result, farmer's enthusiasm for production was greatly revitalized and grain production expanded rapidly for consecutive years during late 1970s and early 1980s. And following the rural reform, China started to undertake another far-reaching economic reform, converting gradually the long practiced planned economy system into market economy system. By removing rigid constraints on production and market, the conversion gives further impetus to the development of agriculture and rural economy in China. However, these reform steps also expose farmers to direct market influences.

Compared with the rest of the world, farmland is a scarce natural resource in China. Only 13% of the territory is suitable for agricultural activities, amounts to some 1.3 billion hectare. For the huge rural population, 800 million, about 70% of country population, average arable land contracted by each farmer household under the family responsibility system, amounts to only 0.53

hectare (7.94 mu, 1999), may be the smallest household land hold all over the world. Moreover within the household, a basic rural economic unit, highly diversified production pattern prevails. To individual farmer household, the instinct nature of small-scale business in terms of land size and diversified production pattern usually means less farm investment, backward technology, low efficiency and no benefits of scale economy.

Furthermore, as long practiced state controls over farm production and product market are phasing out, the government plays mainly a role of macro-control, and leaves the agriculture production levered by market force. And after China's WTO accession, the market is bound to open-up deeper to outside world and become more unpredictable. Under the circumstance, our farm households naturally belong to the vulnerable group, compared with commercial farm production corporations domestic or abroad, and any dramatic fluctuation and failure in the market may means disaster to them.

In short, how to organize farmers who are independently operating on a tiny piece of land and help them to obtain the capacity of dealing with in the market influence is a question need to answered timely to the government.

II. Development of Rural Social Economic Structure prior to Reform and Opening-up

The rural social economic structure undertook dramatic changes in terms of ownership the and organization pattern since the foundation of new China in 1949, and can be subdivided in to four categories as follows:

i) *Mutual Help Team (1949~1953)*

The land revolution, conducted after the foundation of new China, distributed arable land to farmers. At that time, average farm household land hold was about 0.83 hectare (0.17 hectare per capita). While farmers were happy with ownership over land but worried by the lack of production resources, such as tools and draught animals. According to a survey in 1954, on average each farm household possessed 0.6 head of draught animal and 0.52 set of plough. In order to recover food production rapidly, the government encouraged farmers to form various kind of cooperatives. And Mutual Help Team was then the first type of farmer's cooperatives established in China.

The establishment of Mutual Help Team did not bear on the private land ownership. On their own initiatives, farmers found their partners to form a Mutual Help Team on the principle of mutual help and mutual benefit. Farm tools and draught animals were share among team members. The team members set aside a portion of product to pay other members according to their contributions to the team.

There were two types of Mutual Help Team: the temporary and long term teams. The

temporary lasted only one or two seasons and the later operated on annual basis.

By 1953, the number of Mutual Help Team was increased to 7.45 million from 2.8 million in 1950, with average number of team member increased from 4 to 6 persons. Team member households increased from 11% to 39% of total country farm households. Though team households accounted for less than half of country farm households, their positive effects on ensuring normal farm activities, increasing efficiency and food production were clearly recognized and welcome by farmers.

ii) *Primary Cooperatives (1953~1955)*

As mentioned above, various type of cooperatives were encouraged by the government. While the Mutual Help Teams were developing, Primary Cooperatives came about in 1953 and spread steadily. Meanwhile, Senior Cooperatives also came into experimental period.

For Primary Cooperatives, land and major farm inputs remained household owned, but were utilized collectively within a cooperative and converted into equity. The benefits were distributed among members according the their labour and equity contributions.

The number of Primary Cooperative increased from 15 000 in 1953 to 633 000 in 1955, with average members increased from 18 to 27. Cooperative households accounted for 14% of total country farm household.

iii) *Senior Cooperatives (1955)*

After two years of experiments, Senior Cooperatives entered a rapid development period in Summer of 1955, and by the end of 1956, it almost covered the whole country.

There many differences between Primary and Senior Cooperatives, but the fundamental one was the introduce of collective ownership over land and other major agriculture inputs, which took the place of household ownership. With that, the collective economy came into being.

Many problems arose from the violent change of ownership and equalitarian distribution principle. Consequently, farmer's enthusiasm for production was hampered obviously.

iv) *People's Community (1956~1978)*

In August of 1958, People's Communities were established all over China. On average, each People's Community consists of about 5 000 farm households, and was about thirty times as large as a Senior Cooperative.

People's Community further consolidated collective economy, and finally, previously mentioned cooperatives as well as basic household economic unit disappeared.

In general, from Mutual Help Team to People's Community which lasted to late 1970s, the country had been suffering severely from food deficiency due to slow agriculture development. In order to stabilize agriculture product supply to meet the human and industrial needs, farm production and product marketing were under strict state control. Actually, farmer were isolated at all from the market for a pretty long period.

III. Recent Development of Farmer's Organizations

Both the historical experience and reality suggests that agriculture and society could not develop smoothly without well organized farmers. Bearing this in mind, the government is paying great attention to the development of farmer's organizations, while implementing household responsibility system and phasing out state control over production and market. As a result, rural cooperatives and farmer's organizations have entered a real development era.

Now, development of rural cooperatives or farmer's organizations in China are promoted by the government under the development framework of industrialized agriculture, and generally named as farmer's specialized cooperative economic organization, as they usually cover one kind or category of agriculture product within a specific area. According to a statistic, the number of farmer's specialized cooperative economic organizations has surged to 1.4 million, since mid 1990s, among which 140 000 are of considerable size, and operating in a normative way.

Take Beijing as an example, there are so far more than 1600 farmer's specialized cooperative economic organization established, with total assets value of RMB 4 billion (USD 500 million). Its 342 000 members account for 28% of total local farm households, and each has received more than RMB 3 600 income from the organizations.

In Beijing, farmer's specialized economic cooperatives usually follows four organizational models: i) *association model;* ii) *Partnership model;* iii) *Shepherd model;* iv) *Technical service model.*

In general, a large number of farmer's organizations are playing well functions in organizing farm production, providing services and linking farmers to the market. But as a matter of fact, they are still new things to both farmers and the government. There some issues need to be addressed by farmers and the government to foster their development, such as small scale, highly concentrated in relatively developed areas, inadequate connecting mechanism between farmers and market, and most disturbingly, the lack of relevant legal frameworks and supportive policies.

IV. Conclusions

After many years of development, farmer's organization finally come into a real development period. Recognizing the influence farmer's organizations have on the development of agriculture and rural economy, the government should bears the responsibilities for establishing an enabling environment, the first and foremost is to develop a special legal system and supportive policy system to protect and regulate farmer's organization developments.

Linking Farmers to Markets: A Case Study of Vietnam

Paper presented at the APEC-ATCWG Workshop on
Linking Farmers to Markets: The Role of Farmers Organization
Organized in Tokyo, Japan, 12-14 March 2003

By

Assoc. Prof. Dr. Do Kim Chung
Vice Director,
National Institute of Agricultural Economics
Ministry of Agricultural and Rural Development
Vietnam

Hanoi
February 2003

SUMMARY

The agricultural sector of Vietnam gradually moved toward market oriented economy and international trade integration. This paper discusses some major changes brought about by international trade participation over the past few years and the new marketing difficulties, opportunities and the government's programs to help farmers in this changing market environment. These include continuation of restructuring the agricultural commodities; improvement of competitiveness of farm commodities; continuation of equalization of SOEs and allowing private sector to compete with SOEs on an equal footing; Investing in market infrastructure especially wholesale markets; encouraging contract farming between processing, trading firms and farmers; and provision of credit to farmers and strengthening marketing cooperatives.

INTRODUCTION

Vietnam's agriculture has been moving towards a market oriented sector for 15 years, in which products are mainly for marketing. Marketing is the transmission of price signals between consumers and producers and the physical transmission of the commodity from points of production by farmers to points of purchase by consumers. The sector grew at an impressive rate over the last ten years (4.5% per annum) and gradually moved toward international trade integration. In this context, Vietnam has opportunities and also faces some challenges in agricultural marketing. Vietnam considered that improving post harvest handling and marketing is an important approach to uplift farm income and consumers' well –being. Marketing of farm products becomes crucially important for farmers. Building up linkages between farmers, traders, processors, exporters and governors are extremely important for a sustainable market development in Vietnam (MARD, 2003).

This paper aims at providing brief information on agricultural marketing systems, major challenges of poor farmers in their marketing of farm products, status of farmers organizations in the agricultural product marketing and government policies and services that support producer organizations, agricultural marketing

I. VIETNAM'S AGRICLTURAL MARKETING SYSTEMS

1.1 Agricultural Sector

Agriculture provides food for more than 77.6 millions population as well raw material for industries, employs 59,065,600 farm populations with 27,922,000 laborers (GSO, 2001). More than 70% of rural households are engaged in farming. The agricultural sector is characterized by the production and complex integration of food crops, principally rice, maize, sweet potatoes, cassava and vegetables, fruits and industrial crops such as coffee, rubber and tea; animal husbandry including pigs, beef and poultry; and aquaculture (shrimps, fresh and brackish and marine aquaculture).

The agriculture is practiced in 12,588,000 household farms, 8764 cooperatives, 800 state farms and join-venture farms. The agricultural sector currently consists of 12,588,000 farm households. Average farm size in Mekong Delta is 1.2 ha equaling 4 times of that in the Red River Delta. Cooperatives have shifted their functions to provide inputs, production activities and services that can be best done on larger scale than that of individual farm household. State farms have been given greater autonomy and have greater competition among them and between them and other farm actors. State farms are being decentralized and equalized

1.2 Agricultural Market Reforms

Vietnam has been adopting a strategy for market reform since late 1980s. The main characteristics of the market reforms are: a) a freedom of choice is given to all producers and consumers, b) Recognition of farm households as main unit of agricultural production, c) reallocation of farm land to individual households with privatization of land use right, liberalization of input and output markets, recognition of private marketing. The main features of this reform are the gradual removals of trade barriers to private sector, domestic and international trade integration. As a result, major achievements were observed during more than last decade (Table 1).

Table 1. Major Agricultural Marketing Policy Reform and Achievement

Year	Major Reform	Major Achievement
1988	Adoption of Resolution No. 10: reallocation of farm lands, restoration of farm households, Domestic Inputs and outputs market liberalized,	Sufficiency of rice for first time
1989	Removal of two tier price systems. Abolishment of quotas for most commodities, except for ten exports and 14 imports, Unification of exchange system	Vietnam be came the third largest rice exporter
1991	Private companies were entitled to export and import directly	Industry grew by 9%. Farm export increased
1992	Trade Pact with EU signed	Agriculture export to EU
1994	Removal of export licenses for most good except rice and wood	Vietnam became member of ASEAN
1995	Number of import goods controlled by quotas reduced from 14 to 7	AFTA membership granted, Export grew
1997	All barriers against internal trade of rice removed. Private enterprises granted licenses to rice export subject to certain condition	Rice export reach 3.0 million tons
1998	New range of non-tariff measures and exchange controls restrain imports and protect domestic production temporarily introduced	APEC membership granted
1999	Decree 57 Which liberalized export-import rights passed. Introduction of VAT	Rice export reached 4.5 million ton
2001	Bilateral trade agreement with US signed in 2000 and approved by two countries in December 2001	Export to US increased

Source: National Center for Social Sciences and Humanities, 2001, National Human Development Report

1.3 Current Marketing Situation

As an outcome of policy reform, input and outputs marketing are fully liberalized with a strong participation of private, cooperatives and other business actors. Private sector dominated in domestic marketing, especially rice market while international trade was monopolized by the state owned enterprises until 1999. The main marketing channels of rice markets are divided into tow main channels: The first channel is from farmers to small assemblers to millers, wholesalers and retailers and domestic consumers. The second one is from farmers to small assemblers who is dominant and collect 95% of total rice output marketed, millers, polishers and exporters. (Figure 1)

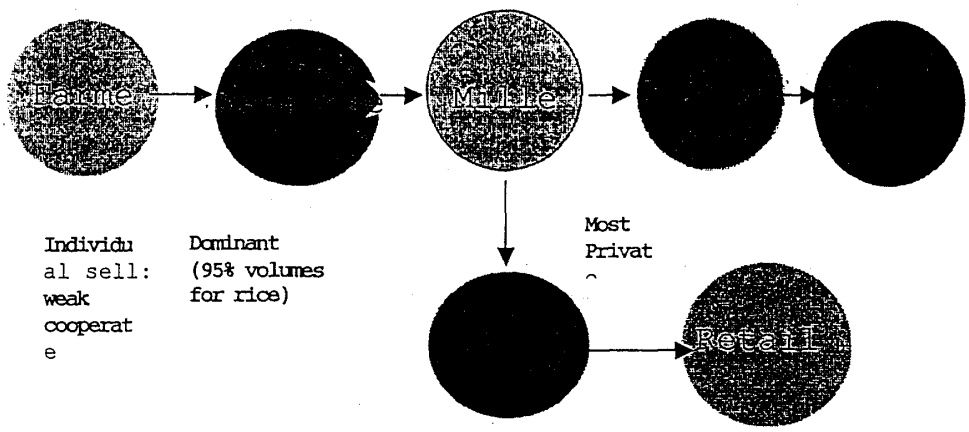


Figure 1. Marketing Channel of Rice Outputs in Vietnam

Barriers for private sectors to enter international trade were gradually removed. Since 1999 no export quota, no designed exporters was permitted. This situation allows private sector to enter export markets that stimulated rice export. Although domestic markets were fairly stimulated by market reform. Although agricultural marketing was facilitated by the government policies, it still faces big challenges of poor infra poor market infrastructure including market information and road systems. This causes high marketing cost for consumers. Transportation cost and marketing margin was accounted from 52,6% higher as compared with the producers price (Table 2)

Table 2. Rice Price Changes from Mekong Delta to Remote Hamlets in Nghe An province

Place	Distance from next (Km)	Transportation means	Price (VN$/kg)
Mekong Delta			1,900
Vinh	1,000	By Ship	2,100
Upland districts	250	By Truck	2,500
Commune center	20	By small cars	2,700
Remote Hamlets	7	By Bike	2,900

Source: Oxfam GB and Oxfam HK, 2001, Rice for the Poor and Trade Liberalization,

II. MAJOR CHALLENGES FACED BY FARMERS IN AGRICULTRAL MARKETING

The agricultural sector faced some challenges. GDP growth of this sector dropped from 5.7% annually during 1996-2000 period to 2.8% in 2001 (MARD, 2002). Weak market access was the main reason attributing to this slow development. While the amount of farm outputs (rice, coffee, rubber) exported increased, export prices of these commodities decreased sharply. Comparing with 2000, farm outputs in 2001 increased about 25.2% and agricultural price downed the same rate (24.7%) (Table 3). Prices of coffee in 2001 were one tenth of that in the 1995-96 period. Pepper and other farm products have the same challenges (Table 3). Export price was US$5-15 per ton (for rice), US$200-300 per ton (for coffee), US$30-50 per ton (for rubber) and US$150-200 per ton (for tea) lower than those of other countries (Vy, 2001)

Table 3. Changes in Prices and Outputs of Some Major Agricultural Commodities in 2001

	2001 Price compared to that 2000 (%)	2001 Output compared to that 2000 (%)
All Agriculture	-25.2	24.7
Rice	-15.6	16.9
Coffee	-42.4	40.9
Pepper	-60.0	52.2
Rubber	-7.8	8.7
Cashew nuts	-31.0	27.0
Tea	-9.6	-17.4
Peanut	-9.5	5.2

Source: General Custom Office, 2001 and GSO, 2001

The agricultural sector faced the problems of low competitiveness due to poor quality of farm products, high production cost, poor market infrastructure and services, and over supply.

The country has 415 communes with no automobile roads, more than 30% of district roads, 50% of commune roads are not passable during the rainy season. Yet, market infrastructure is not highly developed, especially in rural areas. The country lacks of market centers, especially wholesale markets, cold storage facilities, poor harbor. Four thousands of 8930 communes (44.8% of total communes of the country) could not access to markets. On average, 1000 rural population have 5 telephones. Both farmers and consumers poorly access to information on price, demand and supply. In adequate market information caused low market prices and sharp price fluctuation.

Over supply of farm products was one of the main reasons for lowering market price. This can be attributed by a weak capacity to react with the changing market environment of the agricultural sector. The agricultural production patterns are not well fit with market demands. The agricultural systems are still dominated by rice, crop cultivation with low quality, poor post harvest infrastructure. Income induced farm products such as fruits, vegetables and livestock products have not yet highly developed.

Most of farm products were marketed in fresh or un-processed forms. By 2000, the proportion of outputs processed with advanced technologies in total output were accounted for 26% for rice, 57% for coffee, 15% for rubber, 37% for tea, 22% for sugar can, 85% for cashew nut, 3% for fruits and vegetables and 0.7% for meat (MARD, 2001).

Although the country attained significant achievements in hunger eradication and poverty reduction, poverty still persist, especially in mountainous region, Mekong Delta and Northern central coast. Poverty rate was 32% in 2000 (UNDP, 2001). Total poor households of the country in 2000 were 17,2% or 2.8 million households (Vietnamese government, 2002)..Income disparity is widening. On average, income of urban consumer is, 3.6 times higher than that of rural consumers. Ninety percent of the poor are living in rural areas.

III. STATUS OF FARMERS ORAGNISATION IN AGRICULTURAL MARKETING

Group marketing through producer organization is considered as main strategy helping farmers remove their constraints and challenges in agricultural marketing. In Vietnam, there are two types of farmers' organizations in marketing, namely agricultural marketing cooperative, farmers' self-help interest groups and Farmers signing contracting with trades and processor

3.1 Agricultural marketing cooperatives

Historically, Vietnam's agricultural sector was operated agricultural cooperatives. By 1996, the whole country had 13,782 agricultural cooperatives. These cooperatives have shifted their functions from responsible for all crop decision and production activities to providing inputs, marketing services that can be best done on larger scale than that of individual farm household. The cooperatives were re-organized by the new cooperative law. As an outcome of this reorganization, the number of cooperatives drops 13,782 before 1996 to 8,764 in 2001 (MARD, 2001). Each agricultural marketing consists of farmers within a villages or even communes. Number of farmers in each cooperative ranged from 150 to 5000 farmers. Each cooperatives has a management board that is responsible for managing all businesses activities of the cooperatives, providing inputs, instructing technical massages, selling outputs for its members. However, most cooperative are not so well functioning with new roles in agricultural marketing. Lacking of market knowledge, post harvest handling of cooperative managers, farmer's group leaders are the main causes of poor performance of agricultural marketing cooperatives

3.2 Farmers' self-help interest groups

This types of farmers organization was formed by farmers to serve their own interests. Farmers can form a commodity group which deals a particular commodity such as rice, pork, cashew nuts, fruits or followers. The group is responsible to help its members in production and marketing. The group also provides capital based on saving rotating group principles. The groups are often formed based on kinships and commodity relation. These groups are important for small farmers in less commercial areas.

3.3 Farmers signing contracting with trades and processors

Farmers in the Mekong commodity producing regions such as Mekong Delta, Highland region formed their groups which signed contract with trades and processors and cooperates. In 2002, 70,000 ha of paddy, 180,000 ha sugarcane, 10,000 ha of coconuts, 30,000 ha of cotton were contracted with processors, exporters such as SONG HAU NONG TRUONG, Vietnam cotton Company, Sugar and Sugar mill company... This type of collaboration was extremely important for farmers in highly commodity producing areas.

IV. GOVERNMENT POLICIES FOR FACTILATING AGRICULTURAL MARKETING

In dealing with the problems in agricultural marketing, the government has enacted a set of policies to promote agricultural marketing, namely, structural changes, market infrastructure development, improving contract framings, agricultural cooperatives and provision of credits

Public policy is designed to achieve income growth in rural area rather than rice-self-sufficiency. Based on market demands, the agricultural sector continued to re-structure its production patterns to better react with the changes in domestic and international markets. The government gives more freedom to farmers in farm decision making allow them to shift from rice to non-rice farm products including aquaculture. More efforts are being devoted to winter-spring crops which are less subject to natural calamities and provide more stable income than the summer-autumn crop. Further more, expansion of rice varieties that have good quality and high market prices.

More efforts being devoted to invest in market infrastructure especially wholesale markets. These include development of roads, warehouse, wholesale markets and other related rural infrastructure to low marketing cost. The government strongly encourages both private and public sectors to invest in market warehouses, wholesale markets and market services. The government has a program to develop wholesale market for rice, pork, fruits and vegetables, especially in Mekong and Red River Deltas. Foreign companies are encouraged to invest in food processing especially in fruit, vegetable and meat. Providing information on both demand and supply for producers and traders; the government enacted the information program to provide information on prices, demand and supply, technologies and other related issues to farmers by using mass media means and setting up information centers for different region and province.

Encouraging vertical linkages between producers with scientists, extension workers, traders, processors and governors. In 2003, 1.3 million ha of rice, 20,000 tons of tea, 100,000 tons of coffee, 230,000 ha of sugarcane, 30,000 ha of cotton are contracted. By 2005, at least 30% of total farmers practiced contract farming with processing or business forms (MARD, 2003). This collaboration can help small farmers overcome marketing problems, ensure a sustainable agricultural development, improving agricultural marketing, ensuring adequate and good raw materials for processing, stabilizing farming income (Figure 2). This strategy helps promote sustainable demand driven market development in the agricultural sector.

Strengthening farmer cooperatives which help farmers sell their outputs and obtain input with at reasonable prices. The government allocated funds to train cooperative managers and farmers in operating their economic activities under market environment

Provision of both long terms and short terms credit to farmers so as farmers do not have to sell their products after harvest to avoid low market prices at the harvesting time. The government allowed farmers to borrow up to VN$ 20 million (US$1,800) without any collateral condition. Credit policy is being improved by lowering interest rates, longer terms of payment and more diverse forms of credit use.

REFERENCES

Oxfam GB and Oxfam HK, 2001, Rice for the Poor and Trade Liberalization,

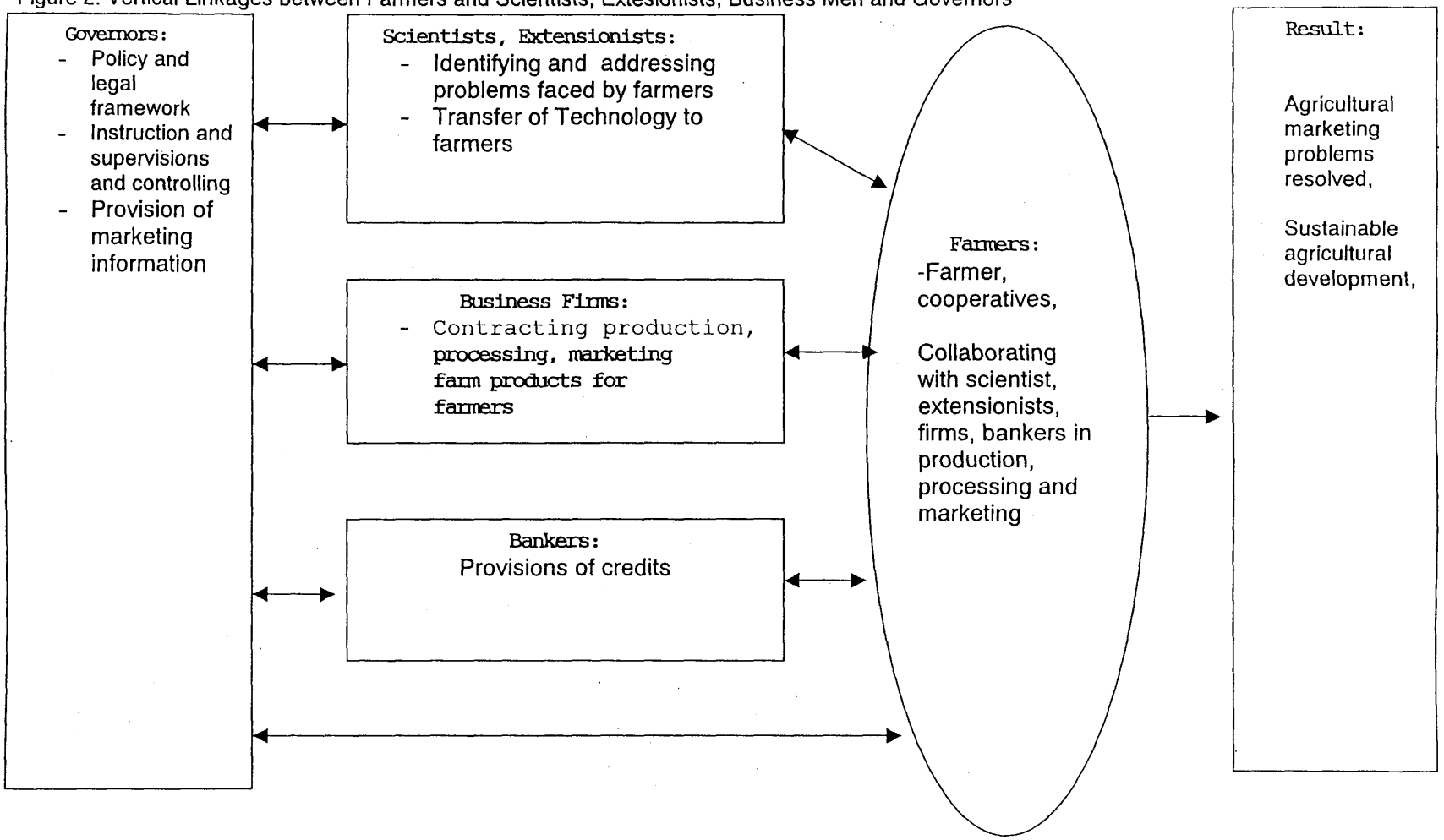
National Center for Social Sciences and Humanities, 2001, National Development Report, National Political Publishing House, pp. 24-25

World Bank, 2001, Vietnam's Development Report, p.80

Do Kim Chung, 2002, Vietnam's Agriculture and Marketing Issues, paper presented at the International seminar on Improving Agricultural Marketing under Trade Liberalization, May 20-24, 2002, Seoul, Korea

Do Kim Chung, 2001, Vietnam's Agriculture and Trade Policies: Paper presented at the Training Workshop on Trade Liberalization and Development in Vietnam Organized in Hanoi 16-19 January 2002
World Competitiveness Report and EIU, 2000
Poverty Task Force: Eradicating Poverty and Hunger, Strategies for achieving the Vietnam Development Targets
Custom General Office, 2001 and GSO 2001, Report on Market Situation in 2000
General Statistical Office, 2001, Statistical Year Book
Economic times, No. 157, issued on 31/12/2001, Success in the Starting Year, p.1
MARD, 2002, Assessment of the Ministry's Sectoral Operation in 2001 and 2002 plan
MARD, 2001, Strategy for Agricultural and Rural Industrialization, Hanoi
UNDP, 2001, Source: Poverty Task Force: Eradicating Poverty and Hunger, Strategies for achieving the Vietnam Development Targets
Vy, Nguyen Phuong, 2001, Restructuring of Vietnam's Agricultural Sector

Figure 2. Vertical Linkages between Farmers and Scientists, Extesionists, Business Men and Governors



Entrepreneurial Activities of Rural Women Leading the Region

- Fresh-From-The-Farm Activities that Bring Vigor and Sparkle to Everyone -

Aiko Kakehata
Leader
Group of 101, Nagawa Cherry Center
Nagawa Town, Aomori Prefecture

1. Overview of the region

Our Nagawa Town is at the southern end of Aomori Prefecture. It is a small farming town located about 20km from Hachinohe Station of Tohoku Shinkansen that opened on December 1 of last year. The town has 2,781 households(of which 917 are farming households) and population of 9,749 (9,250 according to prefectural resident cards). The town has been certified as a depopulated area, the population being below the 10,000 mark in the past several years.

However, Nagawa Town is blessed with beautiful nature. At the foot of Nakuidake Prefectural Park spreads wonderful panoramic views of each season, covered with exuberance of pretty cherry, peach, plum, apple and pear blossoms in spring. All kinds of fruits are being produced here, starting from cherries in early summer. We take pride in Nagawa Town being a major fruit producing center. We are also producing onions, field peas, yams and edible chrysanthemums that add color to autumn.

2. Women's activities started by forming an agricultural produce processing group

Nagawa Town is said to have the largest production of plums and cherries in the prefecture. However, plum prices are very instable with a 12kg box selling for more than 10,000 yen in some years but dropping to 300-150 yen in years of excess production. We are greatly disappointed when all the efforts we put into cultivation do not lead to income. Under the guidance of an agricultural extension center, 36 farm household wives started a processing group in 1986 with the aim of adding value to these plums by processing them and increasing their household income.

The group developed and commercialized "plum nectar," "apricot jam" and "plum soft drink" through trial and error that included peeling 500kg of plums one by one by hand due to lack of processing facilities.

These activities inspired the town office and the local agricultural cooperative to take action and resulted in construction of an agricultural produce processing center in 1988. It provided an opportunity to increase the varieties of processed goods and improve their quality. By 1990, 5 processing groups and Nagawa Town Local Produce Research and Development

Promotion Center were established in Nagawa Town.

3. Birth of Group of 101 and opening of Cherry Center

We were working out of a sheer desire to develop processed goods and increase our income. However, we did not have any fixed marketing outlet, and sales through events alone did not lead to improvement of income.

Agricultural produce was still being wasted in large quantities. So we started to dream about opening a "farm household mother's shop" so that such produce could be fully utilized for improving income and earning allowance for mothers.

We obtained support from the town office and the local agricultural cooperative in realizing this dream, visiting each household at night with the target of recruiting 100 female members and attending evening discussions to convince and obtain understanding of their husbands. Although previous activities were mostly dependent on men, voluntary efforts of women such as word-of-mouth and circulation of prospectus bore fruit and led to inauguration of Nagawa Cherry Center Group of 101 in December 1991. We also succeeded in realizing the direct sales store in the producing area in the form of Nagawa Cherry Center by utilizing the Structural Policy Promotion Model Village Improvement Program.

Looking back, we encountered enormous difficulties in reaching our target of recruiting 100 members for this pioneering project, as in local communities spread bad rumors such as "It's not going to last more than 3 years at the most," and "It's like throwing away the 30,000 yen enrollment fee." Nevertheless, we gained from our pain and were able to celebrate our inauguration with 86 members. I still remember the opening on that light snowfall day of December 25th, Christmas Day. Wide varieties of produce and processed goods filled the shelves and the store was packed with customers. The memory of that moving experience is still fresh in my mind as if it took place only yesterday.

Our original goal was to achieve annual sales of 20 million yen. However, we went far beyond that goal after several months and reached the sales of 120 million yen in our first year. We reached our scheduled membership of 100 soon after people became aware of out results. Today, people are willing to pay the enrolment fee of 300,000 yen but cannot join unless there is withdrawal from membership.

4. Fresh-from-the-farm activities that realized our dreams

1) Farm household mothers playing the leading role in operations

The activity that started out as a means to earn some allowance money for mothers by selling sub-standard produce has evolved into an operation carrying more than 200 varieties of standard produce, gift items, processed goods of all varieties of fruits and vegetables, juices and pickled vegetables, cut flowers and pot plants to meet the demands of our customers.

The center is operated on a voluntary basis by farm household mothers that joined the group by paying their 30,000 yen enrolment fee and contributing 10% of their sales as commission.

The method of sales is similar to that of flea markets in which members take turns selling items at prices being set by the members who sell the item. Under the motto of "all members take responsibility for their products and treat customers in an appropriate manner," the names of producers are indicated on the products. The center is open throughout the year from 9am to 6pm.

When the center first opened, members on duty were barely able to use a cash register, and we often had to stay up late into the night trying to match the sales figures with the earned cash. We now hire a full-time clerk to do the accounting with a PC and use barcodes for our merchandise control. We also hire a tax accountant and security personnel. Our expenses include payments for these services, facility maintenance expenses, land rent (3 million yen/year) and 0.6% of sales that we pay to our town as the facility usage fee.

2) Our selling points are safety, assurance, freshness and low prices

Our selling points are safety, assurance, freshness and low prices. For this reason, farm produce picked in the very morning of each day with morning dew remaining on it lines up on our shelves, and is very popular among our customers for the good taste despite the somewhat irregular appearance. Direct sale by producers incurs no shipping and distribution cost, and items are sold at 20 to 30% below public market prices.

We also follow the system of person-to-person selling so that we can offer attentive response to inquiries from our customers. Such an effort is resulting in interaction with customers in this age when food safety and confidence in it are among the most important issues, and makes the center a place for mutual understanding on agriculture and agricultural produce.

3) Sales operations have become the pillar of farm management

The work performed by these mothers had been hiden behind the work of their husbands. However, husbands started consulting their wives about which varieties of crops to grow when their opportunities to meet consumers increased after being involved in Cherry Center. The content of crops also changes, as couples talk more about demand among consumers and switch to small volume production of various crops. Needless to say, all family members are helping each other in this effort.

Located on National Highway Route 4, Cherry Center is favorably situated. We are working to use this to our advantage by selling wild vegetables that are extremely popular in spring particularly among long-distance truck drivers that buy them in large quantities as souvenirs.

Since the money from sales is deposited in each member's bank account, each one of us has been working with ideas about how to spend the money. However, the income has now become an important source of revenue for farm management rather than mothers' allowance.

Cherry Center's sales continue to increase despite the economic recession, reaching 260 million yen in fiscal 2002. It is very reassuring to know that two of our members are selling more than 10 million yen a year.

5. Regional vitalization and role of women

1) Roles of women learned through our activities

In addition to the activities mentioned above, we have had valuable experiences because of the Cherry Center. One of them was the overseas experience of participating in Aomori Japan Fair for 6 years since 1995 in which 76 of our members visited Singapore to pound steamed rice into cakes and sold processed goods there. Mothers are working hard by looking forward to these activities.

The opportunity to speak about our activities of a female entrepreneur at various places also increased as such activities were recognized. This has increased our awareness of womanhood and made it easier to obtain cooperation from people around us.

2) Working with community

Nagawa Town has been implementing economic development projects as the home of cherries since 17 years ago. Opportunities for interacting with cities are increasing among Cherry Center members, for some opened cherry orchards and others are engaged in guest house operations as part of green tourism activities.

We are also participating in town events for regional revitalization, as well as organizing 4 events on our own every year.

Last year, we received the 30th Daily Tohoku Award in recognition of our activities and won 500,000 yen as the supplementary prize. We donated 200,000 yen of this for the town's agricultural promotion.

6. Present management of our organization

Since we were groping our way about everything when we first started, we came this far by talking over all the problems that we encountered. Today, we have succeeded in establishing a firm organization and electing 1 chairperson, 3 vice chairpersons, 11 directors and 2 secretaries from our 100 members at our general assemblies. These 17 officials are re-elected once every 2 years.

We also hold our board meeting on the 10th day of every month and issue a newsletter at every meeting to communicate information to our members in the best way possible.

Directors are divided into four sections consisting of training, public relations, supplies and accounting. General meeting is convened whenever there is a serious problem in an effort to solve the problem through discussion.

Various agreements were reached during the period of these 12 years.

The following are just some examples of such agreements.

- Members that forgot to fulfil their duty pay a fine of 20,000 yen.
- Members that did not attend the monthly general cleaning pay a fine of 3,000 yen.
- Members that did not attend the general meeting without reason pay a fine of 5,000 yen.
- Members that received 3 complaints from customers are prohibited to sell their items for 3 months.

- Those selling their items outside of the Cherry Center are prohibited to sell their items for 3 months if they make a shipment before 5 am. (The reason we have this rule is to have our members sell morning-picked fresh items at our center.)
  We have strict penalties so that our customers can purchase Cherry Center products without any concern.

7. Towards the future

Fresh-from-the-farm activities have been growing rapidly amidst the difficulties experienced by farmers. Rural areas have treasures they can offer from abundance of nature. Fresh-from-the-farm activities will continue to grow as long as they engage themselves in activities based on trusting relationship with consumers.

We hope to make Cherry Center the foundation of our activities and see it as purpose in life, take good care of our friends and be engaged in fresh-from-the-farm activities for a long time with the help of our family members.

COUNTRY PAPER ON

LINKING FILIPINO FARMERS TO MARKETS: THE ROLE OF FARMERS ORGANIZATION[1]

PACIENCIA M. BAGTAS

Agribusiness and Marketing Assistance Service (AMAS)

Department of Agriculture

Elliptical Rd., Diliman, Quezon City, Philippines

INTRODUCTION

Marketing is a critical aspect in agribusiness. Linking atomistic producers with buyers goes through a development process to achieve sustainability. One must have a clear understanding of the marketing system of a particular product or commodity and differentiate commodity characteristics. Products go through layers of market channels to consolidate volumes and move from the supply areas to the demand areas up to the point of consumption. Marketing is not confined within juridical boundaries. It goes beyond provincial, regional and national boundaries. Trading may occur within the province, between cities, regional or intra-regional or between countries. Supplies may be sourced from a cluster of barangays, towns, provinces that may belong to different regions depending on the transport or marketing system. The critical aspect in marketing is

[1]Paper presented during the APEC ATC Workshop on Linking Farmers to Markets: The Role of Farmers Organization held in Tokyo, Japan on March 11-14, 2003.

the clarity in the pricing and delivery agreements as ownership of the product changes from one channel to another.

In addition, other support services e.g. farm to market roads, postharvest facilities, financing, substantial contribution and vital roles of farmer organizations, farmer cooperatives, private sectors, etc. makes marketing of agricultural produce a viable venture.

AGRICULTURE PERFORMANCE (JANUARY-DECEMBER 2002)

Agriculture posted a 3.69 percent growth in 2002. Notwithstanding the threat of the El Niño weather phenomenon, all the sub sectors posted gross output increases. The gross value of agricultural production was estimated at P617.9 billion at current prices, representing a 7.38 percent increase over last year's record.

The crops sub sector managed to grow by 1.39 percent. Crop farmers weathered the uncertainties of the times and carried on with their production activities. Palay, which accounted for more than 16 percent of this year's agricultural output, came up with 2.44 percent increase in production this year. The sub sector gained the most in terms of gross receipts. It recorded a 10.44 percent increment over last year's earnings with gross output valued at P305.4 billion at current prices.

The uptrend in livestock production was sustained as 2002 registered a 4.39 percent increase in output. Save for the minimal decrease in cattle production, output gains were noted in all the

livestock components. The sub sector grossed P110.8 billion at current prices, up by 4.21 percent this year.

The poultry sub sector expanded by 6.13 percent. Production of chicken and chicken egg continued to move upward. Prices went down, thus, the deceleration in the growth of the sub sector's gross earnings. At current prices, the sub sector obtained P88.6 billion, representing a 3.48 percent gain over last year's level (85.6 billion).

The fishery sub sector expanded by 6.77 percent this year. Commercial fisheries and aquaculture provided the big push for fishery growth with output increments of 6.64 percent and 9.65 percent, respectively. The sub sector's gross earnings stood at P113.1 billion at current prices and registered a 5.78 percent increase this year.

CURRENT AGRICULTURAL MARKETING IN THE PHILIPPINES

In the Philippines, marketing of major agricultural products has different approaches by which the farmers' produce reach their end-users. These approaches include the institutional approach, functional approach and commodity approach.

Under the **institutional approach**, commodities are marketed through the different government agencies and / or private institutions, mostly farmer cooperatives or federations. With this approach, the number of market channel is reduced, allowing the farmer better returns on his investment, as his cost of sales is accordingly reduced. The **functional approach** is based on certain

value-adding services or activities undertaken in contract-growing agreements between farmers and buyers. These activities include grading, packaging, storage, processing, and even market intelligence and information. The most common and traditional is the **commodity approach** where commodities are classified into major product groups like grains, fruits and vegetables, livestock and poultry, and fish and marine products. Under this approach, producers are linked to wholesalers who distribute to central markets, retailers, and the ultimate consumers.

Agricultural marketing in the Philippines is still dominated by the private sector. The level of government intervention ranges from licensing, regulation to direct intervention, varying according to the degree of importance of the commodity to the national economy. Rice and corn are marketed through both government and private channels and participation. Livestock and poultry marketing are undertaken by private entities ranging from small individual producers to big and / or corporate commercial growers and raisers. Fish and marine products marketing are dominated by private commercial operators with large fishing vessels and / or state-of-the-art processing and storage technology and facilities. Crops like onion, potato, and tomato are traded on volume through private channels and distributed nationwide. Thus, although high-value crops are not grown commercially, institutional marketing has been established for these. For some fruits like pineapple, only a small volume is institutionalized,

because the bulk of its production is handled by multinationals. The government intervenes more strongly in the marketing of the country's basic staples, rice and corn.

Despite the trade liberalization and globalization, agricultural marketing in the Philippines is still governed by the traditional infrastructures although this time, the entry of more and new market players was observed. The marketing channels and infrastructures have remained practically unchanged.

- **Participants in Agricultural Marketing**

  The channels or chains participating in the agricultural marketing system includes private traders, farmer organizations and cooperatives and government agencies/institutions (David, 1994). Classification of main players/channels based on their activities are:

  - ***Broker*** - one who acts as the intermediary between the producer and the wholesaler in return for a commission
  - ***Wholesaler*** - one who buys in large quantities and sells in bulk to other traders, retailers, wholesalers and industrial users and processors
  - ***Wholesaler-Retailer*** - one who buys in fairly large quantities and sells to other traders and / or directly to end-users
  - ***Retailers*** - one who sells to the ultimate consumer or end-user; the quantity of his purchases is usually much smaller than that of the wholesaler. Buys products for resale directly to the

ultimate consumer of the goods, serves as the producer's personal representative to the consumer

- ***Trucker*** - a producer or middleman who brings the commodity from the province to the market place by land through a truck
- ***Shipper*** - also known as viajero usually procures commodity from the farmers to the barrio agents, for shipment and resale to distant places
- ***Exporter*** - one who sends goods for sale to or consumption in foreign countries
- ***Processor*** - one who buys certain commodity in bulk for processing, and transforms such commodity into other finished products.
- ***Institutional Buyer*** - one who buys for the institutional or industrial consumption, i.e. hospitals, restaurants, dormitories, hotels, etc.

- **Marketing System by Commodity Group**

Grains Marketing System

1. PALAY / RICE

Due to the economic importance of rice, the government has continuously tried to enhance rice productivity through price support and supply stabilization schemes, which have direct bearing on the rice marketing system. There are two distinct channels through which rice is marketed to end-users:

Private Sector – Generally, palay passes from the farmer-producer to the rice millers through either middlemen such as assembler-wholesalers or commission agents. The assembler-wholesaler may also opt to sell palay, after having it customed-milled, to wholesalers and /or retailers. In some cases, the farmers follow a more direct route, where palay is given to the wholesaler-retailers or directly to retailers as loan payment. Palay can change ownership several times during the marketing process. It can move from one miller to another without being processed or wholesalers can buy from other wholesalers and resell to another wholesaler or wholesaler-retailer, whenever they find the transaction profitable and less demanding than their usual marketing functions. The traders usually own a vehicle to transport the farmers' produce to the mills. Buying stations are established in areas, which are relatively inaccessible in terms of milling facilities. The millers buy the grains from the assembly trading or buying stations. Farmers are nonetheless encouraged to sell directly to millers for better price of their produce. And, now that they are mostly organized, farmers sell their produce to the millers directly for better prices. The millers bring milled rice to the markets or trading centers or the organized farmers set up their own post-harvest facilities, consolidate their members' produce, process them, and sell them in their cooperative stores.

- ***Government Sector*** – The National Food Authority (NFA) as the national marketing arm of the government is tasked to stabilize farm and market prices of palay and rice. It also ensure supply stability and accessibility of the staple. This is done through an effective buffer stock management and adoption of support prices. At the start of the main crop harvest season, NFA sets up buying stations in strategic areas, and organize mobile procurement teams at the farm sites. The government buys palay at a given support price to give farmers better returns on their investment, and push farm prices up.

2. CORN

Like palay, the local marketing system of corn grains involves many market players before the commodity reaches the ultimate consumers. These players include the farmers, local assembly traders, local millers, grain wholesale dealers, wholesale millers, feed millers and retailers. Part of the produce used to be procured by the government through NFA at government support prices. The current policy of the government now is to cease direct intervention in corn marketing. Among these corn buyers, the wholesaler-assemblers handle the bulk of the farmers' produce. They buy 50 percent; local millers, 45 percent and the rest are sold directly to retailers and consumers. Commercial corn millers who traditionally mill corn grains for human consumption into corngrits sold to retailers based near the market places. Corn distributors pick up

white corngrit shipment from the port using their own trucks and labor, and stock the commodity in their warehouses. The traders maintain their own network and monitor wholesale prices of corngrits through telephone and SSB/VHF radios.

High-Value Crops Marketing System

1. FRUITS

Banana and mango have long dominated the country's fruit industry. They are produced and consumed in big quantities, and are the country's top fruits exports.

a. MANGO

The distribution system of mango is somehow complicated. It has several marketing channels: assembler-contract buyers; wholesalers; processor-retailers; wholesaler-exporters; and agents. About 96 percent of mango production is by small backyard farmers. The trader who contracts for a farmer's produce, provides him with production inputs and credit for his financing needs. The trader deducts the production expenses from the price he pays to the backyard farmer at harvest time.

Another system involves the volume purchase of ready-to-harvest crops, which are negotiated by traders with the farmer at an agreed price on a per-lot basis, regardless of the number of pieces or weight.

In the local market, the wholesaler is the most important buyer among the contract buyers. He brings the produce to the retail and wholesale outlets in the public markets or stores, which sell directly to consumers. In the export market, exporter negotiates with the foreign buyer who purchase in bulk and settles payment as soon as the products are shipped.

In particular, mangoes produced in Visayas and Mindanao, are brought to Manila prior to their shipment to foreign markets. They are significantly priced higher due to added transport cost.. For the improvement of Philippine mango's competitiveness in both the local and world markets, the AMAS of the Department of Agriculture initiated the creation of the Philippine Mango Development Council (PHILMANGO). It is a big step towards the orchestration of strategic interventions for the mango industry.

b. BANANA

The channels of distribution system for banana includes assembler-wholesaler, wholesaler-retailer and retailers. The assembler-wholesaler buys banana from the farmers then sells to wholesaler-retailer who further channels the banana to retailers for sale to consumers. The simplest system is when the producer sells directly to either the processors or to exporters.

Banana marketing in the foreign market is done by maintaining marketing and growing agreements between the local grower-exporter and his multinational partner. This multinational partner

serves as the marketing arm for a specific foreign market of the grower-exporter's produce.

2. Vegetables

Vegetable marketing is difficult, because of the crop's high perishability, short storage life and price fluctuations. The movement of vegetables from the production to consumption area is also complex, since it involves about three to six channels. From the farmer, the produce goes to wholesaler-trader who sells to another wholesaler, who in turn, peddles it to a wholesaler-retailer who disposes it to another retailer before it reaches the consumer. Vegetables are traditionally bought by traders at low prices from farmers to whom they have extended credit assistance during planting period. Other traders who have established contacts procure the commodity from sources who offer relatively lower prices. Trading is usually on cash, consignment or installment basis. There are some vegetables which are traded in volume and distributed nationwide, but are not grown commercially in all production areas. These include onions, potatoes and tomatoes.

a. Onions

About 66.5 percent of the onion goes to wholesalers, 21.9 percent to assembler-wholesalers, 10.9 percent to wholesaler-retailer, and 0.7 percent to retailers. Grading and size standardization at the farm level are practiced in onion marketing. The cleaning/drying process involves removal of the

outer layer of the skin and sundrying to avoid soft rot. Packaging is done either on red nylon sacks with a capacity of 20-28 kg. or a wooden crate with 25-kg. capacity. Trading is done in collection center normally on cash basis.

b. Tomato

Large volume of tomato is channeled to contract buyers estimated at 68 percent, wholesaler receives 12 percent share, while 10 percent passes through the assembler-wholesaler. About 4 percent and 6 percent go directly to the wholesaler-retailer and retailer, respectively. Common practices in tomato marketing include washing, grading and packing. Grading is done according to variety, size and appearance. Bamboo baskets are the most commonly used containers, although wooden crates are also used, especially for distant shipment.

c. Potato

This is the most preferred highland crop, because of its longer storage life and stable price in the market. Farmers channel their produce to wholesalers who account for 54 percent; wholesaler-retailers, 44 percent; and retailers, 2 percent. The marketing channels include assembler-wholesalers, financier-wholesalers, agents, wholesalers, wholesaler-retailers and retailers before the product reaches the consumers. Grade standards and proper handling prior to marketing are also observed in potato trading, and include sizing, washing, packaging into red mesh bags with

20-28 kg. capacity or wooden crates with 25-kg. capacity. As in most crops, potatoes are picked up from collection centers and payment is done in cash, credit and/or consignment.

3. Livestock and Poultry Marketing System

Backyard growers/raisers still dominate the country's livestock and poultry industry, despite the increasing number of commercial farms. In backyard farms, the market group for live hogs consists generally of small producers and a network of middlemen established by big Metro Manila-based financiers or hog and/or meat dealers. Most commercial farms, on the other hand, sell to hog or meat dealers and private traders.

For poultry, the marketing system involves the poultry grower who transacts business with the traders/agents, wholesalers, wet markets, supermarkets, hotels and restaurants, and processors/integrators, or even contract growers entering into agreements with the processor/integrator. With the development of commercial farming, the poultry industry has gradually shifted from small poultry raising to intensive commercial operations.

The distribution system for cattle is the least sophisticated, although from the small farms, the flow usually involves many middlemen. The bulk of transactions are channeled from the farmer-producer to the shipper or transporter, through auction markets.

4. Fish and Marine Products

Milkfish is one of the most commonly traded fish in the country. Its marketing system involves four types of intermediaries. These are the brokers, wholesalers, wholesaler-retailers and retailers. The broker and wholesalers are the major outlets of milkfish producers. The minimal volume left with the producer are being sold to cooperatives, wholesaler-retailer, retailer and consumer. The price at which producers dispose of their product is usually determined by the result of the bidding participated in by different types of buyers. The bidder who gives the highest quotation receives the producer's catch.

MAJOR CHALLENGES/PROBLEMS IN AGRICULTURAL MARKETING

The country's agricultural marketing has been beset with various problems and challenges. Such problems affecting marketing efficiency in agriculture can hardly be said to be purely marketing in nature, as they have also been observed to be problems in production. Generally, all agricultural commodities are produced under competitive conditions by relatively small-scale farmers scattered all over a fragmented archipelago. Scattered as well, are the consumers or end-users. Following a broken geography, centers of consumption are distantly separated from the regions of production. The farmer-producer or even organized farmer-producers cannot efficiently move their produce given the winding route they have to take to the markets, and the cost of doing so vis-à-vis their economic inadequacies. Thus,

they are often at the mercy of middlemen who bridge the cost and distance of the markets to the production areas. Offering a wide range of services necessary in the flow of food supply such as credit, transportation, assembly, processing, storage, wholesaling and retailing, these intermediaries become indispensable. Producers of primary commodities often take the short end of a buyer's market (which usually characterizes agricultural trade), selling their goods at whatever price the buyer commands. This becomes more pronounced when harvest time comes, and the farmer, ill-equipped with the necessary post harvest facilities and even technology, is forced to sell his perishables as soon as possible.

The marketing channels can be as many as six or eight. Most of the country's processing plants are usually located in more urbanized areas and farm products from the rural areas would have to be transported to be processed. Along the way, more expenses are incurred. Middlemen are often attributed with the higher market prices of agricultural commodities, as they add costs more than the cost of their value-adding activities. Problems in agricultural marketing can be summarized as:

- Inadequate post-harvest and marketing facilities and infrastructures such as appropriate storage and efficient and cheap transportation facilities, aggravated by poor farm to market road conditions;

- Inadequacy of resource data and other market information to pursue a more meaningful program for resource utilization and management;
- Lack of grades and standards. The quality of the produce can hardly meet local standards, more so with export requirements;
- Lack of ready market to absorb the produce at prices that allow the producers better returns on their investment;
- Inefficient and ineffective marketing and distribution system; and
- Lack of credit facilities available to the market players.

Other marketing concerns or issues that are peculiar to a commodity include the inability of the concerned industry to shift from the traditional to one that can address the current demands of the global environment.

STATUS OF PRODUCER ORGANIZATIONS IN THE AGRICULTURAL PRODUCE MARKETING

In the Philippines, cooperative are categorized according to membership and territorial consideration. In terms of membership, cooperatives are categorized into:

Primary – the members of which are natural persons of legal age.

Secondary – the members of which are primaries.

Tertiary – the members of which are secondaries upward to one (1) or more apex organizations.

In terms of territory, cooperative is categorized according to areas of operations which may or may not coincide with the political subdivisions of the country.

The cooperative has two kinds of members: the regular and associate members.

A **regular member** – is entitled to all the rights and privileges of membership as stated in the Cooperative Code and the coops by laws.

An **associate member** – has no right to vote and is entitled only to such rights and privileges provided by the cooperative's by laws.

The Cooperative Development Authority (CDA) is the only government agency mandated to register all types of cooperatives.

As of 30 November 2002, the multi-purpose agri and non-agri cooperatives registered the highest cumulative total of 34,107 and 20, 222, respectively. (Figure 1)

On the aggregate, Region VIII represents 26.59% of the total operating members followed by Region XI and Region III with 13.18% and 11.82%, respectively. (Figure 2)

The registered producer cooperative ranked sixth with cumulative total of 1,168 seventy five (75) percent of which are NATCO members. These cooperatives undertake joint production whether agricultural or industrial. Economically, they help to accelerate agricultural development through credit delivery, supply of production inputs, marketing and processing of farmer's produce. They operate on the principle of peoples participation and process built-in systems for

sustained resource building and continuous training not only in organizational matters but also in management and technical aspects of various projects.

ROLE OF SUPERMARKETS AND AGRO-PROCESSORS IN THE MARKETING OF AGRICULTURAL PRODUCE

Latest ACHIENELSEN study on "Shoppers Trend Asia" which covered Japan, Singapore, Korea, Malaysia, Thailand, Indonesia and the Philippines revealed that despite huge investment in real estate, formats, marketing and promotion by the large local and multi-national supermarket chains, generally the shoppers (between 80-90 percent) in all countries surveyed except Japan still prefer to buy their fresh food (meat, fish, fruits and vegetables) in the wet markets.

Convenience store like 7-Eleven, SM Supermarkets, Big R, MACRO, S & R, etc. are expanding rapidly in the country. Despite all the inroads made by these supermarkets the trend of buying fresh produce and food relatively unchanged. Mr. Carlos Cabochan, Vice-President of the Philippine Association of Supermarkets reported that only a minimal volume of fresh agricultural produce (about 5% of their available stock) were absorbed by the shoppers. The food processing industry on the other hand, used to be a simple enterprise. Many enterprises operate manual and semi –mechanized systems. Some are gearing towards a fully automatic system to minimize labor input, contamination and waste. Others however, continue to be semi-automated to take advantage of the country's large and skilled labor pool, as well as to limit investments in capital equipment.

There are about 150 small and medium sized fruit processing firms in the Philippines with an estimated capacity of 60,000 metric tons of raw materials per year. The major companies are: San Miguel Corp., Del Monte Phils., Inc., Dole Phils., Inc., Diamond Star, Agro-Products, Eden Corp., KLT Fruits,., and Crown Fruits.

Moreover, the size of operations of local meat processor ranges from small backyard to large with modern facilities. The well known and bigger companies are Purefoods, RFM and Campo Carne. Domestic meat processors sell most of their produce to the local market, with only a very small portion of total production is exported.

In the past, only local companies were competing each other for the market. But because of the influx of various imported processed products in the local market nowadays, the consumers opted to buy these low-priced products.

PHILIPPINE AGRICULTURAL WHOLESALE MARKETS

Wholesale agricultural marketing in the Philippines has remained almost unchanged in the last decade. Except for the mechanisms that the economy has set up to address and respond to trade liberalization and globalization, particularly the GATT, marketing systems and infrastructures are essentially the same, but characterized according to how things are at the production side.

Accordingly, Philippine wholesale agricultural markets have been struggling to shift from subsistence at the domestic scene to commercial agriculture for international trade. Wholesale market

players have been changing from being resource-based to science-based. Hence, mechanization, biochemical technologies, and other state-of-the-art systems are adopted gradually by the industry. Also, market players now aim not just to help the country to be self-sufficient, but to be globally competitive. Tradition has characterized the wholesale agricultural markets in the country. Located mostly in Metro Manila, these markets are the centers for trading preliminaries for particular agricultural products, usually major food commodities.

The marketing system in these wholesale markets is closely tied to the suki (frequent buyer) system. The bond between the buyer and seller is strengthened each day of trading, since commodities are personally collected by the buyers themselves. To gain patronage, assemblers/distributors offer extended credit, lasting for as long as two weeks to their suki, while others are allowed only one day deferred payment. A new buyer must establish business dealings for six months, before even a cent of credit is extended to him. Payment in cash through bank transfer is the common practice for buyers in the southern islands of Visayas and Mindanao.

There are also exporters who form a big wholesale market for agricultural produce. These exporters usually have forward contracts or contract-growing arrangements with producers, set up a collection center or buying station at the production site, provide the necessary grading, cleaning/washing and other post-harvest facilities and

transport to their warehouse or plant for further processing and packaging for delivery/shipment to their clients abroad.

KEY WHOLESALE MARKETS

Wholesale Agricultural Markets in the Philippines are in the major key cities in the country, mostly in Metro Manila. It served as the producers' and assemblers' bagsakan or drop-off points of various agricultural produce. As points of first sale, they are usually the price leaders in the areas they serve. As price leaders, these markets govern the inflow and outflow of agricultural produce in the major consumption areas, and the delivery system to the consuming households.

Terminal Market – is the place where the biggest wholesale activities or bulk-trading of agricultural commodities take place. It supplies the requirements of medium – to large-scale retail and wholesale markets in the country in the country.

Livestock Auction Market – is one wholesale market operated by the LGU or farmer organizations and businessmen for either profit or service. The most common animals traded at auction markets are cattle, carabao, swine and goat. They are offered not only for slaughtering, but for breeding and fattening as well. Sales are made through private negotiations between buyers and farmers.

Slaughterhouse – is another wholesale market where hogs and cattle coming from different pooling places are slaughtered prior to

distribution to different retail wet markets. This serves as the point of first sale to businessmen who retail to various wet market retailers.

Vegetables Trading Center - Baguio City is the main source of temperate vegetables in the country. The bulk of the farmers' produce are traded in the center. This development has helped improve the efficiency in vegetable marketing and made the commodity more affordable and regularly available in major consumption areas in the metropolis.

Central Fishing Port and Fish Market – serves as the landing area for commercial fishing boats operating in different fishing grounds. Located in Navotas, Metro Manila is the 67-hectare Navotas Fishing Port and Fish Market Complex (NFPC). Considered the largest in the Philippines and Southeast Asia, NFPC is the traditional landing place of commercial fishing boats operating in various fishing grounds. Trading at this port is usually done through auction or whispered bidding from 6:00 in the evening to 12:00 midnight, by private/commercial enterprises through their licensed brokers.

Food Terminal Inc. (FTI) Trading Center – provides facilities and services to farmers/producers, wholesalers, exporters, food processors, institutional outlets and manufacturers. The complex also serves as the trading center for various commodities such as onion, tomato, mango, dressed chicken and beef/pork meat. It owns the largest cold or refrigerated warehouse in Asia, with an area of 2.5 hectares and a rated capacity of 55,000 m^3.

GOVERNMENT POLICIES AND SERVICES THAT SUPPORT PRODUCER ORGANIZATION

Cognizant of the vital importance of linking farmers to markets, various programs and projects were formulated to carry out the process. Concerted efforts of various government agencies, financing institutions, private sectors, other interested groups, individuals, etc. contributed a lot on the implementation of government policies/ interventions/services for the improvement in the production and marketing of fresh produce.

Among others, such policies/interventions/services are as follows:

1. Republic Act 8475 or the Agriculture and Fisheries Modernization Act (AFMA)

The AFMA is a comprehensive legislation that provides for the country's blueprint for the sector's modernization and rural development. It defines the necessary policy environment and deliberate public investment stream that will transform the rural economy into one that is modern, science and technology-based, more integrated into national and international markets, thereby making it highly productive and competitive.

AFMA's major provisions include, among others, **"REFORMS AND REORIENTATION IN THE PROVISION OF PUBLIC PRODUCTION AND MARKETING SERVICES"**

a. Focus and concentration of public investment on identified Strategic Agriculture and Fisheries Development Zones

(SAFDZs), which are defined geographical areas of competitiveness and comparative advantage based on biophysical and socioeconomic endowments;

b. Crafting and execution of medium-and long-term Agriculture and Fisheries Modernization Plans (AFMPs), in full consultation with all stakeholders and based on the SAFDZs;

c. Phase-out and consolidation of directed credit into the Agro-Industry Modernization Credit and Financing Programs (AMCFP);

d. Establishment of the National Marketing Assistance Program (NMAP) that will lead to the creation of the National Marketing Umbrella (NMU) which will serve as a meeting point of the agricultural producers and processors/buyers to ensure the generation of the highest possible income for the former and ready supply of raw materials for the latter.

e. The setting up of the National Information Network (NIN), a support system that intends to strengthen the country's marketing services related to agriculture and fisheries;

f. DA-DPWH-LGU (or the Department of Agriculture-Department of Public Works and Highways-Local Government Unit) coordination in the formulation and implementation of the Agriculture and Fisheries Infrastructure Plan to include the improvement of irrigation and other rural infrastructure (post-harvest facilities, farm to market roads and ports); and

g. Adoption of product standards to ensure consumer safety and promote competitiveness of local products in the world market, through the establishment of the Bureau of Agriculture and Fisheries Product Standards (BAFPS).

2. Other laws/policy measures set by the government are:

a. Executive Order No. 226 or the Omnibus Investment Code of 1987 which provides fiscal incentives to enterprises such as income tax holidays, import tax and duty exemption, tax credit and tax deductions.

b. Republic Act 6938 otherwise known as the Cooperative Code of the Philippines (CCP) that gives fiscal and other forms of incentives specifically to cooperatives.

c. Republic Act 7308 or the so-called Seed Act of 1991 seeks to develop domestic seed industry through various strategies like regulating imports to protect domestic seed producers. Cognizant that the local seed industry could not meet the demands, a differential treatment of seeds across commodities was adopted.

d. Republic Act 7900, otherwise known as High Value Commercial Crops (HVCC) Act provides incentives to promote the production, processing, marketing and distribution of high value crops. Such law expands the coverage of the Philippine Crop Insurance Corporation (PCIC) to cover high value crops. It also empowers the QUEDANCOR (Quedan Rural Credit Guarantee Corporation)

to provide credit guaranteed. This Act also provides some fiscal incentives to HVCC producers.

e. Republic Act 8179 better known as Agricultural Tariffication Act prescribes the adoption of tariff in lieu of non-tariff import restrictions to protect local producers and agricultural products, except rice. It imposes maximum bound rates committed under the GATT-Uruguay Round on agriculture and further devised and Agricultural Enhancement Fund for agricultural products whose quantity restrictions are removed.

3. Other Support Services

1. Market Matching

The AMAS of the Department of Agriculture in collaboration with other government agencies provides the forum were farmers, farmers organizations and representatives of agribusiness firms (processors, exporters, investors, institutional buyers) meet and discuss possibilities for establishing a buyer-seller relationship.

2. Market Information Dissemination

The market information was widely disseminated through broadcast and print media. Television network and radio stations were utilized and distribution of brochures, bulletins and publications to farmers and farmers organizations, cooperatives and other interested parties is undertaken by the government agencies and private sector as well.

3. **Conduct of Training/Seminar Workshops**

Various types of training was conducted focussing on proper values, organizational and managerial strengthening, enterprise development, agricultural production, post-harvest and marketing have proven to be a critical aspect in preparing the farmers organizations to tie-up with agribusiness firms. Usually, experts on market and product development and agribusiness practitioners are invited to the workshops as resource persons.

4. **Conduct of market promotion and selling missions.**

In the pursuit of these activities, the AMAS together with farmers and private sector representatives participated in international and local trade fair, selling missions, congresses, conventions, etc. The Philippine agriculture and fishery products are showcased in one large venue to transact business and personally meet buyers. Major commodities that are being promoted practically cover the agriculture sub-sectors. This is a potent vehicle and cheapest way in establishing Philippine image as a reliable supplier of agricultural produce both in the local and international markets.

IMPACT ASSESSMENT ON GOVERNMENT POLICIES AND SUPPORT SERVICES

The following are the general observations on the impact of the country's policies and services particularly on the marketing of agricultural produce.

- Locally, the private sectors were encouraged to invest and undertake business with farmers, farmer organizations / cooperatives.
- A long term market linkage and agribusiness firms tie-up were established. These linkages have resulted in increased incomes among the farmers as well as the women engaged in agricultural production and marketing.
- Aggregate agricultural production increases were recorded more of which comes from the fishery subsector as well as traditional and non-traditional crops (e.g., fruits, vegetables, nuts).
- On the average, farm gate prices of agricultural commodities increased by 3.56 percent.
- Demand for agricultural produce had significantly increase due to substantial supply requirements of agribusiness companies and institutional buyers (e.g., hotels, supermarkets, restaurants, etc.)
- Despite El Nino/La Nina phenomenon and the Asian financial crisis, there are indications that trade reforms have had a positive employment impact on the agricultural sectors especially on the livestock and poultry. Although in the overall, it was cited that a small drop in agricultural employment, it is more than compensated by the new jobs created in the industrial sector.

- Actual agricultural performance does not provide a clear basis for determining the impact of the various policies and support services on farm produce exports. Positive exports effects are seen mainly in the manufacturing sector.

CONCLUSION AND RECOMMENDATIONS

Agriculture continues to be one of the aces of Philippine economy in maintaining country growth and sustainability. In the face of global market competition, though various policy reforms, support and extension services and interventions, the country still has the urgent need to progressively move forward and advocate a market driven and farmer-focused agribusiness system in the agricultural produce. It would entail several imperatives and political will to shape up and do double time to address the on-going concerns of the agriculture to include among others, is the linking of farmers to markets.

LINKING FARMERS TO MARKETS: THE ROLE OF FARMER ORGANIZATIONS

COUNTRY REPORT

(PAPUA NEW GUINEA)

Presented by:
Robert Paruruman Lutulele
Fresh Produce Development Company
P.O. Box 1290
MT. HAGEN, Papua New Guinea

At the:
APEC ATC Workshop, Mita Kyoyo Kagisho, Tokyo, Japan.

12-14th March 2003

TABLE OF CONTENTS

ABREVIATIONS AND ACRONYMS

ACIAR	Australian Centre for International Agricultural Research
ADF	Associated Distributor Freezer
BCL	Bougainville Copper Mine
CCEA	Cocoa and Coconut Extension Agency
CIC	Coffee Industry Corporation
DAL	Department of Agriculture and Livestock
DPI	Division of Primary Industries
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FPDC	Fresh Produce Development Company
FPPP	Food Processing and Preservation Programme
GDS	German Development Service
NARI	National Agricultural Research Institute
NGO	Non-Government organization
PAU	Pacific Adventist University
PNG	Papua New Guinea
PJV	Pogera Joint Venture
VAT	Value Added Tax
VEW	Village Extension Workers
WTO	World Trade Organization

ACKNOWLEDGEMENT

Firstly I wish to sincerely thank the Japanese government through Mr. Itaru Minami and his staff, namely Mr. Tsuyoshi Shionoya of the Ministry of Agriculture, Forestry and Fisheries (MAFF) for their financial support, which enables me to attend this workshop. I also would like to thank Mr. Masahiro Fuji, the officer in charge of the ATC WG workshop and his staff, for organizing the logistics for my travel and accommodation.

In, PNG I would like to thank the Deputy Secretary Mr. Sam Lahis and the director of Food Security Division of the Department of Agriculture and Livestock for extending the invitation to FPDC to attend this workshop.

In, FPDC I would like to thank the General Manager of FPDC for nominating me to attend this workshop and for commenting and editing this paper. I also would like to extend my sincere appreciation to my other colleagues in FPDC and DAL PISS and importantly farmers and other stakeholders who assisted me with information directly or indirectly.

Finally and not the least, I wish to acknowledge Mr. Mohamed Iqbal, the retired expert for the FAO project TCP/PNG/0165 for figure 1 and his insights on the marketing chain and traders situation in PNG.

1.0 INTRODUCTION

Market oriented gardening in Papua New Guinea (PNG) is smallholder based and is therefore very much subjected to prevailing climatic and socio-economic factors affecting the country. Given the nature of the horticultural crops grown for markets, most of which are introduced perishable crops, the complex number of problems relating to agronomic, post harvest, marketing and transport posed higher risks to their production and marketing.

Farmers are predominantly small and therefore produce small surplus volumes most of which are often scattered and inconsistent both in terms of supply and quality. The problem is further compounded due to limited market places, a small number of wholesalers, lack of market infrastructure, lack of market information, limited knowledge about marketing and post-harvest management and lack of farm management skills amongst both farmers and extension staff.

Taking cognisance of the above situation, the government of PNG, through the Department of Agriculture and Livestock (DAL) and with the initial support of the New Zealand government, instituted the Fresh Produce Development Company (FPDC)[1], to take the lead role of fostering the development of a sustainable fresh produce industry in the country in 1989. Since than, FPDC, through its various component programmes is working together with other line agencies and with the financial and technical support of the New Zealand government, the German Development Service (GDS), the Food and Agriculture Organization of the United Nations (FAO) and recently ACIAR (Australian Centre for International Agriculture Research) to help address some pertinent problems on production and marketing of Fresh Produce in the country.

Its focus is to establish linkages with the main stakeholders of the industry such as producers, wholesalers, retailers and the supportive institutions such as transport companies and agriculture input suppliers to access information that can be used to improve the environment for the development of the industry. It realises that, the fruit and vegetable industry in PNG is dependent to a large extent on small farmers, most of which are resource poor and whose production is disjointed. Their profitability is therefore a matter of concern that must be addressed if the industry is to remain sustainable.

This report gives an overview of the status of the industry at present. It describes and discusses to some extent the marketing and distribution chain, changes that are happening in it, the challenges faced by farmers and how they are adapting to them, the status of the producer organizations, the government policies and services that support the producer organizations and

[1] FPDC is a semi-private government organization whose role is to foster the development of a sustainable fresh produce industry in PNG. It does this through its various component programmes such as the Market Support (MSP), Potato (PP), Crop Production (CPP), Gender and Youth (GYP) and the Food Processing and Preservation (FPPP). Its head quarter is in Mt. Hagen and has branch offices in other centres in Goroka, Lae, Rabaul, and Port Moresby.

an evaluation of their effectiveness. Finally it gives a concluding summary of the aspects discussed above.

2.0 DISTRIBUTION SYSTEMS OF FRESH PRODUCE

In PNG, like in many other third world countries, marketing and distribution of horticultural crops is channelled either through the formal or the informal marketing and distributing systems. It reaches consumers, directly from the growers or indirectly through the formal marketing and distribution chain (see Figure 1). Farmers direct sale to consumers includes sale at farm, roadside stalls, sales to mining and construction companies and through open urban markets. They also sell limited volumes to hotels and restaurants. The open air markets have been set up to provide an opportunity especially to the farmers with easy access to the urban markets to bring their produce and sell direct to consumers. Though in almost all these markets, quite a significant number (varying from 20 percent to over 60 percent) of traders[2] or dealers are operating. These markets continue to be good outlets for the farmers.

Growers often decide to sell their produce through either of the marketing and distribution chains, on the basis of several factors of which price is the most predominant, followed by market accessibility. Farmers are often prepared to take risks[3] to sell their produce to markets further away from their localities if the price is perceived to offer higher margins of return. On this basis, they will then proceed to organize transportation of their produce to these respective markets. In instances where accessibility to markets is made difficult by unreliable transport and to some extent higher freight costs, growers will tend to sell their produce at the nearest local markets or through the formal system via the nearest wholesalers, retailers or end-users[4]. This is also true in situations where supply exceeds demand.

Thus the formal markets, especially the wholesalers are always left at the mercy of growers in periods of short supply, mainly caused by seasonal weather patterns. Under such circumstances, growers always shop around for better prices and in most instances sell their produce to the highest bidder. Wholesalers are the worst affected because they cannot compete with consumers, retailers or other end-users in terms of price. Consequently their supply volumes are affected. On the other hand, the wholesale markets make even with the growers under situations of market gluts, by offering low prices and demanding better quality of produce. Growers tend to lose more when the situation is prolonged as climatic pattern favours continuous production.

---

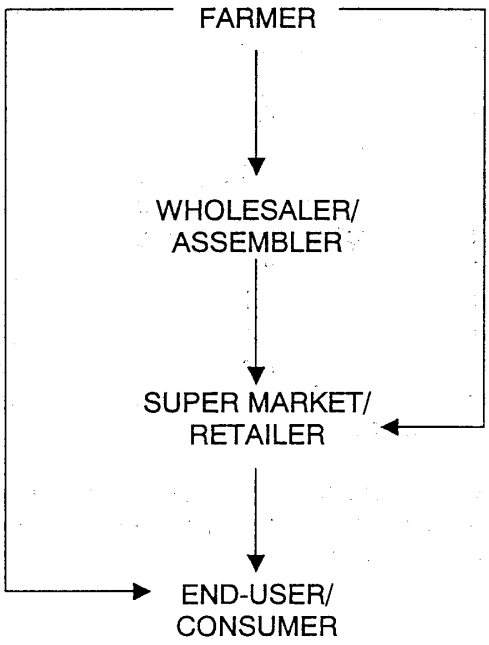
[2] Traders are those individuals who buy fresh produce (bought from farmers) or who are semi-commercial producers who consolidate and sell produce to retailers or consumers in open urban markets in urban centres. They are also referred to here as dealers.

[3] Risks involved post harvest losses, loss in transit due to vehicle accidents along the road or loss of ships at sea, theft, high freight costs, opportunity costs, fluctuating prices.

[4] End users are fast food restaurants, restaurants, hotels, guest houses, institutions, catering companies such as in mines, universities and other educational institutions

The real winners in this game are end-users and to some extent retailers. They dictate the prices of fresh produce in most instances. This is because end-users and retailers can get their supply either, from the wholesalers and distributors or directly from growers, whichever the situation permits. End-users and retailers in this case, shop around for lowest prices amongst or between growers and wholesalers and settle for the lowest bidder. Because of this, they set the overall market prices and trends of which the wholesalers and to some extent growers tend to live with. Unfortunately for the former, the latter does always have the option to sell directly to consumers at the open informal markets.

Figure 1: Generalized Marketing Channel for Fruits and Vegetables in Papua New Guinea



Source: Mission Report (24Nov-4 Dec 2002) by Mohamed Iqbal, FAO consultant.

2.1 Major Buyers.

Formal Markets:

Wholesalers and distributors

A total of six major fresh produce wholesalers operate in the country. Two operate out of Port Moresby. These are the Green Fresh who buys the bulk of its fresh produce from the highlands and the Pacific Adventist University (PAU) farm, which specialises in providing lowland type of fruits and vegetables to formal markets in Port Moresby. The remaining, are all based in

the main area of production in the Highlands. Enga Vegetable Depot buys and consolidates fresh produce in Enga province for the Pogera Joint Venture (PJV) mining company. Alele Farm Fresh and Vegmark are based in Mt. Hagen with clearing houses in Port Moresby. They both buy a wide range of fresh produce from farmers in Western Highlands, Enga, Southern Highlands and Simbu. While the former has its own trucks and cooler containers thus enabling it to transport larger volumes at low unit costs to its contract markets, the later specializes in buying reasonable volumes of mostly perishable crops like broccoli, cauliflower, capsicum and asparagus and airfreights them to its buyers in Port Moresby and other mining centres such as PJV. Kelta potatoes on the other hand specialises in buying and distributing potato. It has a primary consolidation depot in Mt. Hagen and has lately opened a deconsolidation depot in Port Moresby. This development has resulted in an increase in volume purchased from farmers as a result of an increase in its market share of ware potato in Port Moresby. The Associated Distributors and Freezers (ADF) was a major buyer of fresh produce in Goroka but unfortunately it closed down in January this year. The reasons for the closer are unknown at this stage.

Supermarkets/Retailers.

Supermarkets seem to be the largest market outlets in the formal sector, for fresh produce in the major urban centres in the country in general and Port Moresby in Particular. According to Peter (2001), supermarkets dominate the formal market demand share for fresh produce, with AD Freezers once being the most dominant as a result of the forward market integration system that it adopts. Through this approach, competition with dealers was minimised. Unfortunately for the fresh produce industry in the country it decided to close its wholesale in the Highlands.

Other major supermarkets and retail outlets in Port Moresby and other urban centres buy their fresh produce supplies from other wholesalers or directly from individual dealers. This system contributes to the competition for markets with the formal retail sector by the wholesalers and farmers or dealers.

Mining and Exploration Companies.

This market constituted, if not a potentially larger market share, second to supermarkets and retailers in the volume of fresh produce bought. Unfortunately, about 90 percent of their total requirement is met from imports. The main reason cited being the problem of inconsistent supply.

Hotels/Guesthouses and Institutions

End-users provide a market outlet for fresh produce whose proportion is likely to be between the volume purchased by the wholesalers and mining companies. Peter (2001) observed that Hotels, guesthouses and institutions, purchase all or some of their fresh produce requirements from open urban markets. Guesthouses and hotels purchase between 5 to 95 percent of total fresh produce requirements from the imported produce or local open fresh markets, while 20 to 50 percent from local wholesalers and retailers. Most organise more than one contract suppliers who are individual dealers, each

specialising in supplying one or more of the fresh produce types. Most of these dealers buy directly from individual farmers within their localities.

Restaurants/Fast Food Outlets.
The fast food outlets in the main urban centres have ballooned in numbers over the last nine years. They provide the main outlet for potato and to a lesser extent fresh vegetables. Changes in consumer's life style seem to favour this consumption trend.

Informal Markets.

Informal markets are the major outlets for fresh produce in the country. The volume of fresh produce sold through them, is estimated to comprise more than seventy percent of the total volume of fresh produce traded across the country annually. These are briefly discussed below.

Open Markets.
Open roadside and urban markets are predominant informal market outlets found almost through out the country. Women, who are mostly producers and in other instances, are traders or dealers, dominate almost all these markets. Unlike the formal market sector where introduced temperate vegetables dominate the volume of fresh produce sold, traditional fresh vegetables and food crops in the open urban markets is estimated at 80 percent of the total volume of fresh produce sold. The remaining would be locally produced introduced fruits and vegetable species. This indicates that majority of consumers that frequent the open markets are low to middle class wage earners.

Dealer/Traders.
Dealers or traders have lately evolved to provide another alternative informal market source for farmers. According to Mohamed (2002), the level of traders in the many open urban markets ranged from 20 to 60 percent.

In Port Moresby, the dealer's have become an established alternative market for fresh produce from the Highlands. Women, especially unemployed mothers and youths are involved here. They buy fresh produce in bulk from individual suppliers at the wharf or informal central markets in Port Moresby and resell the same at the suburban markets or the main urban markets in Port Moresby. According to Peter (2001), the dealer type market has reached a certain degree of maturity where an organized transport system provides freight services to dealers. Dealers purchase produce in bulk and organize transports to transport their produce to designated sub-urban markets across the city. The buyers jump on PMVs and follow the trucks to these respective specified locations.

2.2 The Role of Markets

Formal markets play the important key role in dictating the direction and the rate of transformation of the local Fresh Produce Industry. Markets are like bridges linking the producers to consumers and vice versa. Through the

markets, the type and the quality of produce demanded, reaches the consumers at a predetermined price. On the other hand, they determine how much money should growers get, and also convey to them, the consumer requirements in terms of volume and quality preferences, by demanding growers to meet them. With better prices and information on demand and consumer preferences, they keep the growers happy and influence their decisions to adopt and utilize production and post harvest technologies that will consistently maintain or improve consumer satisfaction. Consequently consumer base increases concurrently with increase in consumer satisfaction.

2.3 Trading Norms

Given the lower significant status of fruit and vegetable industry in PNG relative to other important agricultural export commodities such as coffee, cocoa, palm oil and coconut, the government nor the industry has yet to put in place, trading norms that will govern the trading practices and the produce offered for sale within the industry. Though people are aware of standards and practices in the trading of fresh produce there is no real commitment from all stakeholders to ensure that the industry abides by these norms. FPDC ideally would be the key government institution to regulate and monitor the trading norms for the benefit of the fresh produce industry. Funding and human resource would be a critical factor by FPDC to effectively implement these norms.

In the absence of proper trading norms, the developments in the industry are dictated by those stakeholders with more influence other than the main market forces of supply and demand of which price is largely a function of these two. Quality may have, to a lesser extent influence the consumer preferences and behaviour.

In terms of import, the government has imposed duties as a result of the lifting of ban on imports. The current duty rates on a wide range of vegetables and crops are around 45 percent. It is expected to gradually decrease to zero level by 2020 under the World Trade Organizations (WT0) agreement.

In terms of quarantine regulations, no regulations restricting trading of produce between and within regions, the type and capacity of packaging to use, the quality of produce to sell is absent.

All in all, the industry needs to set some norms for trading in place for the benefit of the industry.

3.0 CHANGES IN THE DISTRIBUTION SYSTEMS OF AGRICULTURAL PRODUCE

The distribution system of the fresh produce sector has been undergoing changes to adapt to the expanding market opportunities and the increasing competitiveness of the fresh produce sector relative to the decline in the

socio-economic indicators as a result on the down turn in the nation's economy.

3.1 Wholesale Markets.

3.1.1 Quality issues.

By virtue of their position, that is they are the first contact point between farmers and the formal marketing chain, wholesalers largely influence the quality of produce supplied. They do this by, 1) stringently maintaining quality criteria required by their respective customers by either refusing to buy poor quality or ungraded fresh produce, or offering higher prices for premium quality and low prices for other quality of produce 2) by using proper packaging materials and handling procedures and 3) by providing appropriate environment for produce in storage or on transit to markets so that quality is maintained.

Such changes are already beginning to take place in PNG. For example, some two years ago the major potato wholesale distributor use to buy ungraded potato. This resulted in consistent sale of ungraded potatoes by his suppliers and consequently a low market share. With the recent expansion of his market base in Port Moresby, the same wholesaler is now demanding better quality and graded produce from his farmers by not buying mixed quality of potato as he used to. This came about as a result of the high competitive level of local against imported potato in Port Moresby and the demand by his customers for better quality. He has now reported a marked improvement and consistency in quality of potato supplied to him and consequently an increase in his market share in Port Moresby to almost a near monopoly status.

The wholesaler of mixed vegetables in Mt. Hagen has moved a step ahead. It has changed from hiring cooler containers and transport to owning these vital infrastructures. This apart from other factors as resulted in maintaining a lead in the market share of fresh produce in the country. His major constraint is to increase his capacity to buy more produce from the farmers and importantly transport a higher volume of perishable crops at one time by the use of mobile cooler containers.

The other change that had happened is in the volume distributed. Because wholesalers have the capacity to consolidate economic volumes, they are able to bargain for special freight rates or capitalise on the special freight rates offered by transport companies. For example, the AD Freezers in Goroka used to airfreights larger volumes of perishable fresh produce under discount rates to Port Moresby and Madang twice a week. By doing so, it was able to supply good quality produce at lower prices.

3.2 Status of Supermarkets

Almost all supermarkets in the main urban centres of Port Moresby and Lae stock their shelves with both local and imported fresh produce. While the Stop

and Shop and Kwik shops in Port Moresby used to benefit from the forward integration system, others have to rely on suppliers that always do not guarantee reliability in supply and quality. Importing fresh produce from Australia and New Zealand has therefore become the most viable option for them. Despite the currently high duties on imports of fresh fruits and vegetables at 45 percent and coupled with the quarantine and other handling costs, supermarkets still prefer to import fresh produce from overseas.

Some observed changes are that, the display and labelling of fresh produce on shelves of supermarkets has improved. Local fresh produce is being clearly labelled as local as against imports. Such an approach undoubtedly improves the consumer awareness of the quality supplied locally.

3.3 Agro-processors.

Relative to other market outlets, agro-processing is still a young industry. The major agro-processor in PNG processes jam, marmalade, alcohol and recently fruit juice from local fruits such as orange, banana, tamarillo (*Solanacea* spp.), pineapple and other PNG exotic wild fruits. While it has the largest citrus block in PNG, it buys most of its other raw products from people in the surrounding villages. Most of these raw products such as tamarilo, Cavendish banana and pineapple grow naturally with low or negligible inputs.

Prior to the transition into the agro-processing enterprise, the major agro-processor operated a successful wholesale vegetable marketing depot, supplying the Bougainville Copper Limited (BCL) and markets in Port Moresby. The collapse of BCL in 1988 due to civil unrest in Bougainville, led to the transition into agro-processing. His principal starting products was jam but has since broaden the range of products to include alcohol and recently bottled orange and pineapple fruit juices.

It has now penetrated markets in urban centres of Lae, Madang, Wewak, Kokopo and Kavieng apart from his principal market in Goroka, and to date the volume processed has increased by 525 percent over the last two years. One can infer that the demand for raw material for processing by the processor may have increased by the same margin.

Analysis of the factors affecting its development.

With the exception of this major agro-processor, agro-processing is still very much an underdeveloped opportunity. This is primarily because of the low volume of production of most fruits and vegetables, which is sufficient only to meet the fresh demand. The potential for processing is slowly becoming evident as volumes of fresh produce increases and the market gluts for some crops are regular events. This situation could change if processing plants are set up to process a selected range of crops.

Two other main set backs for processing are, 1) the relatively high unit price of raw material and 2) the relatively low demand by the country's total population for such products other than the common basic foodstuff such as

rice, canned fish and meat. If PNG is to seriously contemplate agro-processing as a potential market for fresh produce, it has to ensure that the unit costs of production of raw materials are reduced to acceptable world margins of unit costs of production. This is because PNG currently is almost a net importer of agro-processed products to meet its domestic demand. Therefore it would be challenging to compete against imports, given the currently high unit costs of production. In this case, small-scale cottage processing is an alternative to large agro-processing industries. The Fresh Produce Development Company (FPDC) through its Food Processing and Preservation Unit (FPPP), based at the PNG University of Technology is pursuing this option with interested contact clients. Trainings of farmers on cottage processing techniques are part and partial of group farmer trainings conducted by FPDC.

4.0 MAJOR CHALLENGES OF POOR FARMERS AND WOMEN IN THEIR MARKETING OF FRESH PRODUCE.

Smallholder farmers, most of which are women, dominate the horticultural production in PNG. Apart from the staple food crops such as sweet potato (*Ipomoea batatas*), cassava (*Manihot esculenta*), yam (*Dioscorea spp*), taro (*Xanthosoma* and *Colocasia* spp.) and banana (Musa spp.) they produce small quantities of many different range of fresh produce (depending on their locations) to sell for money. Factors such as household needs[5], weather, local prices, seed availability, costs of agricultural inputs and market accessibility determine to a large extent, the decision by farmers on what and when to plant. The general scale of production is rather small and subsistence oriented, thus making it vulnerable to outside influences, especially at this time when the economy of the country is at the lowest level.

Some problems are briefly described below.

4.1 Lack of Market Information.

Market information[6] and extension is not adequately and appropriately made available to farmers in a suitable form and time frame to enable informed decisions on production. Information on the volume and quality demanded by the consumers or the formal markets is absent. Under such circumstances production becomes uncoordinated and hence oversupply or market gluts occur. Such events trigger a chain reaction across producers and thus market gluts are usually followed by periods of undersupply and hence high demand.

The flow back of other small but pertinent market information on specific consumer preferences such as, the price they are prepared to pay for the produce, the quality attributes such as colour, size, shape, texture and

[5] Household needs includes manufactured food, cloths, school fees, utensils, medical fees, social and customary obligations.

[6] An ACIAR funded project on mapping out relevant information to develop an effective market information service is just underway with FPDC, NARI and NRI being involved

general appeal and packaging types through extension-farmer contact is absent or negligible. In most instances it filters through buyers-farmer contact. This channel of communication has the potential to create a much larger impact within a short period of time then the former.

4.2 Lack of Programmed Planting.

While most market-oriented producers are fairly versed on the techniques and requirements of producing most vegetable crops, and do understand the importance of staggering production to meet market demands, their main constraint is lack of irrigation skills and technologies to enable continuous production. This is because being resource poor they tend to orient their production with the rainy seasons in their respective regions. Coupled with the lack of appropriate market information and extension and the market demand schedules among other factors, sequential plantings become difficult to coordinate. The situation has become quite complicated because normal climatic pattens that people have been used to some six years ago have presently become distorted, whereby occasionally, dry periods appear suddenly and without warning during periods of rain and vice versa.

4.3 High Costs of Inputs.

The devaluation of Kina as a result of the down turn in the nations economy, coupled with the ten percent value added tax (VAT) has pushed the price of mostly imported agricultural inputs, beyond the reach of many small scale growers. Farmers respond by forgoing the purchase of all necessary inputs such as fertilizers and pesticides, to save enough money for seeds. Consequently the yield and yield attributes of their produce are affected, resulting in loss of revenue. Others shift production to crops that demand less of the expansive inputs to those that are low input-high output such as sweet potato. If this trend continues, it could lead to overproduction of some crops in some instances. Low input systems of production with focus in improving quality attributes and marketing margins are alternative options to undertake.

4.4 Lack of Farm Management Skills and Knowledge.

Productions by most, if not all commercially oriented small-scale producers is devoid of any farm management[7] skills and techniques. Consequently continuity and progressive expansion in production of fresh produce is retarded as producers exit from market gardening of food crops to other more lucrative enterprises, or in most instances reduce the scale of production of their crops or shift production to other crops with stable characteristics such as low input-high production, low perishability and hence post harvest losses, and higher margins of returns determined through perceived, other than actual calculations of price margins amongst other factors. This contributed to a small agricultural growth rate of 2.0 percent (Horizon 2002-2012, August

[7] An FAO funded project TCP/PNG/0165 aimed at equipping agriculture extension officers (AEO) and semi-commercial to commercial farmers with the basic skills and tools on farm management and marketing extension is in its mid stages of implementation. FPDC is coordinating this project.

2001) relative to the population growth rate of 3.1 percent as of the 2000 national census. Equipping farmers with these skills would be favourable for the fresh produce industry in the long term as farmers can be able to operate profitably.

4.5 Poor Post harvest practices.

The post-harvest practices are poor, which result in enormous produce losses of up to 50 precent or more on average. Except for the produce sold to super markets, the bulk of the produce sold through open markets is ungraded and of low quality. Much needs to be done on the farm to improve quality of the produce by adopting improved production practices.

Factors that contribute to post harvest losses are lack of or poor knowledge of post harvest practices, the impact of the farmer's normal packaging and handling practices on the quality of fresh produce, unreliable transports or the absence of a dedicated transport system for fresh produce, poor road conditions, lack of or breakdown in communication between farmers and buyers and lack of appropriate marketing infrastructures among others. Solutions to the post harvest problems must be pragmatic, taking into consideration diverse factors that contribute to the high post harvest losses of Fresh Produce in the Country.

4.6 Poor Transport and market Accessibility.

The absence of a regular and reliable transport system was perceived by the production and market sectors as the main critical factor contributing to inconsistent supply of Fresh Produce to markets. Where transports are available, preference is always given to passengers, thus fresh produce is either left behind or in most instances, is loaded onto vehicles with passengers sitting on the produce. PMV owners refuse to provide separate transport for fresh produce. Farmers with larger volumes of fresh produce usually offer hire rates equivalent to or higher than the amount these PMV owners can make on normal PMV runs in order to enlist their service. It is more economical for them to transport goods and passengers simultaneously.

4.7 High Freight Costs.

Freight costs charged on fresh produce from Mt. Hagen to Port Moresby has increased by a margin of 115 percent within the last two years. For example, in 2000, the unit cost of freight of produce from Mt. Hagen was estimated to be at K0.13[8] per kilogram by road. The freight in 2002 was estimated to be K0.28 per Kilogram. Preliminary findings on gross margin analysis and landing costs of fresh produce from the Highlands to coastal markets indicated that 50 percent of the total landing costs of all fresh produce in Lae and Port Moresby markets is attributed to freight costs (Senat, in press). Notwithstanding this, there are many other additional costs such as handling costs, which are not accounted for. Airfreights are very high and therefore

[8] Kina is the name of the National currency and 1 Kina (K) is equivalent to 0.26 US cents

only high-value low volume crops such as broccoli, capsicum, asparagus and others are freighted.

4.8 Unfair Price Margins.

One of the major discontentments by farmers is the perceived unfair margin between the purchase price and the selling price of fresh produce at supermarkets in the major coastal urban centres of Lae, Madang, Rabaul and Port Moresby. Indications are that, the annual difference in price margin ranges from 500 to 1000 percent. For example the wholesale price of a kilogram of high quality local broccoli is K1.50 at Mt. Hagen. The same, but rather of lower quality, after going through the many transportation and handling processes, is sold in supermarkets and retail outlets in Port Moresby at a price range of K8 to K15 per kilogram. Many farmers perceive these price margins as unfair and exploitative. Therefore when given the opportunity, they would normally bypass the normal formal marketing chain and sell directly to a buyer within the formal or informal marketing chain that offers a price that is perceived to be fair and rewarding. Most prefer instead to sell directly to consumers at the open markets at their own determined price.

Price on its own is no longer the significant motivating factor for farmers to meet the main market requirements. What is required most by farmers and consumers is fairness in price margins, offered by and to each and every stakeholder in the industry in general, and in particular the formal marketing chain.

5.0 STATUS OF PRODUCER ORGANIZATIONS IN THE AGRICULTURE PRODUCE MARKETING AND THEIR TYPICAL SCOPE OF OPERATIONS

5.1 Rational in Forming Farmer Groups.

Farmers are now realising the importance of producer groups or organizations in coordinating production and marketing of fresh produce. The Fresh Produce Development Company (FPDC) is vigorously mobilising and supporting farmers to achieve this end. The rational is, the fresh produce industry in PNG, depends to a large extent, on small-scale growers, who normally use low input system of production, thus obtaining low outputs. With the rising costs in all aspects of agriculture production and marketing, the decline in the socio-economic indicators, and the increasing competitiveness of the fresh produce brought about by the reduction in import barriers, such small-scale production systems will in the medium to long-term remain uncompetitive. The likely scenario is that the fresh produce industry in PNG could collapse, leading to loss in self-employment opportunities for a large proportion of the countries population that depends upon it for food and income. The social consequences would be immense.

5.2 Current Developments.

So far two farmer groups, the North Wahgi Fresh Produce Farmers Association (NWFPFA) and the South Wahgi Fresh Food Farmers Association (SWFFFA) based in the naturally fertile Wahgi valley of Western Highlands province were formed and registered in 2002. Several more others are in the initial stages of being formed. The total membership of the two registered groups is more than 200 and is set to increase to more than 500 by the end of this year. The groups appointed executives amongst their members. These farmers, mostly women grow a wide range of introduced crops. FPDC assists with production and marketing extension services by providing logistical support for seconded provincial DPI (Division of Primary Industry) staff and the Village Extension Workers[9] (VEWs) and linking the farmer groups to markets respectively.

Presently they are contracted to supply a sub-contractor for a catering company serving the Chevron Oil and Gas project in the Moran and Kutubu areas of the Southern Highlands Province. Since last year, the two groups produced and sold more than 200 tonnes of mixed vegetables to the sub-contractor. Because of this arrangement, the volume of production has picked up and the quality has tremendously improved. The need now is to open up more new market opportunities for them, since many people in these communities perceived the benefits obtained from being members of the groups and have expressed interest to join the groups.

5.3 Scope of the Farmer Organizations.

The scope of the farmer organizations is wide ranging. The two farmer organizations and others that are in the process of being formed are formed on the above rational. Their membership cuts across the main boundaries of social, gender, and denominational, political, tribal and clan groupings, villages and to some extent language. The common denominator being that they all have one major motive and that is to combine their resources in an orderly manner to maximise returns on investment amidst so many socio-economic challenges. Moreover they must be actively involved in some form of vegetable production and have to be registered members who are prepared to abide by the constitution of the Association.

The NWFPFA has another criteria where, all registered members are to have passbook accounts and the minimum balance at any one time is K500. This approach has not only assisted the group members to save excess funds but importantly it transforming the peoples attitude of 'working and living for the day' to 'working and living for the future'. A concept that is quite new and alien to many PNG citizens, hence the countries high vulnerability to natural disasters and social and economic disorders.

---

[9] VEW is a system of extension under FPDC where competent farmers are selected by a group of farmers in their own communities, to be trained in all aspects of production and marketing extension by FPDC, and in turn provide the same to their contact farmers. The pilot project is in its final 4 years of implementation and is funded by German Development Service. FPDC will continue to maintain and expand the concept after this pilot phase.

Within the group, the VEW's own central nurseries jointly funded by the farmer, district DPI and FPDC. These nurseries provide seedlings to the group members and are also used in the training of farmers who are group members, on aspects of nursery establishment and management.

5.4 Results and Progress to date.

Some notable results achieved so far were that, all members appreciated tribal barriers and hence tribal fights, as threat to their current newfound livelihood. Members of waring tribes around Minj district are now learning to live and work together again. The NWFPFA in Banz district has moved ahead. They are negotiating with potential new markets and more than 62 percent of its members have savings of more than K800 in their passbook accounts from sale of fresh produce. These accounts are managed on member's behalf by the association, whereby, on every sale, 50 percent of income is given to growers for personal use while 50 percent is deposited directly into the member's accounts. These people were proud this year, to meet school fees for their children with ease. Many women members were reported to have acquired social prestige and respect by their male peers in these communities as a result.

Farmer organizations no doubt are the means, with which the imminent socio-economic problems facing the country can be tackled with some degree of confidence and success.

6.0 GOVERNMENT POLICIES AND SERVICES THAT SUPPORT PRODUCER ORGANIZATIONS AND PRODUCE MARKETS

6.1 Government Policy Reforms

The government through the Department of Agriculture and Livestock has realised the importance of forming farmer organizations. The recognition came about as a result of a once successful cooperative[10] movement in the 1960's, which provided the main impetus for the growth and expansion of the cocoa and copra industry. Produce was marketed and all range of consumer goods including agriculture inputs were wholesaled and retailed by these cooperative societies. It was through these cooperative groups that rural dwellers had easy access to goods and services. Despite some successful stories, the concept eventually faded away because of inadequate managerial skills on the one hand, and probably the lack of vision and fate by the members in the potential benefits of the concept on the other hand. Moreover, the much better socio-economic environment at that time may have clouded

[10] Known sometimes as Cooperative Societies because they involved memberships from a society or ethnic group. Eg. The Mengen Cooperative Society was formed by small cocoa and coconut growers from the Mengen language speakers of Pomio district in East New Britain Province.

the importance of cooperative movements. The "wantok" [11] system contributed to hardships experienced.

The Department of Agriculture and livestock, in its paper titled 'National Agriculture Development Strategy – Horizon 2002-2012' is supportive of the concept to be re-established. Reforms are proposed to mobilize farmers into homogenous groups under the cooperative marketing scheme. It planned to institutionalise the formation of farmer associations and cooperatives under a committee with a secretariat for consultation and monitoring of the planning, design and formation of these groups. The secretariat is envisaged to involve the participation of donor agencies, NGO's, churches, women groups and other stakeholders. Through participation from a wider cross section of organizations, can a strong foundation for growth and development of the concept result. The registry for cooperatives is now an established function of the ministry of Trade and Industry.

6.2 Government Services that Support Producer Organizations and Producer Markets

As a consequence of this policy and even prior to it, DAL and its line agencies such as the Coffee Industry Corporation (CIC), the Cocoa and Coconut Extension Agency (CCEA) and the Fresh Produce Development Company (FPDC) have embarked on the process to promote selective adoption of the concept.

In terms of the fresh produce sector, FPDC has adopted a unique extension approach by involving selected farmers as extension agents and supports them through targeted technical, gender and market-economics training, to develop them into role models in their respective communities. The concept is known as the Village Extension Workers (VEW). It involves mostly women as extension agents, because of the realisation that in PNG, production and marketing of most food and vegetable crops are done by women, and that the money generated from sale of produce is being used to support the needs of the family. The VEW's provide basic production and market extension to their contact farmers where possible while much difficult cases are reported in a coordinated fashion through weekly report forms to FPDC technical and marketing staff for action. It was partly through this system that the two groups were formed. Other VEW's are currently being assisted to formalise their farmer groups. It is therefore envisaged that, at least two more such groups will be formed within this year, thus increasing the number of farmers as members of farmer organizations.

6.3 Evaluation of FPDC's effectiveness in organising farmer groups

FPDC plays the facilitators role in the formation and eventual registration of the two farmer groups in 2002, while the members themselves with their

[11] A system, where friends and relatives are favoured more than others.

respective VEW's and support by their extension advisors were instrumental in organizing the groups.

While formation of these groups is probably the easiest part, the need to maintain these groups to work cohesively together under so many challenging socio-economic and cultural barriers is the real challenge that rests upon FPDC's shoulders. The groups require FPDC to assist the members with appropriate and relevant training on production and marketing aspects and the basic training on farm management tools to produce profitably. At the same time they require more market (preferably contract markets) opportunities and an effective system of communicating production and market information between the farmer groups and potential buyers. They also require easy access to markets or the main consolidation points as well as storage infrastructures to store excess fresh produce that markets cannot absorb. Credit[12] access is also one area of their concern. Moreover, given the volatile nature of the social systems in the Highlands of Papua New Guinea, there is a need to conduct targeted trainings on gender and law and order issues for farmers and communities in which these groups exist.

FPDC is being looked upon to by many of these farmers and groups to assist them to address these problems. While it is FPDC's obligation to assist these farmers, it does not have the financial and human resource capability to help address these critical issues. FPDC is pursuing mutual partnerships and linkages with the line agencies in agriculture and the major stakeholders and support service in the industry as well as NGO and donor agencies to assist it to address these problems. In articular, it is grateful to the New Zealand government, DAL, GDS, FAO and ACIAR for their timely support in instituting and supporting projects that aims to address these problems.

FPDC however needs to have a critical mass of highly trained, experienced and knowledgeable staff to work together with the above organizations and donor agencies to implement these projects and institute any new ones. Almost all current critical staffs of FPDC are first-degree holders with limited industrial exposure. Therefore their capacity to meet these emerging problems is always a challenge for them. FPDC board's policy does not support long-term training for staff. This situation needs to be redressed since the problems facing the industry are beginning to get more complex.

7.0 CONCLUSION.

The Fresh Produce Industry in PNG is undergoing a dynamic transitional era as the economic and social indicators are on the declining trend. Each and every stakeholder is responding by undergoing some form of transformation in their conventional approach and norms of doing business by adopting innovative and pragmatic measures to improve efficiency and effectiveness and hence profitability of their respective enterprises. While these are

[12] FPDC has been given the custodian status by DAL to manage the K1.4 million Kina for the food crops sector currently with the Rural Development Bank of Papua New Guinea.

welcomed developments in the fresh produce sector, FPDC does not have the financial capacity and the critical human resource required to facilitate an effective transformation. FPDC shareholders, DAL and Department of Finance need to be more assertive in getting the appropriate support for FPDC.

The donor agencies in particular are being supportive with timely initiatives to assist with projects that address some of these problems. Some are still to be addressed to some level. It is therefore pending on FPDC to sustain these initiatives and further improve on them as time goes by.

8.0 LIST OF REFERENCES AND DOCUMENTS CONSULTED

1. Iqbal, Mohammed. 2002. Mission Report. FAO TCP/PNG/0165 project on Capacity building for agriculture marketing and farm management.

2. National Agriculture Development Strategy. 2001. Horizon 2002-2012, Department of Agriculture and Livestock.

3. Peter, Rufina .2001. A survey to establish causes of inconsistent supply of Fresh Produce to wholesale and retail market sectors. Fresh Produce Development Company.

4. Senat, Philip (In press) Analysis of cost of production and marketing of major FPDC focused crops.

APEC - ATCWG WORKSHOP : LINKING FARMERS TO MARKET - THE ROLE OF FARMERS ORGANIZATION

COUNTRY PAPER

MALAYSIA

ABDUL AZIZ MOHD KHAIRUDIN
FARMERS' ORGANIZATION AUTHORITY,
MALYSIA

AND

LEE TECK LONG
FEDERAL AGRICULTURAL MARKETING AUTHORITY
MALAYSIA

1. INTRODUCTION

Malaysia has basically been an agricultural country, one of the largest producers of natural rubber, oil palm, cocoa, pepper, and tropical hardwood in the world. Agriculture in Malaysia is dominated by oil palm plantation (2 million hectares), rubber plantation (1.8 million hectares), and cocoa plantation (0.4million hectares). Paddy is the main staple food crop covering 650,000 hectares. A host of miscellaneous crops such as fruits, vegetables, flowers, tobacco, and tapioca are grown in smaller scale. In recent years, the Malaysian agricultural sector has declined due to shortage of labor, exhaustion of land resources, and an increased emphasis placed on industrialization. The rapid expansion of the manufacturing sector has altered the relative importance of agriculture in Malaysian economy, especially with regard to output and employment. However, there is the rural poor who rely on their small-scale farming for their livelihood. As such, the government introduces the Third National Agricultural Policy (NAP3) to guide the development of agricultural sector for the period of 1998 to 2010. The vision for this policy is to ensure sustainable development of a dynamic agricultural sector. Growth in agricultural sector would be market-driven and commercialized farming. The overriding aim is to maximize the income through optimal utilization of resources. The principal government ministries involved in the administration and development of the agricultural sector are the Ministry of Agriculture, the Ministry of Primary Industry, the Ministry of Land and Co-operative Development, and the Ministry of Rural Development. In this regard, the Farmers' Organization Authority (FOA), under the jurisdiction of the Ministry of Agriculture, which oversees the Farmers' Organizations (FOs), has an important role to play to ensure the member-farmers get the fullest benefit of the NAP3.

The purpose of this paper is to describe the role of Farmers' Organization in Malaysia in assisting their member-farmers to uplift their social and economic status. The main objective of this paper is to discuss the status of Farmers' Organization in the agricultural sector and their scope of operation. The second objective is to explain government policies that support Farmers' Organizations. The third objective is to describe major challenges of poor farmers in the marketing of their agricultural produce.

This paper is organized as follows: Section 2 describes the status of Farmers' Organization. The Farmers' Organizations in Malaysia adopt a three-tier type of structure in terms of membership and the role that they play. Section 3 explains the government policies that support Farmers' Organization. In

this regard, the Third National Agricultural Policy will be highlighted. This is followed by Section 4, which describes the progress in the activities implemented by the Farmers' Organization. The last section discusses major challenges faced by the Farmers' Organization and the conclusion of this paper.

2. FARMERS' ORGANIZATION

Currently, there are 282 Farmers' Organizations (FOs) in Malaysia. The Farmers' Organizations (FOs) are comprised of 267 Area Farmers' Organization (AFOs), 13 State Farmers' Organizations (SFOs), and one National Farmers' Organization (NAFAS).

The AFOs had a total membership of 661,000 (end of 1998) with a total share of capital amounting to RM 54 million (1USD = RM 3.86). The total assets of the AFOs was RM428 million (1998).

The role of these FOs is to promote the economic and social interest of their members. The FOs have the power to undertake a wide range of economic and social activities that can benefit their members. Usually the Area Farmers' Organization deals with the retailing of agricultural inputs, engaging in supervised farm credit, providing farm mechanization services, organizing group farming, and processing and marketing of agricultural produce at a primary level. The State Farmers' Organization deals with the wholesaling of agricultural inputs, land developing, processing and marketing of agricultural produce at a secondary level, and engaging in general businesses. The National Farmers' Organization engages in the importing and manufacturing of agricultural inputs and importing, assembling and distributing of agricultural machinery. NAFAS also plays an important role in securing government contracts for poultry products under an "umbrella scheme." The objective of this "umbrella scheme" is to ensure that the member-farmers get their fare share of their poultry production.

3. GOVERNMENT POLICIES AND SUPPORT

Under the National Agricultural Policy, the government has underlined several policies to enhance the prosperity of farmer institutions. These policies are related to:

(a) Self-help, self-improvement, and attitudinal change to spearhead innovations and active participation of Farmers' Organizations and Agro-based cooperatives in the modernization processes in agricultural sector,

(b) To establish a financial institution to effectively meet the current and prospective credit needs of farmer institutions,

(c) To meet the increasing need for capable management and technical personnel in order to run the institutions on a self reliant and self financing, and

(d) The formation of the Federation of farmer institutions.

The development programs and projects can be grouped under six broad thrusts. They are as follows:

(a) ***Implementation of agriculture production projects, especially food production, that are organized and market-driven.*** In line with the NAP3, projects that can increase food commodities production are to be given priorities. Expanding commercial production of food commodities is essential for import substitution, to meet export requirements, and to cater for the raw material requirements of industry. Efforts are to concentrate in areas where FOs have demonstrated a competitive edge such as experience and skill as in organizing paddy and oil palm cultivation. The FOs also plan to increase their share in the production of vegetables, animal produce, fruits, and horticultural commodities.

(b) ***Propagation of small and medium scale industries.*** The agricultural sector needs to be modernized and its value-added increased through processing of agricultural produce such as better handling and packaging.

(c) ***Marketing to be the basic activity of the FOs.*** One of the primary objectives is to build the FOs as an important and effective marketing organization for fresh agricultural produce and agricultural food products by taking advantage of the existing marketing channels. The State Farmers' Organizations (SFOs) and the National Farmers' Organization (NAFAS) are to undertake the roles of wholesalers, manufacturers, and

exporters. The main strategy is to strengthen the linkages among the FOs, and that of the FOs with the private sector.

(d) ***Implementing a saving and loan scheme.*** Since all FOs provide saving facilities and give short-termed production loans to their member-farmers, the Farmers' Organization Authority (FOA) intends to strengthen this activity by setting up a scheme for better mobilization of members' resources and their management.

(e) ***Encouraging farmer-entrepreneurs.*** This strategy involves motivating individual farmer-members and transforming them into entrepreneurs who will undertake business activities in partnership with the FOs as a mean of commercializing agriculture further and fulfilling the government's objective of developing a commercial and industrial community. The FOs will concentrate on those members who possess the traits necessary to succeed in business, have the potential to progress in the production of agricultural produce and services, and the inclination to work with the FOs to expand their business. The entrepreneur activities need to have synergy with that of the FOs such as in producing, processing, marketing, and manufacturing, and are to be in the form of a joint venture.

4. PROGRESS IN ACTIVITIES IMPLEMENTED BY THE FOs

FOs' role in food production has changed to suit the changing environment in agricultural sector in Malaysia. In the 1970s/1980s, the FOs played an important role in organizing and encouraging the member-farmers to participate in commercial food production activities. Depending on the location and suitability of the soil, the FOs initiated the cultivation of vegetable, fruit, and tobacco, and poultry and aquaculture projects. Beginning in the late 1980s, the agricultural sector is facing labor shortage due to a shift in labor supply in the manufacturing sector. FOs role has shifted from being a mere catalyst to that of an active partner or implementer of many food production projects. Currently, there are four modalities in the implementation and management of agricultural projects undertaken by FOs. They are as follows:

(a) *Corporate Farming*: This is practiced when the FOs have to lease agricultural land from member-farmers who are no longer interested in farming. As such, individual lots are being cultivated as one contiguous unit with FOs taking full management responsibility for all farming operations and decision-making. Surplus from the farming operation goes to the FOs. The land-owners receive rental payment.

(b) *Management Agency*: The FOs consolidate farm lots to form a commercial farming unit and undertake the management and operation of the farm on behalf of the land-owners. Surplus from the operation is distributed to the land-owners based on their land size. The FOs receive management fees for these operations.

(c) *Group Farming*: The FOs help in organizing the farmers to cultivate their land along cooperative lines. Major activities such as ploughing, harvesting, and marketing are being arranged by the FOs following a definite schedule. The farmers will still manage their own farms by following the advice of their organizations on the day-to-day operations. The farmers are fully responsible for the success or failure of their projects.

(d) *Entrepreneur Farmer*: In line with the government's policy of creating more entrepreneurs, Farmers' Organization Authority (FOA) has initiated a scheme whereby enterprising farmers are being selected to venture into commercial farming enterprises. The selected farmers will receive financial assistance in the form of soft loans.

The modalities to be adopted will vary depending on the local situations and the socio-economic problems facing each FO. In fact, all these modalities implemented by the FOs are taking into consideration problems faced by the agricultural sector. Table 1 shows the status of the food commodities that have been implemented based on the modalities described earlier.

Table 1: Farm Size Managed by FOs by Commodities and Modalities

Commodity	Modality			
	Corporate	Agency	Group	Entrepreneur
Paddy (Ha)	208	9,257	11,505	–
Vegetable (Ha)	250	–	–	622
Fruit (Ha)	734	–	–	1,067
Poultry (Birds/cycle)	711,400	–	–	1,408,000
Cattle (Heads)	4,450	–	–	3,550
Tiger prawn (Ha)	42	–	–	13.4
Fish (cages/ponds)	332	–	–	617

The problem of idle paddy land not being brought into productive use has often been highlighted. FOs have rehabilitated some 19,000 hectares of paddy land for cultivation of paddy, palm oil, and other crops. This is a visible attempt to assist the country in overcoming food shortage.

As commercial farming is highly dependent on access to capital, availability of technology, farm machinery, agro-chemicals, and market outlets, FOs have taken steps to provide various services and activities within the constraints that they faced. The services and activities provided by the FOs are as follows:

(a) ***Farm Mechanization***: Farm mechanization is critical to the successful implementation of commercial farming. To overcome the farm-labor shortage and to improve productivity and efficiency, FOA had, in the early 1980s, initiated a farm mechanization program to promote a wider usage of farm machineries, especially in the paddy growing areas. Eighteen farm mechanization service centers were set up to cater the needs of paddy farmers. Currently, all these centers have been handed over to the State FOs to run on a commercial basis. Table 2 shows the performance of farm mechanization service centers.

Table 2: Performance of Farm Mechanization Service Centers

Type of Service	1996		1997		1998	
	Ha	No. of farmers	Ha	No. of farmers	Ha	No. of farmers
Ploughing	30,374	15,187	28,970	14,702	24,600	16,732
Harvesting	12,925	6,464	14,702	7,351	14,155	7,560

It must be borne in mind that paddy production is now the most important commodity that relies heavily on farm mechanization to ensure its success. All farm operations from land preparing to harvesting, tractors and combined harvesters are being used in a timely manner.

(b) *Use of technology*: It is often mentioned that farmers are slow in adapting new technology. Agricultural extension workers have the responsibility in disseminating new technology to the farmers. In this regard, the FOs are instrumental in introducing innovative technologies to lead the way for farmer-members to follow. Under the nucleus-estate concept, FOs have embarked on many technological innovations with assistance from technical departments and private enterprises. Some of the technologies that have been introduced include the use of rain-shelters, fertigation system, and insect-proof houses for vegetable cultivation. In the aquaculture sector, the use of geo-membrane in tiger prawn rearing has also been successfully tested apart from the use of cage culture for fish rearing.

FOA has also been able to have private sectors' collaboration to carry out other new technologies through the FOs. For example, the use of T-Plus, and field trials on a package of inputs with some private companies are being done to assist FOs to keep abreast of new technologies especially those that are more biological and environmental friendly. Through the FOs and the concept of nucleus-estate, the farmers will be encouraged to adopt the technologies as well.

(c) *Supply of Inputs*: Currently FOs are actively involved in the supply of agricultural inputs such as fertilizer, herbicide, fungicide, and pesticide, beside being the sole distributor of paddy fertilizer under the National Paddy Fertilizer Scheme. Through the distribution of agricultural inputs, FOs staff are able to provide advise to the farmers on how to use and handle agrochemicals safely. At the same time, new and proven technologies are made available as the FOs also act as resource centers for information relating to agriculture. The performance of FOs in the supply of agricultural inputs is shown in Table 3.

Table 3: Performance of FOs in the Supply of Agricultural Inputs

FOs	Volume of Business (RM)		
	1996	1997	1998
National (NAFAS)	67,689,003	97,593,905	95,988,157
State (State FOs)	48,963,239	33,330,658	39,192,124
Area (Area FOs)	46,163,992	47,046,981	53,198,003
Total	162,811,234	177,971,544	188,378,294

(d) ***Marketing***: The heart of any commercialization in agriculture is in the ability to sell all the produce at a price that is fair to both producers and consumers. This will ensure that producers have enough incentives to continue working in the farms and do even take risks in introducing new innovations.

FOs have been playing an important role in organizing marketing for farmers' produce and finding new market outlets. In the marketing oil palm (fresh fruit bunch - FFB), for instance in Johore, a scheme known as supervised farm credit has been introduced. Through this scheme, farmers are given inputs on credit and an agreement is signed with the FOs for the marketing of all the FFB. The price offered will be determined by the prevailing market condition and the quality of the FFB. Not only has this scheme ensured that the farmers are not being exploited, but is has served to inculcate a greater sense of awareness among farmers on the advantages of co-operative marketing. The scheme has also been adopted by several FOs in other states.

Contract marketing has also been actively pursued by the FOs especially for vegetable and poultry production. In most cases, vegetables are grown and poultry are reared according to the specifications of the buyers for a pre-determined price, though at other times it may be tied to the prevailing market price. Problems do exist in such marketing arrangements especially for vegetables where the contentious issue is often centered on the quality and price of the produce.

To overcome some of the problems encountered, FOA has been helping FOs to find alternative marketing outlets. The most current being the setting up of farmers' markets in strategic locations so as to reduce the number of market intermediaries for

the benefits of both producers and consumers. To-date, there are 47 farmers' markets operated by the FOs. Steps are also being taken to explore the feasibility of setting up food parks and cool-chain system with the private sector to ensure better quality of produce and more value-added products. Table 4 shows the volume of agricultural produce marketed by the FOs.

Table 4: Value of Agricultural Produce Marketed by FOs

FOs	Value (RM)		
	1996	1997	1998
National (NAFAS)	13,368,037	31,489,615	14,789,266
State (State FOs)	22,851,010	49,660,979	210,219,017
Area (Area FOs)	143,731,327	167,956,101	237,775,040
Total	179,950,374	249,106,695	462,783,323

(e) ***Processing***: The need to provide processing facilities to ensure better value-added products is being implemented. The major focus is on commodities which the FOs have control in production in terms of size and quantity. In the past, small-scale processing facilities were being set up to meet the immediate needs of farmers within a given locality. In the 7th Malaysia Plan, the emphasis is given on bigger projects which are able to meet the standards of competitive environment. Commodities which are being given priorities include paddy, poultry, and oil palm. The value of processed products such as chicken and rice is still quite insignificant at the moment.

5. DISCUSSION AND CONCLUSION

The farm size of each farmer is considerably small and therefore uneconomical for commercial cultivation. It was reported that 58% of the farmers own less than a hectare and each farmer may grow his "own crop" using his "own method." There are two categories of farmers in Malaysia: (a) traditional subsistence farmers who accounted for 80% of the farm-communities, and (b) modern commercial farmers who are profit-oriented and educated. The biggest challenge for the FOs is to re-develop the former group where most of the farmers are old and their children are relatively not interested in farming. Youths, with better education when

compared to their parents, search for better occupation prospects in manufacturing sector in the city. Many studies have established that the migration of youth from the rural areas to the urban areas leads to a reduction in the pool of farm workers and exacerbated to the problem of idle agricultural land. As a measure to overcome these problems, majority of the FOs have introduced the concepts of corporate farming, farm management agency, and group farming with the aim to enhance the farm productivity and to overcome the shortage of labor. The main theme behind these initiative are to consolidate and rehabilitate small and idle land and the introduction of professional management practices.

The lack of funds and marketing outlets has also restricted the ability of FOs to market the agricultural products produced by the farmers. Under the 8th Malaysian Development Plan (2001-2005), the government has been providing the FOs with the necessary marketing infrastructures such as the construction of agricultural collecting centers, farmer markets, farmer trading centers, and farmer distribution depots. Some of these facilities are equipped with cold-room and refrigerated-truck. To ensure the success of these programs, various government agencies such as Federal Agricultural Marketing Authority and local authorities are expected to support the FOs.

The involvement of women plays an important role in the FOs movement because inmost cases women are hardworking and trusted group. The women participation rate, as members of FOs, has increased significantly from 16.0 percent in 1985 to 21.3 percent in 1995. In 1999, this figure has risen to 30 percent. It is expected that this trend will continue in the future. As an individual member of a community, a woman can do very little to promote their status, but when women are properly organized into a group, they are able to interact, share experiences, express their needs, and identify the resources that they require to increase their socio and economic status. Many FOs have identified various agricultural projects specially designed for women. Among others are group farming for livestock and crops. Most of these projects are undertaken through Women-farmers Group (KPW).

References

Abu Hassan Md Isa, et at. (2000). *Repositioning of Farmers' Organization and Agricultural Cooperatives in the New Millennium*. Unpublished paper.

Economic Planning Unit. (2000). *Eight Malaysia Plan (2001-2005)*. Kuala Lumpur: National Printing Office.

Fredericks, L.J. (1986). *The Cooperative Movement in West Malaysia*. Kuala Lumpur: University Malaya Press.

Ministry of Agriculture Malaysia. (1999). *Third National Agricultural Policy*. Kuala Lumpur: National Printing Office.

Ministry of Finance Malaysia. (2002). *Economic Report 2002/2003*. Kuala Lumpur: National Printing Office.

Hussain, Nozir Ahmad. (2000). *Achievements and Prospects for the Farmers' Organizations and Agricultural Cooperatives in the New Millennium*. Unpublished paper.

Group Marketing of Horticulture Produce in Japan: Background to Development and Current Status

Hiroji Fujishima
Faculty of International Agriculture and Food Studies
Tokyo University of Agriculture

1. Three Fundamental Types of Group Marketing

* The major objectives of group marketing are the following two items:
The first objective is to extend marketing opportunities for small scale producers (farmers) while protecting them from treacherous and unfavorable deals.
The second objective is to achieve "economy of scale" in order that small scale producers can maximize profits from the sale of agricultural produce.

* There are the following three ways to materialize group marketing.

① Cooperative shipment
This involves joint transportation through collecting the produce of a number of producers with the same shipping destination to fill one truck, and is the most primitive method of group marketing. The objective is to reduce the unit cost of shipping by achieving large scale transportation.
For producers shipping to remote locations, the cooperative shipment is effective as a means of increasing each producer's profit.
To ship over a distance of between 300km and 500km in Japan, a truck load of about 10 kilograms costs between ¥1,000 and ¥2,000 while that of about 10 tons costs between ¥100,000 and ¥300,000. Converting these figures into cost per kilogram of freight, the former is between ¥100 and ¥200 while the latter costs only ¥10 to ¥30. Accordingly, the larger is freight, the less expensive is the cost of transportation per unit weight of the freight.

② Cooperative assortment
Cooperative assortment is that farmers who participate in a group marketing scheme bring their produce to a single heap and sort it based on predetermined grading criteria rather than they separately sort their produce based on individual criteria.
Through cooperative assortment, the time and the cost required for sorting can be reduced. Moreover, by employing part time staff for sorting, it becomes possible to expand the scale of production by using the time that would have been required for the sorting process. Furthermore, through cooperative assortment, it becomes possible to handle such produce as being a single kind thus allowing them to wear a common label/logo.
Cooperative shipment can also become easy because freight can be loaded at the joint sorting facility. Moreover, since freight is continuously collected to such a facility, producers may gain bargaining power against transport companies on the freight price.

③ Cooperative marketing

Cooperative marketing involves joint decision making on the counterparts of sales, the marketing volume, timing and prices. Moreover, cooperative marketing generally involves cooperative shipment and cooperative assortment.

Through cooperative marketing, a group of small scale farmers becomes able to sell a large volume of products with uniform specifications so that they can directly deal with supermarkets and other retailers that procure in large volumes. The addition and diversification of trade counterparts may bring producers advantage in pricing. Moreover, the meetings for cooperative marketing may bring opportunities to producers to discuss development of new products and to initiate such a project.

* Currently in Japan, the aforementioned three kinds of cooperative activities are undertaken primarily at the level of primary agricultural cooperatives. However, with respect to cooperative marketing, the federations of agricultural cooperatives at the prefectural level often provide the primary cooperatives with directions on the counterparts of sales and sales volume.

2. The History of Group Marketing

* What is the most important in achieving "economy of scale" through group marketing is to forge a consensus among the producers who participate in such group marketing schemes. The consensus is rarely formed through discussions among producers in today's Japan, but through unconditional commissioning of the sales of their produce to the relevant agricultural cooperative. Accordingly, group marketing in Japan today is nothing but cooperative marketing by agricultural cooperatives.

While this process employed in Japan cannot be described as the one that fully forms a consensus among producers, it has such strength that agricultural cooperatives can make prompt reactions to changes in the market based on their judgment.

* Group marketing began in Japan more than 100 years ago at the end of the 19th century. At that time, the most common form was voluntary shipment cooperatives made up of producers for the shipment of produce to wholesalers in consumption areas. Later, industry associations (the precursors of agricultural cooperatives) took initiatives in group marketing. For example, an industry association in Miyagi Prefecture would ship Chinese cabbage to Tokyo and an industry association in Tottori Prefecture would ship pears to Osaka.

However, as is clear from Figure 1, it was only after the mid-1960s that group marketing in Japan became full-fledged as cooperative marketing by agricultural cooperatives. In 1964, cooperative marketing of vegetables accounted for 42.8 billion yen or 12% of 354 billion yen: the total sales of vegetables. In 1997, the value of cooperative marketing by agricultural cooperatives was 1 trillion 352.1 billion yen or more than 30 fold the level in 1964. This accounted for 60% of the total sales value of 2 trillion and 254.8 billion yen.

* The main reasons for the growth of cooperative marketing after the mid-1960s are twofold.

The first reason is that the national government promoted cooperative marketing by agricultural

cooperatives under the Law for Stabilization of Production and Shipment of Vegetables that was enacted in 1966 in order to stabilize supply of vegetables. Based on this law, the national government committed itself to providing price subsidies to producers in the event of price plunges of vegetables but limited the producers eligible to receive such subsidies to those who participate in cooperative marketing by agricultural cooperatives.

The second reason is the Wholesale Market Law that was enacted in 1971 that increased the number of central wholesale markets dealing in fruits and vegetables from 43 markets in 1970 to 73 markets in 1980. Since the major destinations of shipments in cooperative marketing by agricultural cooperatives are central wholesale markets, the increase in the number of such markets enabled the growth of cooperative marketing.

3. Features of Group Marketing in Vegetable Producing Areas of Nagano Prefecture

*The vegetable producing areas of Nagano Prefecture are a producing center that achieved significant development after the mid-1960s through cooperative marketing by agricultural cooperatives. The area harvested for production of vegetables in Nagano Prefecture as of 1965 was 17 thousand hectares, which was ranked in the tenth place among the 47 prefectures in Japan. The volume of harvest was 460 thousand tons or in the seventh place, and the volume of shipments was 308 thousand tons or in the sixth place. In 1990, the area under harvest had increased to 22 thousand hectares or to the fourth place in the nation, the harvested volume had increased to 744 thousand tons or in the fourth place, and the shipment volume had increased to 626 thousand tons or in the fourth place. Nagano Prefecture occupies this ranking today.

*The following three points may be pointed out as the major features of group marketing in the vegetable producing areas of Nagano Prefecture.

First, as can be seen from Table 1, Nagano Prefecture has a production and sales system that is limited to a small number of crops. Looking at the column under the concentration ratio (percentage of the sales volume of each crop against the whole sales volume), the ratios of the top two items, i.e., Chinese cabbage and lettuce, are 29.6% and 28.8% respectively, and are far in excess of the ratios of other items. Moreover, the sales shares of these crops in the national markets are also very high. When limited to Chinese cabbage and lettuce sold in the summer months, the share in total national sales volume reaches between 70% and 80%.

Limiting to certain specific items enables the creation of a situation in which the seller has the monopolistic bargaining power thus achieving advantage in marketing.

The second feature is the fact that the ratio of cooperative marketing by agricultural cooperatives is higher for the aforesaid main items than for other various types of vegetables produced in Nagano Prefecture. As shown in Table 2, the ratio of cooperative marketing by agricultural cooperatives is 89.8% in the case of Chinese cabbage and 92.8% in the case of lettuce, and the level in the vicinity of 90% has been achieved for both items. On the other hand, while there is such an item as broccoli that the ratio is high, overall ratio of cooperative marketing by agricultural cooperatives is low; for potato and kidney bean, the ratio is between 50% and 60%.

The reason why the ratio of cooperative marketing by agricultural cooperatives is high for Chinese cabbage and other major items is purely because agricultural cooperatives are actively

promoting the production of such items to the producers.

The third feature is that the more an item is produced, the broader its market can be. Looking at Table 3, Chinese cabbage and lettuce may be said to be sold nationwide with particular emphasis on large urban centers, but in the case of potato, there is a skew to the Keihanshin area and Nagano Prefecture. For onion, its market is limited to the Keihin area and Nagano Prefecture.

It can be said that the main items can be sold nationwide since the volume of sales is large but another way of putting this is that production in large volumes is possible because there is a nationwide sales channel. For potato and onion, since the volume is small, advantageous sales is not possible unless the sales is targeted to limited markets.

* Features of group marketing in the vegetable producing areas of Nagano Prefecture suggest the necessary conditions of producing areas that can thrive.

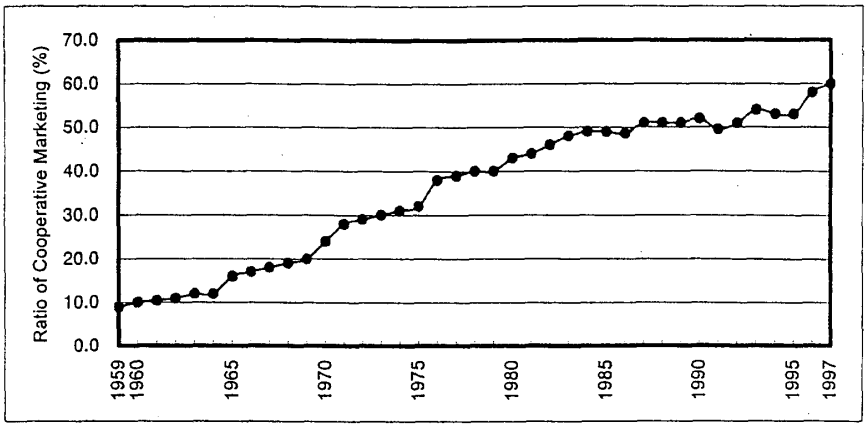


Figure1: Transition in Ratio of Agricultural Cooperative Marketing of Vegetables

Source: Statistics on Farm Economy, Comprehensive Agricultural Cooperative Statistical Table, The Ministry of Agriculture, Forestry and Fisheries of Japan

Table 1: Production and Shipment by Item of Vegetables and Concentration Ratio by Item in Nagano Prefecture in 1990

Item	Nagano Prefecture						Nationwide						Specialization index (A/B)
	Harvested area		Volume of harvest		Volume of sales		Harvested area		Volume of harvest		Volume of sales		
	Absolute number (ha)	Concentration ratio (%)	Absolute number (tons)	Concentration ratio (%)	Absolute number (tons)	Concentration ratio (A) (%)	Absolute number (thousand ha)	Concentration ratio (%)	Absolute number (thousand tons)	Concentration ratio (%)	Absolute number (thousand tons)	Concentration ratio (B) (%)	
(1) Chinese cabbage	2,950	12.9	205,300	27.6	185,200	29.6	29	5.5	1,220	8.4	885	7.6	3.9
(2) Lettuce	6,300	27.6	189,400	25.5	180,500	28.8	22	4.1	518	3.6	476	4.1	7.0
(3) Cabbage	1,990	8.7	91,900	12.4	81,400	13.0	40	7.5	1,544	10.6	1,301	11.2	1.2
(4) Tomato	623	2.7	37,300	5.0	32,500	5.2	14	2.6	767	5.3	659	5.7	0.9
(5) Cucumber	650	2.9	30,800	4.1	24,200	3.9	20	3.8	931	6.4	770	6.7	0.6
(6) Watermelon	492	2.2	24,400	3.3	22,900	3.7	23	4.3	753	5.2	639	5.5	0.7
(7) Japanese radish	1,630	7.1	42,700	5.7	22,400	3.6	61	11.5	2,336	16.0	1,721	14.9	0.2
(8) Celery	387	1.7	17,300	2.3	16,200	2.6	1	0.2	45	0.3	42	0.4	7.2
(9) Sweet corn	1,590	7.0	14,400	1.9	10,700	1.7	39	7.3	409	2.8	308	2.7	0.6
(10 Onion	334	1.5	14,200	1.9	9,980	1.6	29	5.5	1,317	9.0	1,121	9.7	0.2
(11 Others	5,854	25.7	76,400	10.3	39,920	6.4	253	47.6	4,715	32.4	3,654	31.6	0.2
Total	22,800	100.0	744,100	100.0	625,900	100.0	531	100.0	14,555	100.0	11,576	100.0	1.0
Remarks: Top 3 items	11,240	49.3	486,600	65.4	447,100	71.4	130	24.5	5,197	35.7	4,143	35.6	2.0
Top 5 items	12,513	54.9	554,700	74.5	503,800	80.5	179	33.7	7,348	50.5	5,798	50.1	1.6
Top 10 items	16,454	72.2	667,700	89.7	585,980	93.6	282	53.1	10,502	72.2	8,450	73.0	1.3

Source: Vegetable Production and Shipment Statistics, Statistics and Information Department, The Ministry of Agriculture, Forestry and Fisheries of Japan

Note (1) Others: Turnip, lotus root, taro, yam, green pepper, podded pea, green soybean, kidney bean, strawberry, cauliflower, broccoli

(2) "Absolute Number" and "Concentration Ratio" for "Top 3 Items" and other such headings have been calculated in the order of volume of shipments.

Order of items under the "Nationwide" column: (1) Japanese radish, (2) Cabbage, (3) Onion, (4) Chinese cabbage, (5) Cucumber, (6) Tomato, (7) Watermelon, (8) Carrot, (9) Leek, (10) Melon

Table 2: Ratio of Cooperative Marketing by Agricultural Cooperatives by Item for Vegetables Produced in Nagano Prefecture (Fiscal 2000)

Item Name	Total Volume of Shipments (A) (tons)	Cooperative Marketing by Agricultural Cooperatives (B) (tons)	Ratio of Cooperative Marketing Agricultural Cooperatives (B/A)
Chinese cabbage	195100	175200	89.8
Lettuce	179000	186100	92.8
Sweet corn	9900	7200	72.7
Potato	3780	2100	55.4
Onion	3710	2760	74.4
Broccoli	2440	2140	87.7
Kidney bean	994	584	58.8

Source: Vegetable Production and Shipment Statistics, The Ministry of Agriculture, Forestry and Fisheries of Japan

Table 3: Shipment and Share of Shipment by Area of Vegetables Produced in Nagano Prefecture (Fiscal 2000)

	Item	Total volume of shipments	Large urban centers			Nagano Prefecture	Other areas
			Keihin area	Chukyo area	Keihanshin area		
Total volume (tons)	Chinese cabbage	195,100	53,400	27,800	52,000	13,000	48,900
	Lettuce	179,000	57,500	17,400	39,500	15,300	49,300
	Potato	3,790	104	299	1,910	1,440	37
	Onion	3,710	1,270	0	0	1,230	1,210
Share (%)	Chinese cabbage	100.0	27.4	14.2	26.7	6.7	25.1
	Lettuce	100.0	32.1	9.7	22.1	8.5	27.5
	Potato	100.0	2.7	7.9	50.4	38.0	1.0
	Onion	100.0	34.2	0.0	0.0	33.2	32.6

Source: Vegetable Production and Shipment Statistics, The Ministry of Agriculture, Forestry and Fisheries of Japan