

# Inter Pares

B U L L E T I N

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## People's Science



Credit: Project Counselling Service

*Participants at the Third General Assembly of the Federation of Women's Organizations of Yauli, Huancavelica, Peru.*

In 1993, Jean Symes of Inter Pares and our Peruvian colleague, Diana Avila, began to visit Andean settlements in Huancavelica in Peru. They travelled miles through the high plains to meet with communities to discuss the situation of women and their families after almost two decades of armed conflict in that country.

They were met by women in a host of towns and villages throughout the far-flung highlands. The women discussed how they might work together to reconstruct the lives and livelihoods of thousands of families uprooted by the violence and terror that they had suffered. Diana and Jean did not bring answers, but questions; they did not bring solutions, but a desire to learn about the lived experience of their sisters. They offered to help the women share their knowledge from community to community, and to work with them to apply that knowledge to learn more and invent possibilities for the future.

Today, the women of this region are organized and have begun to assert their collective voice through representatives within citizens' fora. One such forum is the Huancavelica Round-

table, which includes representatives of communities as well as local government officials. Such fora are places for the expression of the knowledge and wisdom of people defining their experience and their vision of a future for themselves, their children, and for future generations.

In this process there are inevitable clashes between what local people know and seek, and what others from outside "know", and insist local people should want. Particularly important is how the benefits of the "modern" world should finally come to Huancavelica. While Huancavelica is the source of most of the hydro-electricity generated in Peru, it is the least electrified region in the country, suffering the destruction caused by major power projects without the benefits that such technology brings. Mining companies tear and scrape the earth of the region, using destructive extractive technologies, while local people see their landscape fouled, without local benefit or prospects for future generations. Meanwhile, family and community-based artisanal production that relies on the knowledge and expertise that is the heritage of Huancavelicans is eroding and young people are forced

to emigrate to the cities to seek meagre wage employment.

The people of Huancavelica – like rural people in most countries around the world – want to reverse this process. Rather than allowing disruptive technology and development to overturn their physical and cultural landscape – transforming it to make it compatible with a foreign imagination – they want to find ways to introduce the benefits of appropriate technology and science to conserve and nurture their lives, their environment and their communities.

In the same way that the process of investigation with the women in Huancavelica began – not by imposing knowledge and solutions, but with dialogue and the elaboration of local knowledge – so the political process in Huancavelica today is an attempt to build on similar values and methods, with the goal of achieving change "as though people mattered". Processes like this one are underway throughout the world, in the south and in the north. These are processes of a people's "science" – or "ways of knowing" – through participative investigation based on the experience, expertise and aspirations of people in their own context.

This new "people's science" is actually very old, and venerable. It recognizes that the quest for knowledge cannot be carried out by separating ourselves from nature to tame it and make it in our image. It recognizes that we are a *part of* nature, and that we have to stop seeing ourselves as *apart from* it. It recognizes that sane knowledge is created by embracing nature to participate in its secrets, and by living as part of nature in harmony with its ways and wisdom.

This *Bulletin* shares examples of people engaged in their own processes of creating and applying knowledge that conserves and nurtures life and their communities to benefit the whole planet.

## Can knowledge be owned?

We require knowledge to fulfil the most integral and basic of human needs: feeding ourselves and healing ourselves. Since the advent of agriculture, farming communities throughout the world have created, refined and continually transformed the expertise to grow food. The seeds they have sown have been the vessels for this knowledge, carrying the collected expertise of farmers through space and time.

Ancestral knowledge has been shared through a process in which everyone benefits, with farmers exchanging seeds and using them to develop specialized hybrids, also shared. Seed varieties have flourished, accompanied by the knowledge of where and how to use them. Through this process, Andean farmers developed 3,000 varieties of potatoes, Chinese farmers 10,000 varieties of wheat, Indian farmers 200,000 varieties of rice and North American farmers 7,000 varieties of apples.

Today large seed companies are using the World Trade Organization's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) to co-opt thousands of years of plant selection and breeding. Through Article 27.3(b) of TRIPS, which covers patents on life forms, governments are obliged to give rights to private plant breeders. These rights do not benefit communities, but give companies exclusive and monopolistic powers to produce, use and sell seed varieties. Ironically, farmers — who bred the seeds used by the companies to develop the new varieties — are then forced to pay royalties to seed companies to plant these 'new' varieties. Farmers are further concerned that their seed exchanges could be criminalized, and that they will

lose their right to save seed from one season to the next. Not only do companies retain sole ownership, but small farmers face increased competition from seed giants, themselves having received no monetary benefit for their stewardship of seed varieties over the years. This practice is no less than biopiracy.

Third World Network in Malaysia, a long-time counterpart of Inter Pares, has been monitoring the TRIPS debate closely. At stake in TRIPS is not only seed ownership, but also the ability to patent everything from computer programs

to human cell lines. Through their analysis, and their own creation of knowledge, TWN has provided crucial support to the resistance to TRIPS, and is calling for recognition and legal protection of farmer's rights.

TWN believes that when knowledge isn't privatized or concentrated in the hands of a few, it flourishes for the good of all. TWN will continue to work for the distribution and accessibility of knowledge in a manner that is just, equitable and that benefits the entire human community.

### Farmer as Scientist

No matter where they live in the world, farmers share a universal language. And so, when Canadian farmer Percy Schmeiser rose to speak last year at a meeting in Tangail, Bangladesh, several hundred local farmers listened intently.

Percy, a farmer from Bruno, Saskatchewan, was in Bangladesh as a participant in a "people's caravan" of farmers who travelled to rural communities in India, Bangladesh and the Philippines. The caravan, organized by Asian organizations including UBINIG from Bangladesh, was aimed at promoting farmer-to-farmer discussion about the use of pesticides and genetically modified seeds.

Percy told the Bangladeshi farmers in Tangail of how he was facing a lawsuit launched by the multinational Monsanto (now Pharmacia), for allegedly planting its genetically-engineered canola seed without a license. Percy told the farmers that he had never purchased Monsanto seeds. He spoke with pride of his own 50 years of careful scientific work in selecting and preserving canola seeds. This

work was destroyed, Percy said, when Monsanto's genetically modified seeds germinated in his fields, contaminating his own seed stock. Not only was his life's work ruined, he now faced a costly legal process.

"I want to tell all farmers in Asia," Percy said, "that they should never sign any contract that takes away the right to use their own seeds. If farmers give up this right they are losing their freedom. Anyone who controls the seed supply also controls the food supply."

Like Percy, the farmers in Tangail select and preserve their own seeds, and were indignant that an ancient agricultural tradition was being privatized and commercialized. One farmer stood and told Percy that his story confirmed what Bangladeshi farmers already knew, that they should never lose control over seeds.

Since the meeting in Tangail, Percy lost the initial legal case lodged by Monsanto and has filed an appeal. Farmers around the world are watching closely, as the result has implications for everyone.

## Everyday Science

As the sun slowly disappears behind the hills of Moheshkhali Island into the Bay of Bengal, the UBINIG regional centre coordinator, Rafiqul Haq Tito, is busy talking with Nayakrishi farmers and *gramkarmies* – community-based agricultural volunteers. They are reviewing the results of recent mixed-cropping experiments conducted with local indigenous seed varieties. Similar conversations are happening in hundreds of villages throughout Bangladesh among farmers who have chosen an alternative model of agriculture and an alternate way of interacting with nature – one that nurtures and celebrates all forms of life.

Nayakrishi Andolon, or New Agricultural Movement, now embraces more than 60,000 farming households across Bangladesh. These rural families, the majority with less than a hectare of land, are creating a new national movement for ecological agriculture and bio-diversity.

Nayakrishi emerged in the 1990s from conversations among UBINIG staff and subsistence farmers, especially women, about the impact on their lives of modern agricultural technologies and “high yield” seed varieties. During meetings in farmers’ fields and debates that sometimes went late into the night, it became obvious that “modern” technology and science had brought major environmental and health problems to rural communities, especially their poorest members. The “Green Revolution” increased for a time the yields of certain rice varieties, but productivity was calculated for specific single crops, while ignoring the destruction of some of the most important resources of the country. Surface waters and fish species vital to Bangladeshi rural life were contaminated by pesticides and fertilizers. The soil lost fertility, requiring larger and larger amounts of fertilizers. Leafy vegetables and various types of uncultivated plants that grow on the side of the rice paddies and roads were

contaminated, preventing the poorest households in rural communities from having access to an essential source of nutrition. Over time, genetically modified seeds themselves lost their vitality and new ones needed to be purchased, adding increasing recurrent costs for farmers.

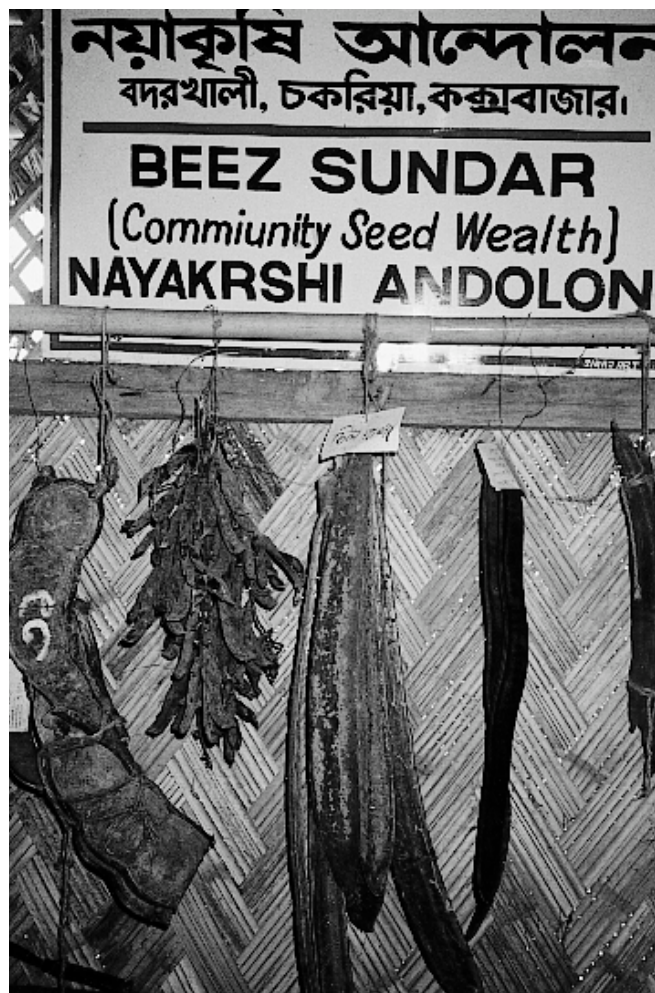
Nayakrishi Andolon came about through listening and learning from elders in rural communities – who planted and farmed their land without chemical inputs or genetically modified seeds – through trials and experiments, observation and analysis. Nayakrishi has created a new body of knowledge that evolves and grows every day. Women’s expertise in seed selection and conservation is at the core of Nayakrishi. As UBINIG Executive Director, Farida Akhter, points out: “The success of Nayakrishi is directly related to the commitment of the movement to start with local and indigenous knowledge systems, then to critically integrate the insights of modern science where necessary. Nayakrishi Andolon strongly believes in the capacity of the farmers as authentic knowledge producers, no matter how they articulate this knowledge.”

Today, Nayakrishi households practice a range of mixed-cropping, small-scale aquaculture, surface water management, and agro-forestry. More than two thousand indigenous varieties of rice, leafy vegetables, pulses, fruits, and trees have been re-introduced, shared and conserved in thousands

of villages. Experiments are also being undertaken by Nayakrishi farmers and UBINIG regional centre staff to recover and enhance the rich bio-diversity of the various ecosystems that form the Bengal Delta Plains. It is an on-going process of learning, and acting on what one knows.

This is a new “scientific” agriculture that is being constructed, rooted in the fact that farmers create knowledge every day. It is knowledge that is inclusive, comprehensive, multi-dimensional and dynamic. Most important, it is knowledge that brings about a better life for tens of thousands of peasant families.

*Inter Pares’ support for the expansion of Nayakrishi Andolon through UBINIG is assisted by a five-year contribution from the Canadian International Development Agency (CIDA).*



Credit: Rita Morbia

## Action for Alternatives

Brewster and Cathleen Kneen have been engaged in social justice action and analysis for almost 40 years. Brewster and Cathleen are the co-editors and writers of *The Ram's Horn*, a monthly journal of food systems analysis. They began writing *The Ram's Horn* while living and working on a large commercial sheep farm in Nova Scotia, where for many years Brewster was secretary of the Sheep Producers Association.

In those days, most farmers sold their lambs at the local auction, or to middlemen who shipped the lambs to Montreal. Brewster and Cathleen joined a marketing cooperative to cut out the middleman. At one point, Brewster bought lambs at the auction, and shipped them through the co-op. As he told the next meeting of the Sheep Producers, he made more money on those lambs in 24 hours than the farmer who raised them. Brewster's speech was not welcomed by a few of the larger sheep producers who also acted as middlemen. They got together and



Credit: Jamie Kneen

*Brewster and Cathleen Kneen*

managed to get Brewster voted out of his position as secretary. *The Ram's Horn* was first published to answer farmers' questions about what had happened, and to inform producers how the system was exploiting them.

Twenty-one years later, Brewster and Cathleen continue to publish *The Ram's Horn* from their home in Sorrento, B.C. *The Ram's Horn* dissects our food system, reports the activities and analyzes the

strategies of transnational agribusiness and governments, and deals with the issues and dangers posed by biotechnology and genetic engineering. But *The Ram's Horn* also does something else – it offers hope for the creation of socially-just and ecologically-sound alternatives.

The Kneens tell us that *Inter Pares* has been one source of their own hope – as they are for us. Cathleen explains, “When we were living on the farm in Nova Scotia, we had a map of the world on the kitchen wall because we wanted our children to know that their world was much larger than the farm. *Inter Pares* does that for us. We feel that through *Inter Pares* we have friends and colleagues engaged in the same work for justice and peace. This is critically important because it is the bulwark against despair. Belonging to the world is what gives us hope.”

*Inter Pares* is grateful to Brewster and Cathleen Kneen for their work for social change, and for their long-time support and solidarity.

## Güises Montaña: Knowledge at Work

It is an arduous journey to get to El Castillo, a municipality in the heart of the fragile humid forest zone that spans the Río San Juan and forms the border between Nicaragua and Costa Rica. By land and boat the journey from Managua can take almost twenty-four hours. This same journey takes us to the Güises Montaña Experimental Station, a remarkable initiative in scientific investigation and community development that has much to teach about the relationship between science and the expertise of local people.

Güises Montaña Experimental was created in the late eighties by Peruvian biologist Daniel Querol and a group of his Nicaraguan colleagues. Before creating Güises they had worked together for several years promoting seed conservation among Nicaraguan peasants as a means of enhancing bio-diversity and food self-sufficiency. As scientists they had learned as much from Nicaraguan farmers as they had taught, and had developed a deep respect for the knowledge and scientific instinct of rural people in their daily efforts to preserve their way of life and conserve the landscape that sheltered and nurtured them.

At the same time, Daniel and his colleagues were extremely aware of the challenges faced by farmers and communities confronted with the impact of civil war, and the erosion of rural economies swamped by the competitive pressure of industrial agricultural and market globalization. From their earlier experiences, Daniel and his colleagues were convinced that the best solution lay in the resources of rural people themselves. In discussion with local farmers they began to promote the recuperation of traditional bio-science and knowledge, and the application of this knowledge in ways that could help people creatively adapt within the “new” world without surrendering all that was significant in the physical and cultural landscape of their lives.

They created Güises Montaña Experimental as a joint venture with the municipality of El Castillo and the people of the many small communities that make up the municipality. They did research into the rich biozone in which they lived, and together they have developed plans to husband these resources while exploiting the richness in ecologically-sound ways to ensure their livelihood — through sustainable farming, fishing, lumbering,

corn-mill processing, and eco-tourism. Now they are working to enhance natural corn varieties appropriate to the humid tropics, assisted by a Mexican colleague sharing local expertise developed in his own country.

Güises has also assisted people in developing processes and structures for formal citizen input to local government planning, based on scientific investigation in which the people themselves take part. To enhance the opportunities for participation and collaboration, Güises has helped create the infrastructure to make communication within and among local communities possible, donating transport and assisting in the design and construction of a community centre and childcare centres. They use theatre to explore social and cultural responses to the changes coming to the region, and to generate new knowledge within communities.

Güises Montaña Experimental began over a decade ago with technical support and seed funds from *Inter Pares*. We will continue our collaboration with Güises Montaña and the communities of the Río San Juan as they put their knowledge to work to invent and re-invent their future.

