

## THE WORLD FOOD PRIZE 2008 YOUTH INSTITUTE PAPER TOPIC

### *“Agriculture in Development: Food Security in an Era of Increased Demand”*

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#### INTRODUCTION TO THE ISSUES

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A fast unfolding food affordability crisis is occurring simultaneously in many countries around the world, the first time that this has happened since the early 1970s. In 2007, wheat prices rose by about 80 percent, and soy, rice, and corn prices by about 18 percent. In 2008, the rate of increase for wheat and rice prices has accelerated, making for some of the sharpest rises in food prices ever. This food price shock is sending a new wave of hunger and poverty rippling through the world's poorest nations, igniting street riots and threatening to destabilize governments. These impacts reflect the role of wheat, rice, and other grains as staple foods eaten directly by the majority of the world's population.

A compounding politics of food scarcity is also emerging, as governments impose price controls, lower import tariffs, increase purchases to stockpile food, and restrict grain exports to check the rise in domestic food prices. These responses distort the overall world food market and drive prices even higher.

More expensive food is disproportionately impacting the world's poorest individuals, who are predominately small-scale subsistence family farmers. These farmers live in communities and countries of concentrated poverty – areas containing over 92 percent of the world's households that consume \$1 or less of goods per person per day. Without the financial ability to pay more, they are experiencing increased suffering and economic hardship. The 1.5 billion people who live on \$1 - \$2 a day are cutting meat consumption and spending on items such as health care. The 1 billion people living on \$1 a day are eating cheaper cereals such as sorghum and taking their children out of school. The absolute poorest families, living on 50 cents a day, are selling their animals, tools, and other possessions. All are eating less food.

These price increases are the cumulative effect of several trends that are simultaneously accelerating growth in demand, slowing growth in supply, and increasing the cost of production:

- Consumption of more dairy and meat products in economically growing countries
- Higher costs for land, energy and fuel, fertilizer, irrigation, and other agricultural inputs; and limited access to credit
- Ethanol production from corn or sugar cane and biodiesel from soy and oil palm
- Reduced yields from the loss of productive lands to urbanization and salinization; droughts, changing rainfall patterns and increased temperatures; declining availability of water resources; and increasing pest and disease infestations
- Slowing growth in per acre crop productivity, reduced investments in agricultural research and development, and poor access to agricultural extension services
- Political instability; inequitable trade and market systems; inflation and currency devaluation
- Shrinking size of family farms and unfavorable governmental land holding policies in developing countries

The U.N. World Food Program (WFP) and governments are responding in the short term by boosting humanitarian relief, food subsidies, and other social-protection programs. As prices rise, large farmers in the Americas, Europe, and other economically advanced countries are responding with increased grain plantings. These plantings should stabilize and then reduce prices in the near term. However, as trends of growing demand, constrained supplies, and

increasing production costs are expected to continue, many analysts predict that we are entering a period where prices may still be 45 percent higher than they were in 2006-2007. This changing scenario suggests that the world must cope with a new reality of more expensive food.

Addressing these trends requires sustainable growth in food production. If the increased food production continues to come primarily from large-scale farms in America, Europe, and other major producers, then the world's poor will remain dependent on a food production system that is vulnerable to price shocks. These shocks will continue to disproportionately affect the food security and well-being of the world's poorest individuals and the communities and countries where they live.

Including the world's small-scale subsistence family farmers in the effort to grow more food would directly benefit them by raising farm incomes. Yield increases translate into increased food security by providing more money for farm families and communities. With higher incomes, they can attain better diets and improved health care, better educate their children, and afford household goods and farming technologies to improve their quality of life. Subsistence farmers also manage a disproportionate share of the world's water and land resources, so raising the productivity of their existing land would be more environmentally beneficial than clearing more land for fields.

Improving yields on subsistence farms will depend on agricultural science; access to technology, land, and water; open and available markets; and economic incentives and supporting institutions. Appropriate action must address these interrelating factors in ways that balance increasing production with the needs of family farmers and their communities.

**Food Security Primer:** People who do not live in hunger or fear of starvation are considered "food secure." Food insecurity exists when people are undernourished, a result of the cost or physical unavailability of food and/or inadequate nutrition. Worldwide, around 852 million people are without enough food to eat on a regular basis, and 2 billion people face intermittent food insecurity. There are 22 countries, 16 of which are in Africa, in which undernourishment affects over 35 percent of the population.

There are strong, direct relationships between agricultural productivity, hunger, and poverty. Families with the financial resources to escape extreme poverty rarely suffer from chronic hunger. Meanwhile, poor families not only suffer the most from chronic, consistent hunger, but are also the segment of the population most at-risk when food shortage situations arise. Three-quarters of the world's poor live in rural areas and make their living from agriculture. Hunger and child malnutrition are greater in these areas than in urban areas. Moreover, the higher the proportion of the rural population that obtains its income solely from subsistence farming (without the benefit of pro-poor technologies and access to markets), the higher the incidence of malnutrition. Therefore, improvements in agricultural productivity aimed at small-scale farmers will benefit the rural poor first.

Increased agricultural productivity enables farmers to grow more food. This translates into better diets and, under market conditions that offer a level playing field, into higher farm incomes. With more money, farmers are more likely to diversify production and grow higher-value crops, benefiting not only themselves but the economy as a whole.

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## How to Write Your Paper

**Step I. Your Mission:** You will select and research one of the factors affecting agricultural productivity and food security in developing countries (see Step II below) in a region or country (see Step III below) of your choice. You will then prepare your *Youth Institute Paper* (see Step IV below) with your research findings and recommendations for increasing agricultural productivity and availability in ways that improve food security and farm income in the region/country on which you have focused.

**Step II. Key Factors** in increasing agricultural productivity and improved food security are:

1. Conducting scientific research into crop biology and agronomic technologies for improving yields, disease and drought resistance, and sustainable agricultural systems
2. Building agricultural extension programs offering education and advisory services to family farmers for implementing technologies and practices from research and development efforts
3. Removing legal barriers to introducing yield-improvement strategies by implementing land inheritance policies and securing property rights
4. Providing access to finance; improving infrastructure and institutions for marketing products; and addressing problems created by globalization and trade policies for subsistence family farmers
5. Reversing natural resource degradation and adapting farming to water scarcity and climate change
6. Implementing early warning and food reserve programs for price shocks or famines induced by drought and disease
7. Formulating public policy initiatives to address increasing populations, rapid urbanization, and gender or cultural discrimination
8. Engaging in diplomatic initiatives for conflict prevention and resolution and governance based on principles of democracy, accountability and transparency in public institutions, and the rule of law that are basic to reducing citizens' social and economic vulnerability

**Step III. Select only ONE of the regions or countries listed below as the focus of your research:**

***Example 1:*** If you choose "**Indian Subcontinent**", your research will focus on agricultural development and food security issues in any of these countries: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka

**North Africa:** Algeria, Canary Islands (Spain), Egypt, Libyan Arab Jamahiriya, Morocco (including Western Sahara), Tunisia

**Central Africa:** Angola, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo (Zaire), Equatorial Guinea, Gabon, Sudan, Zambia

**East Africa:** Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Mayotte, Mozambique, Reunion, Rwanda, Seychelles, Somalia, Tanzania, Uganda

**West Africa:** Benin, Burkina Faso, Cape Verde islands, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, São Tomé and Príncipe, Senegal, Sierra Leone, Togo

**South Africa:** Botswana, Lesotho, Namibia, South Africa, St. Helena (U.K.), Swaziland, and Zimbabwe

**Caribbean:** Anguilla (U.K.), Antigua & Barbuda, Bahamas, Barbados, Bermuda (U.K.), Cayman Islands (U.K.), Cuba, Dominica, Dominican Republic, Grenada, Guadeloupe, Haiti, Jamaica, Martinique (France), Montserrat (U.K.), Netherlands Antilles, Puerto Rico (U.S.), St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, Trinidad & Tobago, Turks & Caicos (U.K.), Virgin Islands (U.K., U.S.)

**South America Tropical:** Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Paraguay, Peru, Suriname, and Venezuela

**South American Temperate:** Argentina, Chile, Falkland Islands (U.K.), and Uruguay

**Central America and Mexico:** Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, and Panama

**Indian Subcontinent:** Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka

**East Asia:** China, Hong Kong S.A.R. (China), Japan, Democratic People's Republic of Korea (North), Republic of Korea (South), Macao S.A.R. (China), Mongolia, Taiwan

**South East Asia:** Brunei, Darussalam, Burma (Myanmar), Cambodia, East Timor, Indonesia, Lao People's Democratic Republic (Laos), Malaysia, Philippines, Singapore, Thailand, Vietnam

**Middle East:** Bahrain, Cyprus, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Turkey, United Arab Emirates, Yemen

**Eastern Europe:** Albania, Armenia, Azerbaijan, Belarus, Bosnia/Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Macedonia, Moldova, Poland, Romania, Russia, Serbia/Montenegro, Slovakia (Slovak Republic), Slovenia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan

**South Pacific:** Christmas Island, Cook Island, Federated States of Micronesia, Fiji, French Polynesia (Tahiti), Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Pitcairn, Samoa, American Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wake Island, Wallis and Futuna

**Step IV. Follow these instructions to develop your Youth Institute Paper:**

1. Choose ONE of the important regions above as the focus of your research. (You may focus on one country in a particular region if you prefer.)
2. Define a “typical” subsistence farm or urban family in your region:
  - family size and composition; diet, education, and income of family members;
  - For a farm family: farm size, crops grown, agricultural practices, marketing opportunities, and major barriers to improving farm agricultural productivity and income
  - For an urban family: employment, quality of life, and major barriers to improving income and access to nutritious food
3. Select ONE of the important factors (*Step II*) above as the focus of your research.

4. In your chosen region/country, how does the factor you selected affect, for a farm family, agricultural productivity and farm income; or, for an urban family, food availability and cost? Discuss the following:
  - What role does the factor presently play in causing your family to not produce enough food or earn sufficient income to purchase food?
  - What is the present status for this factor? How severe is the situation? What percentage of the necessary amount of food and income for the family is being attained? Is the environment being degraded? Are women, rural or urban poor, or developing countries disadvantaged?
  - What are the trends for this factor? How are the trends for this factor measured? Do these measurements indicate the situation is changing? If so, how? Because of potential change, or no change, is the situation for your farm family getting worse, improving or staying the same?
  - How would improving or resolving this factor increase the amount of food or income available to your family? Preserve the environment in a sustainable fashion? Benefit women, small farmers, urban dwellers or developing countries?
5. How could increased productivity and yields by small-scale subsistence family farmers affect the status and trends of this factor? Would this improve or harm the livelihoods of your subsistence farm or urban family?
6. Based on your research, give your recommendations as to how increased productivity by small-scale subsistence family farmers should be implemented to improve the food security and incomes of your farm or urban family in the region/country on which you have focused.
7. Give your suggestions for appropriate roles of corporations, national governments, and other organizations (United Nations, World Bank, private or civic organizations and others) in implementing your recommendations.