

A photograph of two farmers in a vast field of golden wheat. The farmer in the foreground is wearing a white kurta and a white turban with a blue and white checkered pattern. He is leaning forward, looking down at the wheat. The second farmer is in the background, also wearing a white kurta and a white turban with a blue and white checkered pattern, and is also leaning forward. The field is filled with ripe, golden wheat stalks, and the lighting is warm, suggesting late afternoon or early morning.

# Leading the Field

A major international effort to achieve equity and food security for all

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## **Crop diversity is essential for achieving food security and alleviating poverty**

In the last century alone, more than three-fourths of all crop diversity has disappeared forever. The unique attributes they had acquired over millennia – their ability to survive hot summers or cold winters, to thrive in dry conditions or in areas prone to flood, to withstand pests and disease – have been irrevocably lost, putting global food security, whole nations, cultures and economies at risk.

With the global population projected to peak at 9 billion by 2050 (less than five plant breeding cycles away!) and rapidly changing weather patterns predicted - including drought and flooding - the world needs to take corrective action now.

The International Treaty on Plant Genetic Resources for Food and Agriculture was established in 2004 to help lead this effort.

# A Global Imperative





### **The most important challenge of our time**

Crop diversity provides the raw material for plant breeding, the tools for adaptation. The loss of these key components endangers agricultural productivity, food security and our ability to adapt to the pace of environmental change.

More than 75% of all crop diversity has been permanently lost to the world, with the vast majority of these losses occurring in the last 80 years.

As a result of neglect and ignorance, we are now dangerously reliant on only a few varieties of rice, potatoes, maize, wheat, beans and other staple foods. In fact, two-thirds of the world's food is generated from only 12 plants and five animal species. This is a major threat to food security and health globally.

As recently as the 1950's we had access to thousands of varieties of our most important foods and could cross-breed plants to make them genetically resistant to disease, changing weather patterns and other threats, today we have alarmingly fewer options. In the USA, more than 90% of fruit tree and vegetable varieties found in farmers fields at the beginning of the 20<sup>th</sup> century have disappeared.

Today, one billion people live in chronic hunger, one child dies every five seconds from a hunger related illness and we anticipate having to feed an additional two billion people by 2050.

Widely acknowledged by scientists, the loss of crop diversity is rapidly moving up the agenda of governments, the private sector and civil society as we seek to feed a growing planet, safeguard cultures and communities that are inextricably linked to the land, and help the poorest of the poor adapt to the inevitable effects of climate change.

# Food Security

## Global challenges, local impact

Nations are already interdependent in terms of their crop diversity; all depend on the genetic diversity in crops from other countries and regions.

The global exchange of genetic material ensures we can adapt to changes in our environment. The current rate of climate change heightens the interdependence between countries. Coupled with the loss of diversity of crops it threatens our ability to feed a growing population. Never before has the need for exchange of genetic material been more important.

The Treaty has been established as a direct International response to these global challenges. It addresses adaptation to climate change, food security and preservation of on-farm diversity. It directly contributes to the achievement of Millennium Development Goals, 1 and 7 of Ending poverty and hunger and ensuring Environmental Sustainability.

The Treaty is now a fully operational global system. It facilitates the exchange of genetic material and the sharing of benefits that arise with those who safeguard global diversity, thereby enhancing our ability to adapt to climate change and to ensure food security.

# Climate Change



# Innovative Solutions



In addressing these global challenges the Treaty's 123 members established a global genepool and a Benefit-sharing Fund.

With more than 1.2 million entries the multilateral genepool facilitates the international exchange of genetic material needed to adapt to the current pace of environmental change.

The Benefit-sharing Fund invests directly in high impact projects supporting farmers in developing countries conserve crop diversity in their fields and assisting farmers and breeders globally adapt crops to our changing needs and demands.

To ensure sustainability of the efforts the Fund focuses on building the capacities of developing countries, enhancing the exchange of information and making the appropriate technology available for the conservation and use of this diversity.



“Investing in the Treaty is an absolute must if we are to ensure food security and help communities adapt to the potentially catastrophic effects of climate change.

Millions of people across the developing world especially are reliant on the Treaty taking action. This is something the world must do now and on a major scale.”



Ambassador Walter Fust  
CEO, Global Humanitarian Forum  
Former Dir General, Swiss Agency for  
Development Cooperation  
Task Force Member, ITPGRFA

# Preservation & Use

“Over the millennia, humans have relied on more than 10,000 different plant species for food. Today, we have barely 150 species under cultivation – and of those only 12 species provide 80% of all of our food needs.

Agricultural biodiversity is essential. It is really the global insurance that in the future we will be able to adapt to problems like climate change and population growth.”



Dr Shakeel Bhatti (above right)  
Secretary, ITPGRFA  
CNN interview, September 2009



A 3-5 degree increase in global temperatures pushes crop yields into crisis for all major cereal crops in lower latitudes without adaptation measures. In Africa, yields from rain-fed agriculture could be reduced by up to 50% by 2020.



## A 'time bomb' for world wheat crop

Crop scientists fear the Ug99 fungus, called stem rust, could wipe out more than 80% of the world's wheat crops as it spreads from eastern Africa. It has already jumped the Red Sea and travelled as far as Iran. Experts say that 19% of the world's wheat – which provides food for more than 1 billion people in Asia and Africa – is in imminent danger and Ug99 is poised to enter the breadbasket of northern India and Pakistan and the wind will inevitably carry it to Russia, China and North America if it doesn't hitch a ride with people first.

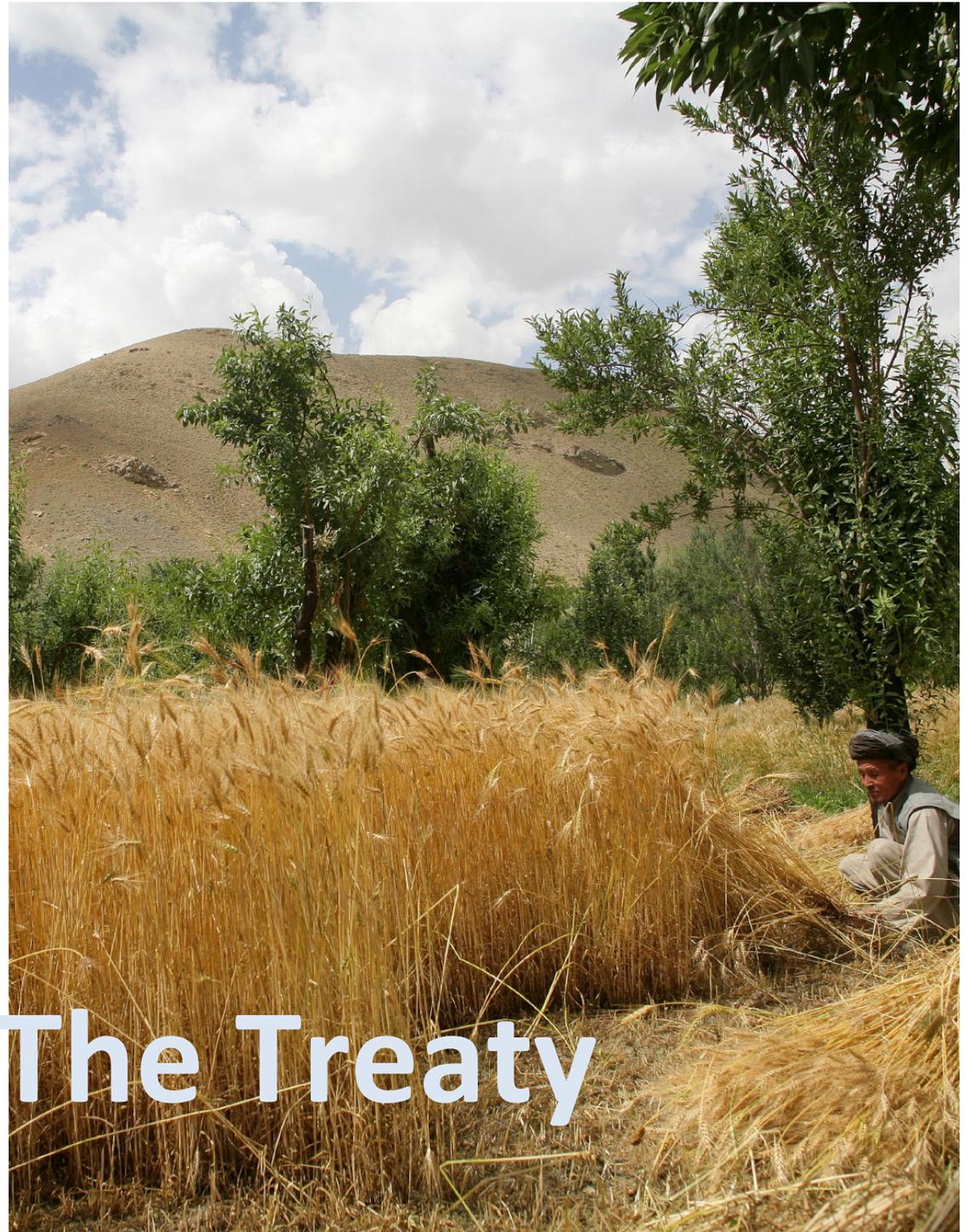
"A significant humanitarian crisis is inevitable," said Rick Ward, coordinator of the Durable Rust Resistance in Wheat project at Cornell University in New York. The solution is to develop new wheat varieties that are immune to Ug99, but that's much easier said than done.

After several years of feverish work, scientists have identified a mere half-dozen genes that are immediately useful for protecting wheat from Ug99. Incorporating them into conventional breeding techniques is a nine- to 12-year process that has only just begun. And that process will have to be repeated for each of the thousands of wheat varieties that is specially adapted to a particular region and climate.

**Los Angeles Times**

*June 2009*

# About The Treaty



## A practical solution

The International Treaty on Plant Genetic Resources for Food and Agriculture came into effect on 29 June 2004. Representing the combined political will of more than 123 governments, and building on the achievements of the Global Crop Diversity Trust which has helped to safe-guard more than 1,000,000 plant varieties in seed banks around the world, the Treaty is committed to eradicating poverty, ensuring food security for all and helping the world adapt to the effects of climate change.

In response to alarming new information about food insecurity globally against the backdrop of climate change and other threats, the Benefit-sharing Fund was established to help accelerate crop diversity efforts and distribute the benefits of these efforts widely.

Parties to the Treaty also committed to working together to raise and allocate a minimum of \$116 million\* through this special Fund, focusing on scalable projects benefitting farmers in the developing world.

*\* Based on a conservative estimate from the Global Plan of Action.*



## ***An efficient and effective structure***

The Treaty itself is a landmark achievement with its multilateral system of access and benefit sharing enabling countries, the private sector and farmers to share genetic resources freely and equitably. So successful is the Treaty's innovative approach, the World Health Organisation (WHO) is using it as a model for sharing information on viruses leading to accelerated research on influenza and other global threats.

Based in Rome, the Treaty is managed by a lean and efficient Secretariat of 11 professional and support staff who coordinate:

- A network of national focal points (NFPs) in 123 countries that includes scientists and policy makers with expertise in plant genetics, farming, climate change, sustainable livelihoods and poverty eradication. The Treaty's NFPs are an invaluable resource, putting the Treaty in close contact with innovative solutions at the grassroots.
- Communication with its member nations across 7 regions and interested others. There is increasing appetite from the world's media for information and real insight regarding crop diversity.
- An executive committee (Bureau) of leaders from seven nations, including Canada, Australia, Brazil, Malaysia, Austria as well as Tunisia and Iran. The Bureau provides oversight of the Benefit-sharing Fund, with input and advice from group of experts representing the Governing Body
- A Task Force of leaders from both the public and private sector who are taking responsibility for the success of the \$116 million resource mobilisation effort, with significant progress to report at the next Governing Body meeting in Bali, Indonesia in March 2011.
- Goodwill Ambassadors working on the Treaty's behalf to raise awareness about the urgent need for global action on crop diversity.



Extending the work of the Global Crop Diversity Trust and others in the multilateral system, the Treaty and the newly-established Benefit-sharing Fund seek to accelerate the conservation and use of plant genetic resources on a global scale through technology transfer, capacity building, high-impact projects and innovative partnerships involving farmers, plant breeders, civil society and other stakeholders. The Benefit-sharing Fund will prioritise projects that:

1. Accelerate on-farm management and conservation in collaboration with farmers and local communities, especially in the developing world, where a real opportunity exists for advances in crop diversity to improve nutrition and create more sustainable livelihoods
2. Increase food security, especially for local communities in the developing world that stand to suffer most from the inevitable effects of climate change. The Fund can and must help keep farmers ahead of the climate change curve, working now to produce seeds that will be adapted to thrive in much harsher conditions in the future
3. Represent innovative partnerships between research centres, farmers, civil society, and public/private sector leaders at all levels. The urgency of the situation and enormity of the challenge facing our world today requires coordinated effort across disciplines and with other relevant funding mechanisms. It requires leaders who share the Treaty's passion for achieving equity and food security for all on a greatly accelerated basis as the world is changing faster than seeds can adapt in nature
4. Have the potential to be scaled up across agro-ecological Zones, ensuring maximum positive impact and best use of current scientific data

# Global Impact



## The Treaty's grant making process

The Treaty is committed to a rigorous, objective and efficient grant-making process. The following reflects a step-by-step overview:

- 1.The Treaty Bureau announces a "call for proposals" once each biennium, the next one is Summer 2010.
- 2.The Treaty activates its global network to raise awareness and encourage the highest quality, most innovative and scalable proposals
- 3.Proposals are reviewed to ensure they meet eligibility criteria. With advice and counsel from a panel of experts and other acknowledged authorities, based on the size of the call, the Secretariat then reviews, scores and ranks the proposals on their technical merits
- 4.The Bureau then formally approves grants based on technical merit, assigned ranking and availability of funds. Review and assessment information will be made available to grant-seekers on the Treaty's website
- 5.The Secretariat then establishes a contractual relationship with successful grant-seekers including more fully defining the criteria by which the success of the grant will be measured
- 6.The agreement and corresponding grant payment schedule is then signed
- 7.Working in close collaboration with the Secretariat, National Focal Points and other stakeholders, the primary grant recipient submits regular project updates along with disbursement requests.
- 8.Once per year, the Treaty requires detailed program and financial statement, with future disbursements linked to the quality of the recipient's stewardship of the funds and their progress against agreed targets

# Rigorous Process

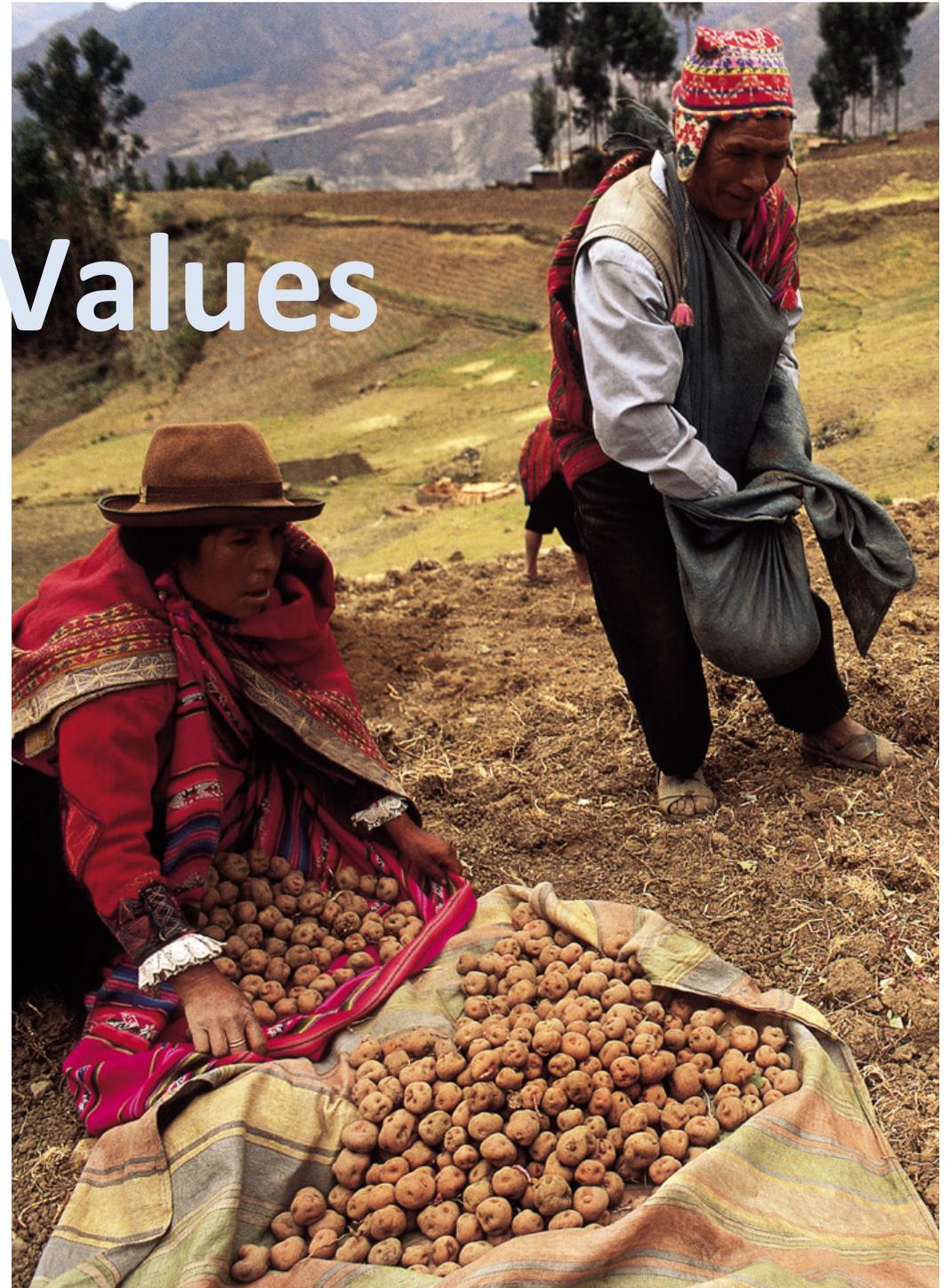


# Investment Values

## The Treaty's investment values

The Benefit-sharing Fund was created to dramatically increase resources to invest in crop diversity leading to increased food security for all. The Treaty takes this work very seriously and is committed to the highest standards of practice regarding resource mobilisation. Its project investment values are simple:

- Transparency – The Treaty has established rigorous systems to ensure the highest level of transparency in governance, mobilising resources for the Fund, and awarding grants
- Accountability - The Treaty is seeking the advice and input of acknowledged experts in selecting and monitoring grants. It is making extensive project information available on its website and investing in communications to raise awareness of the importance of PGRFA
- Impact - The Treaty values projects that will deliver practical measurable results for people and communities, especially in the developing world



# Leading the Field

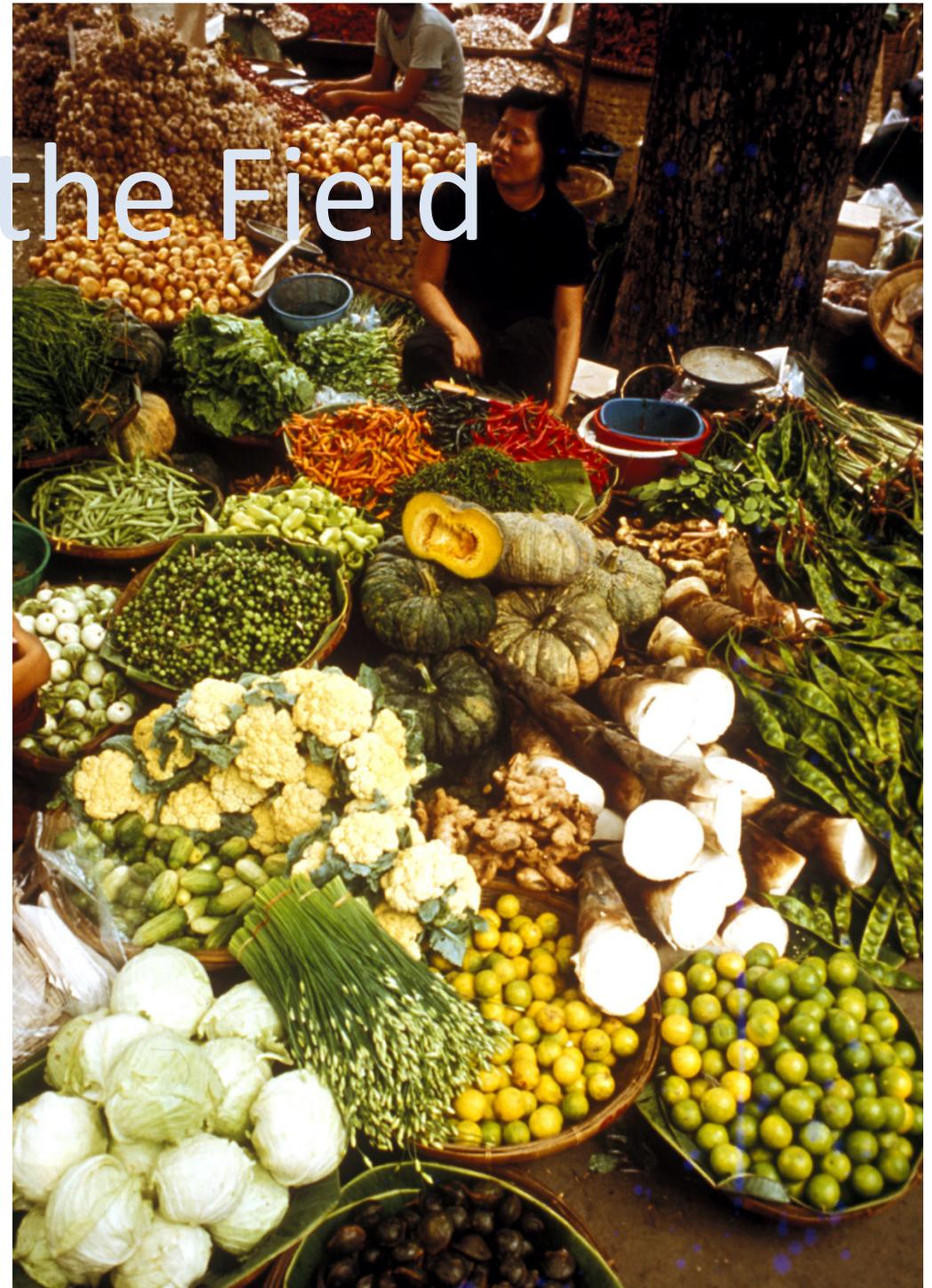
## Leading the Field

Given the potential enormity of the food crisis facing the world, the 7-10 year breeding cycles for most crops and the pressing need for investment now, the Treaty is committed to making its \$116 million resource mobilisation effort – *Leading the Field* – a great success.

*Leading the Field* requires multi-year investments at the highest level from governments, foundations, corporations, philanthropists and interested others. A tiered structure has been adopted to help provide prospective public sector donors with guidance on funding levels, with Spain making the first Tier I investment at nearly \$3 million.

A number of countries are considering “top of the tier” contributions at Tier I, II and III levels. Task Force members are meeting on a regular basis to help focus and drive the initiative.

The International Year of Biodiversity in 2010 creates an opportunity to raise awareness of the importance of crop diversity and make real progress toward achieving food security, alleviating poverty and adapting to climate change.



If the world begins right now, we can use the relatively small amount of genetic crop diversity that remains to develop new varieties, putting global food supplies on a more sustainable and equitable footing. Billions of people, in the developing world especially, are relying on the Treaty to take action.

# Beginning Right Now



*“The \$116 million target is an important start. We need to raise the Fund quickly and allocate it wisely, supporting projects that have the greatest potential to deliver food security, especially in the developing world.”*

**Lars Peder Brekk**

Norwegian Minister for Agriculture and Food  
Task Force Member - ITPGRFA



The world is changing faster than seeds can adapt in nature, requiring a return on a massive scale to conservation and use of local crop diversity

