THE TRIAD OF DISTRESS IN THE WORLD...

- **Economic hardship** caused by:
  - High prices
  - Lack of infrastructure, education and health
  - Uncontrolled population growth

- **Repression** caused by:
  - Violation of civil liberties
  - Lack of freedom of the press
  - Scammed elections

- **Corruption** caused by:
  - Crony capitalism
  - Bribery at the local level
  - Embezzlement of public funds by government officials
TellTale Signs of Distress in the World...

- Hunger
- Disease
- Illiteracy
- Crime
- Irreparable damage to natural resources
- Despair and hopelessness
Hunger is the leading cause of death, according to the World Health Organization. The chart shows that hunger-related deaths are greater than the fatalities caused by HIV/AIDS, tuberculosis, trachea, bronchus, lung cancer, and road traffic accidents combined. The leading cause of death is HIV/AIDS with 36 million deaths, followed by tuberculosis with 5.71 million deaths.
HUNGER AND CONFLICT...

- Hunger causes conflict:
  - Hunger makes people desperate
  - Hunger makes refugees

- Conflict causes hunger:
  - Conflict results in food used as a weapon
  - Conflict drives down food production
    - Nobody to farm
    - Infrastructure destroyed
    - Natural resources trashed
WE CAN TRY TO PREVENT HUNGER BY ADDRESSING CONFLICT...
Dr. Norman Borlaug said it best...

“Peace cannot be built on empty stomachs”
THERE'S A LOT OF WORK TO BE DONE...

Hunger Map 2012

World Food Programme

It costs on average just US 25 cents a day to feed a hungry child and change her life forever.

While food is the most basic of human needs required for survival, on average, 3 in 8 people go to bed hungry each night.

Hunger kills, maims, reduces IQ, lowers wages; reduces school attendance and undermines economic growth.
Drafted in 2000

8 goals for developing countries to be achieved by 2015

- Partnerships
- Extreme poverty and hunger
- Primary education
- Environmental sustainability
- Gender equity
- HIV/AIDS
- Maternal health
- Child mortality
PROGRESS ON GOALS...

- Number of people in extreme poverty (living on less than $1.25/day reduced by half from 1990 to 2015 already met (BUT still about 1 billion people!)
- Number of deaths in children under 5 years old decreased from 12.4 million in 1990 to 6.9 million in 2011 (14,000 fewer children dying each day) (BUT proportion who die during first month after birth increasing)
- Proportion of people without access to drinking water has been halved (BUT 11% of the world, or 783 million remain without access to drinking water)
Established in 2006 as part of Agriculture & Life Sciences at Texas A&M

- Projects around the world totaling >$55 million
- Funded by USAID, USDA, private foundations, corporations
- Mission is to apply agricultural science to feed the hungry and lift people out of poverty

http://borlaug.tamu.edu
Mission
To employ agricultural science to feed the hungry, and to support equity, economic growth, quality of life and mutual respect among peoples.
$55 Million Portfolio

Majority of funding from federal government

Most federal funding from USAID

State Department and Department of Defense account for 30 percent combined
Notable Development Projects

2011-2014 | South Sudan | $9.8 million | Support John Garang University

2005-2011 | SPS-LMM | Ethiopia
$9.3 million | Boost livestock production and processing to increase exports

2006-2012 | SPREAD | Rwanda | $6.6 million | Work with coffee cooperatives

2007-2012 | INMA | Iraq | $5.7 million | Sub to Louis Berger | Bolster Agribusiness

2010-2013 | Indonesia Tropical Plant Curriculum Project | Iraq | $636,000 | USAID
University biodiversity conservation

2009-2012 | AGTEC | Guatemala | $3.5 million | Improve food technology

2006-2012 | PEACE | Afghanistan | $5.75 million | USAID | Improve livestock forage quantity, quality; conflict resolution

2008-2010 | DOD-BTA Iraq Advisory Board Project | Iraq | $5.8 million | USDA-FAS
Advise on community agriculture development projects with U.S. Military
Rwanda project

- A country in shambles after 1994 genocide (800,000 people killed in 100 days)
- Gemmima Mukashyaka, 16 yr old, taken from village, raped, parents and six siblings tortured and killed
- Tried to restart her family’s coffee plantation, making $30 in 1996
Rwanda project

- Funded by USAID and led by Borlaug Institute in partnership with MSU
- Established Maraba Coffee Cooperative
- Improved quality and production and cut-out middleman
- Clients include Starbucks and Community Coffee
- Rwanda project
  - Gemmima now owns two houses and has put her sisters through school
14 Academic Departments

- Biological and Agricultural Engineering
- Agricultural Economics
- Nutrition and Food Science
- Animal Sciences
- Poultry Science
- Soil and Crop Science
- Horticulture Sciences
- Entomology
- Plant Pathology and Microbiology
- Biochemistry and Biophysics
- Recreation Parks and Tourism Sciences
- Ecosystem Science and Management
- Wildlife and Fisheries
- Agricultural Leadership, Education and Communication
A network of 250 county offices, 616 professionals and 343 subject-matter specialists across the state provide agricultural expertise accessible by every resident of every Texas county.

This extension of education helps realize a goal of improving the lives of people, bolstering business and promoting stronger communities across Texas and beyond.
Farming Hits the Wall, But Not the Ceiling

Humankind now farms 38 percent of the earth’s ice-free land. Crops cover one-third of that area; pastures and ranges for livestock cover the rest. Little room exists for expansion because most of the remaining land is deserts, mountains, tundra or urban. Still, farms in many existing areas could be more productive (insets).

Better Breadbaskets
The world could grow much more food if the productivity of the poorest farms were raised toward the maximum possible, given climate and soil conditions. For example, the yield for maize (shown), could rise significantly across parts of Mexico, West Africa and Eastern Europe if seeds, irrigation, fertilizer and markets were improved.
Addressing world hunger is doable;
It is our moral imperative as human beings;
It is in our nation’s best interest

http://www.youtube.com/watch?v=CEJCWQZvTCM