



Can Organic Agriculture Feed the World?

Buy green: organic agriculture is a real growth sector in affluent societies—and so are the trendy labels for its consumers. While enjoying a postmodern “Lifestyle of Health and Sustainability (LOHAS)” or a post-materialistic “Lifestyle of Voluntary Simplicity (LOVOS)” consumers of organic food can feel that they are doing something worthwhile. But can organic agriculture actually help save the planet?

Producers of organically certified agricultural products in developing countries have growing opportunities to benefit from such emerging markets. But a recent study by US American researchers tries to answer the question of whether organic agriculture production in developing countries can do more than just feed new markets among affluent consumers.

One side of the global debate over food supply claims that methods of the Green Revolution are essential to increase food production for a growing human population. The other side claims that such short term productivity gains are a dearly purchased success, with high environmental costs. The Millennium Ecosystem Assessment in 2005 recommended the promotion of agricultural methods that increase food production without harmful tradeoffs from excessive use of water, nutrients or pesticides.

The principal objections to organic agriculture are low yields and insufficient quantities of organic fertilizers. It is also claimed that organic agriculture requires more land to produce food than conventional agriculture, so offsetting any environmental advantages it may have.

The study compared yields of organic versus conventional or low-intensive food production for a global dataset of 293 cases and estimated the average yield ratio of different food categories for developed and developing countries.

The models suggest that the agricultural land base could eventually be reduced if organic production methods were employed, although additional intensification via conventional methods in the tropics would have the same effect. According to the authors the calculations probably underestimate actual output on many organic farms, as

yield ratios were reported for individual crops, while many organic farmers use polycultures, so that the total production per unit area is often higher than for single crops. Typically the production per unit area is greater on small farms than on large farms, so an increase in the number of small farms would also enhance food production, says the study. Organic production requires also more hand labor than conventional production, helping alleviate rural or peri-urban unemployment.



The study concludes that “organic agriculture, properly intensified, could produce much of the world’s food” and thus help increase food security more sustainably.

Undoubtedly, the study sketches a very intriguing suggestion. However, one of the biggest weaknesses of the study is the lack of experimental data that compares the yields of organic and conventional crops in developing countries. More research is demanded - a plea that the authors would concur with, as scientific research over the past 50 years has widely neglected organic farming and instead focused on conventional methods.

Further reading:

Organic agriculture and the global food supply,
in: Renewable Agriculture and Food Systems: 22(2); 86-108
The complete study is available for download on our intranet.

New Publications (Articles & Books) Received by the Library

Garcia, M.I., Lozano, M., de Espinosa, V.M., Ayuso, M.C., Bernalte, M.J., Vidal-Aragon, M.C., Perez, M.M., (2007). Agronomic characteristics and carotenoid content of five Bola-type paprika red pepper (*Capsicum annum* L.) cultivars. *SCIENTIA HORTICULTURAE*. v.113(2):202-207.

Gui, A., Kidoglu, F., Anac, D., (2007). Effect of nutrient sources on cucumber production in different substrates. *SCIENTIA HORTICULTURAE*. v.113(2):216-220.

Khokhar, K.M., Hadley, P., Pearson, S., (2007). Effect of reciprocal transfers of onion sets between inductive and non-inductive temperatures on the incidence of bolting and bulbing and seed yield. *SCIENTIA HORTICULTURAE*. v.112(3):245-250.

Krattiger, A., Mahoney, R.T., Nelsen, L., Thomson, J.A., Bennett, A.B., Satyanarayana, K., Graff, G.D., Fernandez, C., Kowalski, S.P., (2007). Intellectual property management in health and agricultural innovation: a handbook of best practices. Oxford: MIHR. 2 vs.

Medakker, A., Vijayarahhavan, V., (2007). Successful commercialization of insect-resistant eggplant by a public-private partnership: reaching and benefiting resource-poor farmers. In: Intellectual property

management in health and agricultural innovation: a handbook of best practices; volume 2. Oxford: MIHR. p.1829-1832

Rimmer, S.R., Shattuck, V.I., Buchwaldt, L., (2007). Compendium of brassica diseases (plus CD-Rom). St. Paul, MN: The American Phytopathological Society. viii, 117 pp.

Tunku, P., Lagoke, S.T.O., Ishaya, D.B., (2007). Evaluation of herbicides for weed control in irrigated garlic (*Allium sativum* L.) at Samaru, Nigeria. *CROP PROTECTION*. v.26(4):642-646.

Wechter, W.P., Farnham, M.W., Smith, J.P., Keinath, A.P., (2007). Identification of resistance to peppery leaf spot among *Brassica juncea* and *Brassica rapa* plant introductions. *HORTSCIENCE*. v.42(5):1140-1143.

Xu, D.H., Xu, D.H., Sun, R.F., Zhang, Y.G., Yuan, Y.X., Kang, J.G., Wu, J., Zhang, H., Song, X.F., Li, X.N., Song, Y.M., Wang, X.W., (2007). Mapping and analysis of QTL related to leaf color in Chinese cabbage (*Brassica rapa* L. subsp. *pekinensis*). *ACTA HORTICULTURAE SINICA*. v.34(1):99-104.

蔡東纂, 陳珮臻, (2007). Plant nematology (植物線蟲學). Taichung: NCHU. 117 pp.

New Popular Magazines Now Available in the Library

The Economist: How to deal with a shrinking population – 28 July–3 August 2007

Scientific American (Chinese) – August 2007

Time: It's all about me – 6 August 2007



Recommended Web Link: WAMIS

“WAMIS – World AgroMeeorological Information Service”, provides a service for disseminating agro-meteorological products produced by member organizations. By providing a central location for such agro-meteorological information, WAMIS aids users to quickly and easily evaluate the various bulletins of member organizations and gain insight into improving

their own information services. The web site also hosts a “tools and resources” section to further help members improve the quality and presentation of their agro-meteorological bulletins.

Please visit <http://www.wamis.org/index.php>

- Source: Fang-Chin Chen/Communications

SOP for HQ Purchasing Procedures

Owing to occasional use of fake quotations found in purchasing applications, it is important to comply with the SOP for Purchasing procedures. All senior staff are requested to convey the following requirements to their unit staff.

All purchasing requests (PR) must follow the steps stipulated in the SOP for Purchasing Procedures. If the SOP is revised in the future, all staff should follow the revised SOP from the date of announcement. When making a purchase request, the requestor should only provide one quotation to the Purchasing Office for reference, not more. The requestor is not obligated and not allowed to provide more than one quotation to the Purchasing Office. The other quotations, if needed, are the Purchasing Office's responsibility. If a fake quotation is found in future PR, the person who obtained the fake quotation will be subject to dismissal from the Center as this is a fraudulent behavior. If there is any difficulty in getting sufficient quotations (as per current SOP requirements), the Purchasing Office must explain the reason(s) in the column "Remarks" of the subject PR for the management's review and approval.

Here are the steps that we need to comply with in order to keep our purchasing procedures honest and our costs reasonable: (1) Please write down detailed specifications of the merchandise you wish to purchase on the Purchase Requisition Form (for example: model number, specifications, manufacturer, etc.) to help the Purchasing Office seek additional quotations. (2) If you have any complaint about the purchased merchandise, you may file a complaint to the Purchasing Office. The Purchasing Office has to forward your complaint to the supplier if the Purchasing Office agrees with your claim. The Purchasing Office must maintain a record detailing how the supplier handled the complaint and the time taken to settle the matter, and file all relevant documentation (after the case is closed) for future evaluation. I am also requesting the Purchasing Office to prepare a periodical evaluation of our major suppliers for future selection purposes. (3) If the Purchasing Office asks the requestor to provide more than one quotation, please simultaneously notify your unit head, the supervisor of the Purchasing Office, and me. (4) In the current SOP, there is no specified time period for the completion of an approved purchase request. However, the Purchasing Office should do their best to implement the request in a reasonable time after a purchase request is approved. If there is any prolonged postponement made during the process, the requestor may send a follow-up notice to his/her unit head and the supervisor of the Purchasing Office to inquire about the reason for the delay. (5) If the Purchasing Office fails to fulfill

common procurement within 5-7 days, please notify your unit head and the supervisor of the Purchasing Office at the same time. However, sometimes exceptions to this 5-7 days requirement may occur when there is a heavy workload on the Purchasing Office. Please try your best not to submit a large number of purchase requests near the end of projects since this may overload the Purchasing Office.

Please do not hesitate to offer suggestions on the purchasing procedures, either verbally or in writing, directly to our Internal Auditor, Vincent Lu, or DDG for Administration & Services, Yin-Fu Chang.

由於時而在申請採購項目中，發現不實的詢價單，這份聲明係強調遵守中心採購制度的重要性。我現在要求各部門主管將下列的要求明白清楚地宣導給各部門之所有同仁，並且要求所有同仁共同遵守。

從今開始，所有的請購，必需遵照中心採購制度辦理。申請單位僅需提供 1 張詢價單給採購單位作為後續訪價的參考。申請單位沒有義務，也不可以提供超過 1 張以上的詢價單給採購單位。其他必需的詢價單，應該是採購單位的責任。日後，若發現不實的詢價單，則取具不實詢價單的同仁，將遭受解雇的處分，因為這是一種不誠實的行為。如果確有取得其他詢價單的困難，採購單位可以於請購單附註欄說明無法取得額外詢價單的理由，報請管理階層核示。

為維持採購流程的真實性，並以合理的價格採購所需的物品，下列步驟須要各位同仁配合：(1)請申請單位提供所欲購買物品詳細的規格(如物品型號、規格與功能及製造廠商等資訊)，以利採購單位進行後續的詢價工作。(2)申請單位若對所購買的物品不滿意，可向採購單位提出不滿意的理由。採購單位若認同，須向廠商表達此一客訴事件，並與廠商協調處理。採購單位須詳實記錄廠商的處理方式與處理時間，在客訴事件結束後，將相關資料存檔，作為日後評估廠商的參考。我同時也要求採購單位必需定期評估中心主要的供應廠商，其評估結果作為日後挑選廠商的參考。(3)倘若採購單位要求申請單位提供超過 1 張的詢價單，請申請單位應同時知會該單位主管、採購單位主管及我本人。(4)現行的採購制度並未規定採購案核准後到採購完成的時間。我現在要求採購單位應盡其所能，在合理的時間內完成採購程序。在採購的流程中若有任何過長的延誤，申請單位須提出跟催(Follow-up)通知單送交採購單位主管，以便追蹤延誤的原因。(5)對於一般性採購，若採購單位無法在 5-7 天內完成，請通知申請單位主管及採購單位主管。各申請單位應妥善規劃購買物品的需求，避免集中在計畫末期或年終提出，因為這樣會造成採購單位在同時間有過量的工作負擔，而拖延整個採購的流程。

各位若對採購流程有任何建議，請以口頭或書面的方式，直接提供給內部稽核呂謙益或張副主任。

- Source: Dr. Tom Lumpkin/Director General

Travel

Dr. Grey Luther, 6-15 August, to Indonesia, to give a presentation on grafting at the IPM CRSP SE Asia regional workshop; to attend the Communications Forum, to view field trials and to hold meetings on socio-economics activities and future research plans for the ACIAR-Aceh project.

Dr. Manuel C. Palada, 7-17 August, to Indonesia, to attend the Communications forum coordinated by a collaborating ACIAR project in Aceh; to visit and monitor research trials in Aceh Besar, Pidie and Aceh Utara; to attend a review and planning meeting for the upcoming season trials; and to discuss preparations for a baseline survey; to visit Central Java and to follow up the progress of the ACIAR project on IDM Chili; to meet with project collaborators.

Dr. Jackie Hughes, 8-11 August, to Manila, Philippines, to participate, on behalf of the DG, in IFPRI's High-level policy forum on "Agricultural and rural Development for Reducing Poverty and Hunger in Asia" to be held at the Asian Development Bank.

- Source: Yvonne Ting/ASU

Dr. Peter Aun-Chuan Ooi, 6-8 August, to Ciloto, Indonesia, to participate at the IPM-CRSP meeting; 9 August, to meet Mr. Htain Lin of the ASEAN Secretariat.

- Source: Dr. Peter Aun-Chuan Ooi/Regional Director/AVRDC-ARC

New Assignment of Ms. Kitty Hong

Ms. Kitty Hong has been transferred from the International Cooperation Office to the Office of the Deputy Director General for Administration and Services effective 1 August 2007. Kitty's main responsibilities at ODDG-A&S are (1) assist DDG-A&S in developing special project proposals for funding from the host country; (2) assist DDG-A&S in reviewing all the Center's project proposals to be submitted to the host country's funding agencies; (3) assist DDG-A&S in liaising with the host country institutes; (4) assist DDG-A&S in preparing documents and reports for the host country; (5) serve as liaison secretary at AVRDC HQ for the GHI Secretariat; (6) record the Center's incoming Chinese official letters into the master logbook,

translate letters into English as required, and distribute to concerned staff/units after review by DDG-A&S; (7) screen e-mails received through the Center's electronic mailbox and forward to concerned staff/units for necessary actions; and (8) perform other functions as assigned by DDG-A&S. Kitty's new extension number is 124 and her e-mail address (kitty@avrdc.org) remains unchanged. We wish Kitty every success in her new assignment.

- Source: Dr. Yin-Fu Chang/Officer-in-Charge of AVRDC

Highlights of meeting with the Director of RDI-KPS Kasetsart University, Kamphaengsaen on 2 August 2007

The meeting was held at the office of the Director of Research and Development Institute of Kasetsart University, Kamphaengsaen.

The Director, **Dr. Roongnapa**, was informed of the ongoing repair work at the Regional Training Center (RTC). **Dr. Roongnapa** concurred with the idea of setting up a Maintenance Committee with members from both TVRC and ARC to oversee the maintenance of the RTC.

It was agreed that regular meetings between KU and ARC have contributed to better communication and enabled better collaboration as envisaged by the KU Council.

- Source: Dr. Peter Aun-Chuan Ooi/Regional Director/AVRDC-ARC

Visitors

Dr. Raghunath Ghodake, Chairman of APAARI from Papua New Guinea will visit the Center on 7 August. Dr. Ghodake has been invited by COA to visit Taiwan from 5 to 9 August. He will be accompanied by Ms. Hei-yin Sung from COA.

- Source: Dr. Yin-Fu Chang/DDG-A&S

A delegation from the University of Idaho, USA will visit the Center on Tuesday, 7 August 2007. Including 3 teachers and 7 students this visit has been organized by National Chiayi University. They hope to learn more about the Center's research activities.

- Source: Communications

New Staff at Pepper Unit, Effective 1 August 2007



Mr. Chen Chin-teng 陳金藤, Field Laborer, can be contacted at ext. 332 or 333.



Mr. Chen Ying-chun 陳瑩駿, Field Helper (ACIAR-Chilli IDM project), can be contacted at ext. 332 or 333.



Ms. Kao H. Chu-yun 高黃菊雲, Field Laborer (vBSS project), can be contacted at ext. 332 or 333.



Mr. Hsu Jung-chih 徐榮智, Research Assistant (vBSS project), can be contacted at ext. 374. Mr. Hsu obtained his B.S. degree from Department of Plant Industry, National Pingtung Polytechnic Institute in 1995.

<jungchih.hsu@netra.avrdc.org.tw>

- Source: Felisa Wang/HR

What's New on the AVRDC Websites?

Intranet: <http://www.avrdc.org/intranet/home.html>

- ¥ Funding News
 - ◆ Adaptation of African Agriculture to Climate Change
 - ◆ Budget Planning Table (in Excel)
- ¥ Memorandum: SOP for Purchasing Procedures
- ¥ Special Dish Menu for Lunch
- ¥ New Assignment and Extension Number: Kitty Hong

- ¥ Useful Tools: Transferring large documents
- ¥ New Consumption Data
- ¥ Style Guide for AVRDC Staff (1991 ed.)
 - ◆ References
 - ◆ Scientific names
 - ◆ Scientific terms

- Source: Communications