THE ECONOMIC AND POLITICAL IMPACT OF ICTA
DURING THE LAST 25 YEARS

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Translation to English by the author

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Background

In 1925, three-quarters of a century ago, the Russian economist Chayanov wrote a famous book on the small and medium Russian peasants.2 He was concerned that no one understood the economy of the peasants who comprised the most important sector of the country. Chayanov thought that this sector would continue being important for at least another decade. With the exception of a few economists in Europe, this book was little known as it was not translated to English until 1966 (Chayanov, 1966). In the interim, following WWII the reconstruction of Europe and Japan occurred, accompanied by the rapid industrialization of agriculture in the U.S. and to a lesser degree in other industrialized countries. During the 1950s, the philosophy accompanying agricultural industrialization was that farmers should “get big or get out” of the sector. In that era, peasants were considered more of a social problem than a sector important to agricultural development.

In the 1960s the Green Revolution awakened the hope that this technology would help transform peasant farms into small commercial units and put an end to the poor peasant and food insecurity. The World Bank and USAID spent millions of dollars on projects designed, for example, to improve irrigation and alleviate soil salinity and waterlogging on peasant farms in the Punjab of Pakistan (WAPDA, 1967). Also in the 1960s humans walked on the surface of the moon. The lunar landing was a success. Waterlogging and soil salinity in Pakistan persisted. As well, the peasants persisted there as in many other parts of the world. Green Revolution technology functioned admirably on fertile, irrigated soils but failed for the majority of peasants whose soils and conditions were not good and who furthermore did not have access to the resources nor the infrastructure necessary to be able to use the technology. Nor was the peasant sector, who in the 1960s still represented 50-60% of all humanity (Wharton, 1969), being supported by organized agricultural research and extension.

In Guatemala, in the beginning of the 1970s, another kind of agricultural revolution was born. A group of key professional Guatemalans supported by foreign professionals and organizations discussed their concerns and ideas in a series of meetings that resulted in the venerated “Green Book,” basically the bible that was the basis for the

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1 I want to thank the following persons who read the Spanish version and offered suggestions to improve the text: María Hildebrand, Elena Bastidas, Chris Andrew, Kamal Dow and Oswaldo Chinchilla Aguilar. The errors that remain are the responsibility of the author.
2 Rather than use the terms small and medium farmers, or campesinos, the term peasant will be used here.
foundation of ICTA (ICTA 1971). The participants in these meetings were some of the first to recognize that conventional research at the time was not appropriate to satisfy the necessities of the majority of the peasants (*pequeños y medianos agricultores*) of the country. With good management and a little luck a group of key persons began to work as a team. They received approval to proceed, and received technical, logistic and financial support from the Government of Guatemala, as well as USAID, Texas A&M University, some international centers such as CIAT and CIMMYT, and The Rockefeller Foundation. They began to employ technical and administrative personnel—Guatemalan and foreign—for the purpose of creating a new kind of institution unknown before in the world.

**The Formative and Golden Years of ICTA: The 1970s**

Twenty-five years ago ICTA began to function with a vision and a mission, but without a recognized methodology. The vision was: To incorporate the Guatemalan peasants in the economic development process of the country. The mission was: To generate and promote agricultural technology specifically for the peasants with emphasis on the basic grains. Knowing that the majority of the basic grains in the country were produced by the peasants, the goal of the government was to reduce dependence on the importation of maize, beans, wheat, rice and sorghum by means of increased peasant production and not by big producers. In order to incorporate the peasants it was necessary to have a better understanding of their necessities and limitations, something that the social sciences could provide. With this in mind, they decided to develop an institute in which the social sciences could be integrated with the biological sciences to guarantee that the research was oriented toward the necessities of the peasants.

Although no one considered it at the moment and it was not recognized for almost 25 years, the most important aspect was not simply incorporating the social sciences in a national agricultural research organization, but integrating sociologists, anthropologists and economists in a single unit. Economists had been slowly (and suspiciously, I might add) incorporated in the agricultural development process such as in CENTA in El Salvador (Hildebrand 1974) and in some international centers. Anthropologists had been almost completely marginalized. I believe, although I am not certain, that ICTA employed an anthropologist before CIAT or CIP had utilized them even as post-doctoral researchers. I know that for several years the post-doctoral anthropologists were marginalized and not incorporated as regular staff nor in agricultural research. The anthropologists continued their studies of the peasants while the economists did not even consider the peasants. For this reason, the idea of uniting these two disciplines in a single unit was a brilliant and productive innovation. It did not take long for *Socio-Economia Rural* (SER), the new component in the ICTA team, to begin to study the conditions of the peasant families.

ICTA used several very important innovations for the new challenges that confronted it. One of them was the use of “coordinators” in place of “heads” (*jefes*) for each of the disciplines and programs in the technical component (as opposed to the administrative and programming components) of the institute. There were meetings of the coordinators with the technical director at the beginning of each week to coordinate activities in the short and medium term. Each coordinator knew what the other units...
were doing and why they were doing it. Without these meetings of the coordinators, the members of the technical component of ICTA would not have been able to operate as a team. Another important factor was the regionalization of the institute. This permitted different administrative and methodological styles to be tried. But I also believe that this regionalization would have failed if it had not been for the aspect of coordination that existed within the technological component of the institute.

Other important methodologies developed by ICTA included on-farm test plots, on-farm trials, and farm records. These, of course, were not created as finished products. There were some heated discussions like that between SER and the Regional Director in Jutiapa. SER wanted to use bullocks on the plots we were going to use in the regional center and not apply any fertilizer so we would be working in the conditions of the peasants of the region, but the Regional Director insisted in mechanizing (with a tractor) the whole center and applying phosphorus to the whole area because of the low content of phosphorus in the soil. In order to start experimenting with methodologies, the Technical Director, Eugenio Martínez, made the decision to let SER rent some land in La Barranca, Jutiapa, so we would be able to conduct trials in the same conditions as the peasants. This was the only time in my life that someone (Al Plant, the Regional Director) threw me off an experiment station! I do not know exactly how many on-farm trials like these were carried out over the last 25 years, but I can tell you that between 1975 (when we started in La Barranca) and 1990, the technicians of ICTA produced crop record reports on 199 sets of crops, both sole cropped and associated, with 2285 peasants, covering 9587 manzanas (7,000 m² or 1 ¾ acres).

Another innovation was the use of programmable, hand-held calculators with which the technicians could analyze, in a short period of time and in the regional centers, their own data and in this way use the data in the annual regional meetings. These meetings, themselves, were another innovation. By having them, the institute was able to program the following year’s work based on the data from Sondeos, on-farm and on-station trials, and farm records from the previous year. Historically, and in the absence of these annual meetings there was not much continuity and fluidity in recommendations (either for the following year’s work or of technology to be released) based on current data and analyses, and technically adjusted to the conditions of the peasants.

Perhaps the most widely known methodology to be born in ICTA in the 1970s is the Sondeo methodology (Hildebrand, 1981). It can be argued that the on-farm trials and farm records are not clearly products of ICTA, but were only modified here, but the methodology of the Sondeo definitely is a product of ICTA. This methodology, which is a progenitor of rapid, participatory research, was developed because of the demand created in ICTA to inform the technicians about the peasant conditions in an opportune and comprehensive form. The use of questionnaires was too slow and in the first one, only the personnel of SER participated. Transferring the information from SER to the other technicians did not work well. This was because while the regional technicians were working in the field with the farmers, the personnel of SER, after doing the survey, did their analysis and wrote the report in their offices in the capital. Later, when we began to incorporate the regional technicians in the pre-survey, giving them also a sense of ownership in the information, the acceptability of the information about the peasants began to be better accepted. We eventually abandoned the formal surveys with questionnaires in favor of the pre-survey (the Sondeo) that was much more efficient,
rapid and valuable. We also developed a methodology specifically for the Sondeos based on what we originally had called the pre-survey. Another and unexpected result of the Sondeos was the development of friendship and mutual respect among all the technicians who participated in them.

ICTA’s leadership in methodological advances was also shown by recognizing the importance of the contribution of women to the peasant family’s economy, not only in the kitchen and home, but also in aspects of agricultural production. In San Carlos Sija, for example, ICTA recognized that women were farmers in the full sense of the word, while their husbands worked on the coast or in other places. What was probably the first field day for women farmers anywhere was carried out at ICTA’s center, Labor Ovalle, in Quetzaltenango, in October, 1978, with the participation of 35 women and 20 men. Furthermore, ICTA had one and at times two professional women on its staff of technicians. This was quite rare at that time. If one of these professional women had not been on the professional staff of ICTA, stationed at Labor Ovalle in Region I, the work with the women farmers of San Carlos Sija would not have occurred. In this way, ICTA also played a vital part in the movement that resulted in the well-known Women in Agricultural Development, WIAD, Program so important throughout the world.

All the methodology and philosophy developed in the 1970s helped us conceptualize the “transistor radio” model that was published in a report that was requested for the Round Table on Agricultural Production Systems at the annual meeting of the Board of Directors of IICA in Santa Domingo, Dominican Republic in 1977 (Hildebrand, 1977). ICTA was invited to this conference and to several others as a result of the recognition it received from the “Globe Trotters,” who had formed a parade to the central offices, the regional production centers, and the on-farm trials of the institute in the 1970s to learn about the methodology, and the “mystique” of the institute. We were very much observed and criticized, yet very much admired during those years.

There was another unexpected and unwanted phenomenon in the 1970s that caused a tremendous amount of attention in the world, the earthquake of February 4, 1976. Part of the SER team was working in the Tecpán and Patzún area but for one reason or another returned to the capital the evening of February 3. If not, they would have been in a hotel in Tecpán when the quake occurred. You who were in the country during that time will remember the terror of the constant tremors that we lived through. Because of the resulting landslides it was not possible to return to the Tecpán area for nearly three weeks after February 4. When we finally arrived an incredible desolation awaited us. I had been in the Plaza of Patzún with Chris Andrew from the University of Florida six weeks before the earthquake and it was full of color and activity. When I returned I could not believe what my eyes saw.

ICTA’s offices in the Plazuela España suffered so much damage that we had to abandon them. Part of the offices were transferred to La Aurora where agricultural fairs were held, but there was no space for SER. We transferred our offices to my home where we worked for several weeks.

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3 During the 1970s many people from USAID, the large foundations, the CGIAR centers and some from U.S. universities traveled widely and often passed through Guatemala to visit ICTA. These individuals were termed “globe trotters” (trota mundos) for obvious reasons.
Plaza in Patzún in December, 1975.

Plaza in Patzún in February, 1976.
ICTA technicians were being solicited by USAID to go to other countries, such as Honduras, Colombia and Panama to help them understand the ICTA methodology and to design new projects based in large part on what ICTA had accomplished. In Colombia, three members of SER made the first effort to detail the Sondeo methodology in written form. In Panama we were in the field carrying out a Sondeo when the Senate of the United States ratified the agreement returning the Panama Canal to that country. Even though the government declared a national holiday, the team that was doing the Sondeo decided to keep working. Damaris Chea, the Director General of ICTA’s counterpart in Panama, IDIAP, who was also participating in the Sondeo, said she would give the IDIAP people on the team another day off sometime in the near future.

One of the factors that was most favorable for ICTA in the 1970s was the stability represented in the top administration. Mario Martinez, the Gerente General, and Astolfo Fumagali, the Sub-Gerente, together with Bob Waugh, guided the institute during those first five formative years. I am completely convinced that if the institute had not had this stability, we would not have been able to accomplish what we did. In these years, what the whole world knows as “Farming Systems” was born. A large part of the book, “Farming Systems Research and Development Guidelines for Developing Countries” (Shaner et al., 1982) was based on the achievements of ICTA during this period.

The 1980s

For Guatemala, the 1980s represented a difficult time involving a civil war—called an internal armed conflict—that also included a coup d’etat in March, 1982. ICTA had to reduce its area of operations to avoid the most dangerous zones and in this way protect its personnel. Nevertheless, another nucleus was being created. This could be identified as another regional center “sucursal” of ICTA at the University of Florida in Gainesville. There, Bob Waugh, Ramiro Ortiz and I arrived to work with Chris Andrew, the director of the Farming Systems Support Project, or FSSP, funded by USAID, and with Ken McDermott who managed it for USAID. Federico Poey, president of his own consultant company, also worked with the FSSP. Based in part on the enthusiasm created by the Shaner book, the FSSP had the responsibility to provide technical assistance, training and support for communication networks to the various farming systems projects that began to flourish in various parts of the world. In total, there were 20 U.S. universities and four consultant companies involved in the FSSP. We conducted short courses in 22 countries and technical assistance in 14, in Africa, Asia and Latin America (Andrew, 1987).

In 1982 the University of Florida organized a meeting in Costa Rica, funded by the US Department of Agriculture to bring together a group of people with experience conducting on-farm trials. We hoped to leave the meeting with a draft covering the latest methodologies related to on-farm trials. Lynne Rienner, owner of Lynne Rienner Publishers, Inc., of Boulder, Colorado, accompanied us hoping to publish the results as a book. Bob Waugh, Ramiro Ortiz, Juan Herrera, Federico Poey and I, all of whom had formed part of ICTA, participated. Although we did not succeed in putting together a complete draft by the end of the meeting, Federico and I, with support from Ramiro, kept working on the book that was finally published in 1985 (Hildebrand and Poey, 1985).

We began the short courses in June, 1983, in Gainesville with 17 participants from six universities (Iowa State, Washington State, Florida, Virginia Polytechnic,
Michigan State and Illinois) and CIMMYT from Mexico. We offered the second one in July of the same year with 29 participants from eight universities (Louisiana State, Florida, Kentucky, Michigan State, Colorado State, Minnesota, VPI and Arkansas), PRECODEPA from Guatemala, USAID from El Salvador, CARDI from the Caribbean, USAID from Mali and a private consultant. The first materials we used were based almost entirely on the work and methodologies of ICTA that in the 1980s was the only institute with experience and published results in a form that could be used as training materials. The slides taken in such places as La Barranca, Tecpán, Totonicapán and Quetzaltenango began to appear in the “slide-tape” sets that FSSP distributed to all parts of the world.

A series of annual conferences was begun at Kansas State University in 1981 and these had a great deal of impact on the farming systems movement. These meetings brought together technicians working in farming systems projects from many countries. After six conferences in Kansas there were three more at the University of Arkansas and then three at Michigan State University. By participating in these meetings it was easy to see how the ideas and the mystique of ICTA had been disseminated. There were participants from projects in Asia, Africa, Latin America and the Caribbean, and from Europe, the U.S. and Australia. As a result of these conferences a global association was formed, the Association for Farming Systems Research-Extension, with its journal, the Journal for Farming Systems Research-Extension. Additionally today there are regional associations or chapters in Latin America, Asia, Europe, Africa and North America. The global conferences are held in even-numbered years. In 1994 the venue was in Montpellier in France, in 1996 it was in Colombo, Sri Lanka, and in 1998 it will be in Pretoria, South Africa. The regional chapters usually meet in odd-numbered years.

Even though there was great interest in the farming systems methodology for generating and disseminating technology for small and medium farmers under the diverse conditions encountered in different parts of the world, the big donors were becoming disillusioned with the slow impact they were seeing in the process. At the same time there was arising a preoccupation with the sustainability of the various technologies based on the indiscriminate use of chemicals dangerous to both humans and the environment. Also concern was being expressed about the loss of biodiversity, because not only of the use of chemicals, but also because the forests of the world were beginning to disappear and soils in fragile environments were eroding. The donors began demanding sustainable agriculture projects and marginalizing projects dealing with “farming systems.” It is interesting that these donors were confusing goals with methodology. The methodology necessary to work in diverse conditions and to create solutions adapted to sustainability were the same methodologies used in farming systems research and extension.

The 1990s

Now at the end of the 1990s and approaching the third millennium, we are still preoccupied with the sustainability of agriculture and development in general, but we have also become concerned with food security. Many solutions are suggested. In the majority of cases there is confusion as to the diverse causes and between the urban and rural groups affected. If we consider only the rural sector and think about the peasant
sector, there still is no agreement. One group believes they should produce commercial and not traditional crops, sell them and buy their food. Others believe that in the absence of improved markets and infrastructure, it is necessary to improve the capacity of the peasants to produce their own food and sell the surplus, but not try to compete with the large producers of commercial crops. In Guatemala it is very well known what happens when the market of non-traditional commercial crops is interrupted, such as happened with raspberries last year and is still not working. Last month the New York Times published an article (Schemo, 1998) about how the small producers of tobacco in southern Brazil are suffering now that some transnational companies are dominating the market. The price of tobacco has been reduced to such a point that many peasants cannot survive and are selling their land. Related to this discourse is the philosophy of the donors toward privatization and commercialization of agricultural production, research and extension, and globalization in general.

Guatemala is confronting her own challenges that also require attention. With the end of the armed conflict, different but related situations are occurring. The former guerrillas are looking for land and other activities to earn a living, and the refugees are returning to the country also looking for land. This represents a tremendous demand for the government and pressures on vacant or underutilized land in the national territory. Simultaneously with the preoccupation to protect the natural resources such as in the Maya Biosphere Reserve and the Sierra de las Minas, the number of peasants is increasing.

**And in the years 2000 . . .**

Although it seems incredible that at the end of the 20th Century, the peasant sector that was of so much concern to Chayanov in 1925 is still with us. Perhaps that as a percent of the world population they have diminished slowly, but their absolute number is still increasing. In the majority of the countries of the world such as in Guatemala, they represent the largest economic sector. They feed, with their agricultural activities, the majority of the population in these countries and produce productive employment in rural areas. When the peasants are productive they do not need to move to the cities where there is not sufficient legal employment. In many cases the migrant population only increases the number of persons who suffer food insecurity in the urban areas.

At the same time, because of the increase in population in Guatemala, there are strong pressures on the natural resources that remain. The strong increase in the demand for land on the part of the peasants is perhaps reflected in the number of fires reported in the protected areas this year. In order to earn a living, many peasants are forced to utilize these resources to plant their milpas, because they do not have adequate technology to intensify production on their small and infertile farms. Many of them do not have adequate access to good markets where they can sell their products and buy the other things to satisfy their necessities. Furthermore, they do not receive the attention of private research and extension. For this reason, although the new ICTA can begin to commercialize its research product, it is not a good time to forget that ICTA was created to serve a clientele that is still needy. It is critical that ICTA continue with the fight and leadership that it has shown in the past 25 years to help the peasants that obviously are not going to disappear.
References


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