OCP Policy Center Conference series

Fostering sustainable adaptations in the Euro-Mediterranean Area: Solving small farmers' collective action problems in crop switching and adopting higher food standards

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20-21 November 2014

Two obstacles that small-poor farmers face in creating successful agri-businesses

1. Water stresses exacerbated by climate changes

2. Higher health, quality, and environmental standards of the EU

Solutions:

1. Crop switching

2. Adopt the EU's constantly changing, complex, and advanced standards

Requirements: Implementation of existing knowledge and technology by the farmers

1. Complex and technical know-how

    - Acquire significant technical and scientific knowledge
    - Establish effective control mechanisms
    - Develop certification schemes
    - Validate food labels

2. Substantive amounts of financial resources and adaptive capacity

Collective Action Problem

1) The more complicated the solution
2) The smaller the size
3) The larger the number of producers in a sector

➔ The less likely that the local actors will be able to solve the sector's collective action problem

Our claim:

A <u>push</u> from a willing external actor (a technically and financially capable actor) is necessary to provide sufficient communication and coordination

TWO CASES:

CASE 1: The health, quality, and packaging standards upgrading performed by **Turkish Cypriot beekeepers**

CASE 2: The switch to pomegranate farming by **Turkish Cypriot citrus growers**

Background: Cyprus & Its Green Line Regulation

2004 April: Twin referendums on whether to accept UN reunification plan in last-minute bid to achieve united EU entry. Plan is endorsed by Turkish Cypriots but overwhelmingly rejected by Greek Cypriots

2004 May: EU accession -Cyprus is one of 10 new states to join the EU, but does so as a divided island

The EU agrees to take steps to end the isolation of the Turkish Cypriot community

Source: http://news.bbc.co.uk/2/hi/europe/country_profiles/1021835.stm

Background: Cyprus & Its Green Line Regulation

In line with Protocol 10 of the Accession Treaty 2003 and to improve the economic well-being of the Turkish Cypriots, the EU introduced the 2004 Green Line Regulation—designed to facilitate trade between the two states—and promised financial aid to realize such trade.

EU Regulation EC 866/2004

[Article 2 of Protocol No 10 of the Act of Accession]

Special rules concerning the crossing of goods, services, and persons between Northern and Southern Cyprus

CASE 1: BEEKEEPERS' DATED STANDARDS

The initial Green Line Regulation expressly prohibited the movement of animal products across the Green Line due to health and standard concerns (No 866/2004, Article 4: 9). Trade in plant products, such as potatoes and citrus fruits, was permitted, but such products were subject to EC phytosanitary checks before being allowed across the Line (No 866/2004, Annex II).

Observation: potatoes, fish cleared the hurdle but <u>not honey</u>

Size and geographical location of the beekeepers in the north

Region	# of beekeepers	# beekeepers with ≥70 hives
Kyrenia	93	10
Nicosia	91	8
Famagusta	102	20
İskele	102	17
Morphou	93	9
Unknown	4	---
Total	***485***	***64***

Source: Reybroeck (2012)

Simple math: How much income generated?
0.6 kilogram liquid honey from 1 kilogram comb honey
35 kilograms of comb honey per hive
30 hives per beekeeper
Total annual revenue = $7,500
Profit margin = 40%
Net profit = $3,000(26% of the average per capita income of $11,700)

Turkish Cypriot Beekeepers' Problems

- Significantly different/outdated beekeeping practices
    - Use of antibiotics prohibited in the EU
    - Inadequate storage practices
- The number of Turkish Cypriot beekeepers is large and they are mostly small
- Financial and technical resources of the Turkish Cypriot beekeepers were quite limited

How did the EU help?

1. Organized and funded a series of **training and educational sessions** re: the EU's health and quality standards and how to meet these standards
2. Implemented an **equipment upgrade program** (that required some financial input from the beekeepers themselves)
3. Required the creation of a **new collective institutional body** that would provide leadership for the beekeepers
4. Arranged an **independent party to collect and test samples** from at least 10 of the participating beekeepers

How did the EU help? …

- Provided quite comprehensive training and educational programs

    1. The prevention, diagnosis, and proper treatment of several common honeybee diseases
    2. EU veterinary drug legislation
    3. EU regulations concerning pesticides and the maximum EU accepted levels of contaminants
    4. Proper harvesting and storage procedures

- Assisted the beekeepers with equipment upgrades (through a program in which both parties, the EU and the beekeeper, made a financial commitment)

[One of these beekeepers, used this program to obtain seven of the eight EU recommended beekeeping tools and machines. After mastering these (harvesting, uncapping, extracting, filtering, storing, and bottling) machines, he then enhanced the adaptive capacity of his fellow beekeepers by hosting a best beekeeping training session that was attended by 119 local beekeepers.]

- Ensured sustainability by making additional funding contingent on the establishment of a beekeeping cooperative. (The beekeepers formed the Turkish Cypriot Beekeepers Cooperative)

CASE 2: CITRUS GROWERS' DILEMMA

Agriculture in Cyprus is "a sector that is not known for the flexibility of its growers"

- Since the 1970s, Cyprus has had issues with water availability & citrus trees require significant water
- Prior to USAID intervention in 2005, some Turkish Cypriot citrus growers did propose the idea of commercial pomegranate farming
- Yet, starting the pomegranate industry in north Cyprus required significant technical acumen and financial input; the Turkish Cypriot farmers considering pomegranate farming were unable to act on their idea, as the project required resources beyond their individual means

CASE 2: CITRUS GROWERS' DILEMMA …

- Turkish Cypriot citrus growers, like the Turkish Cypriot beekeepers, suffered from a collective action problem:
- Although they realized that they could mutually benefit from a crop change, each individual citrus farmer lacked the necessary resources to implement production.

- Specifically, they were unable to
    1. Organize and collectivize
    2. Overcome significant technical knowledge barriers
    3. Obtain the full amount of the substantial capital needed to realize the project

Overcoming the Collective Action Problem in Four Phases

- In 2005, USAID awarded consultancy firm BearingPoint a 6 million dollar contract to "increase private sector development in the Turkish Cypriot community (TCC)" through the Economic Development and Growth for Enterprises (**EDGE**) program

- **Phase One: Piloting Planting**
- **Phase two: Expanding Planting**
- **Phase three: Processing facility**
- **Phase four: Certification, and exporting**

Phase One: Piloting Planting

- Community outreach programs by EDGE identified 22 Turkish Cypriot farmers interested in pursuing pomegranate farming, 17 of which committed to EDGE's **phase one** (the first planting and harvest)
- EDGE supplied the farmers with both the necessary technical assistance for creating the irrigation lines and the funding to develop approximately half of these lines
- EGDE provided the farmers with access to pomegranate experts, like Israeli Agricultural Engineer Shlomy Raziel, who identified the appropriate plant variety and visited the "growers every six to eight weeks in order to provide on-site technical assistance"
- EDGE also held a number of training sessions for the farmers that covered topics such as tree planting, fertilizer application, pest management, winter pruning, and flower thinning (500 hours of training)

Phase two: Expanding Planting

- During phase one, the 17 farmers planted 18,750 pomegranate trees on approximately 51 acres of land; during **phase two** (the extension of the program), the number of farmers expanded to 22 and an additional 3,700 trees were planted on 11 more acres

Phase three/four: Processing facility, certification, and exporting

- 19 of the pomegranate farmers started a collaborative company (Alnar Narcılık Ltd.) and, using a €150,000 matching grant from the EU, were able to build a technically advanced storage and processing facility
- EDGE ensured the sustainability of the pomegranate program; the program's consultants suggested that Alnar obtain **GLOBALG.A.P. certification** (and helped the producers answer the more than 350 questions that are part of the certification process)

Outcome

- Alnar's farmers actually started exporting their products from this facility to Sweden in 2011, and have since expanded their exports to England, Belgium, Germany, and the Netherlands
- Alnar first exported 49 tons of pomegranate products to Sweden in 2011; by 2013, exports had increased to 232 tons and were being sold in 5 countries
- Productivity has increased from the farmers' initial harvest of 30 kg per tree in 2007 to 60 kg in 2013

LESSONS LEARNED

- Ostrom claims that "all efforts to organize collective action must address a common set of problems." These problems are "coping with free-riding, solving commitment problems, arranging for the supply of new institutions, and monitoring individual compliance with sets of rules."
- The discussed cases suggested solutions to these problems; although they may appear to be rather niche instances, their lessons have more general applicability.
- In regards to specific actions the EU can take to promote sustainable agricultural development in the Euro-Mediterranean area, these cases highlight three components that should be integral to future EU development programs:

    1. Access to information and program-related experts
    2. Financial assistance
    3. Ongoing quality checks