2014 NIGER / SENEGAL 50TH REUNION AT ESTES PARK, COLORADO

Attendees:

Niger III group

Sue Sefcik Bracken Don Bracken

Peter Easton

Warren Enger Pam Enger

Tom Hale

Larry Koff Barbara Koff

Steve Lieberman Tamara Liberman

Gabriella Maertens Owen Melville

David Nicholas Carole Nicholas

Leon Selle

Tom Shafer Diane Shafer

Charlie Stover

Lennie Strauss David Strauss

Jamie Thomson Jesse Winch

Senegal IV group

Judy Graham Paul Grant

John Hansen Bev Hansen

Rita Hays Sandra Rothwell

Gerry Joyce Marion Unwin

Joe Lauer

Anna Lauer

Judy Lewis

Tam Lieberman Steve Lieberman

Rita Sklar Joe Sklar

Carol Thomte

David Vaillancourt Carmen Vaillancourt

Although we had some idea of what the YMCA of the Rocky Mountains in Estes Park was like based on images on their web site, when we arrived, many of us were astonished by the scale of the place. There are 4,000 rooms spread over many acres of a narrow valley surrounded by steep hills with a backdrop of much higher peaks covered with snow. It is a far cry from the spartan YMCAs we had stayed in elsewhere—especially the one in St. Louis where a few of us stopped en route to Southern Illinois University in Carbondale in June 1964. The YMCA in Estes Park is more like a resort and conference center. It offers an incredible range of activities for a large number of visitors, from school kids off for a week to explore the outdoors to hikers setting out on the many trails in the region. The town of Estes, population 6,500 in the winter, grows to 75,000 in the summer.

The rooms in our lodge were quite comfortable, with card-key locks and many other features of urban hotels—but no TV. The lodge was fairly new. It had been built in 2009 to LEED standards.

Monday afternoon, Sept. 29, we began arriving at the Longs Peak Diamond East and West meeting room to pick up information packets and nametags. Even without the tags, we managed to 'rediscover' each other over light refreshments, with a background of African music and a display of photos, memorabilia, and books. We also signed up for activities for Wednesday, Oct. 1.

After supper, we listened to a brief presentation by a YMCA representative about what to expect—and what to avoid—at 8,000 ft. in an area heavily populated with animals. The bears were more numerous this year, she reported, but not really a problem if one just raised one's arms to scare them off. But cars with food inside needed to be very tightly closed. She told about one car with the windows opened just a crack for ventilation—just enough for a bear to slip his paw into the car, rip out the window, climb inside, and tear up the leather upholstery. Moose were only dangerous if one got between a male and a female. Those of us who spotted the deer and moose browsing on the tiny plot of grass between our lodge and the dining hall at 7:30 on Tuesday morning were astonished—and also careful not to upset these animals.

The advice about altitude sickness was more sobering. Many of us experienced some of the symptoms—insomnia, headache, nosebleed, and fatigue. Those who eagerly volunteered to push Steve Liberman in his wheelchair in order to give Tammy a break—and also to hear more of his stories—were quite surprised to discover that they were winded after a short push up a ramp from the dining hall to the lodge. One attendee with asthma and sleep apnea ended up in the hospital for two days.

Tuesday morning, we gathered to hear presentations by Peter Easton (literacy), Tom Hale (African literature), Dr. Dave Nicholas (health), and Charlie Stover (lessons learned in Niger). See the appendix for summaries of the talks. The session was moderated by Senegalese Ambassador to the U.S., Cheikh Niang. His comments on each presentation were brief and to the point, based often on a comparison of what we reported about Niger with what was happening in Senegal. We enjoyed chatting with him about a variety of topics related to the Sahel. Unfortunately for us, he has just received his next assignment—on the other side of the globe: Tokyo. It includes not just Japan but a large number of countries in the Pacific.

That afternoon we hiked or drove over to Barclay lodge for a joint social offered by the '65-67 Niger group. They had chosen to again meet at Estes this year even though they were forced to postpone their meeting scheduled for 2013 because of the severe damage caused by floods in the region. A small

number still met later in October 2013. Although we did not know all of them, some of us worked with volunteers in this group because our service overlapped by one year. The high point for us was a brief conversation on speakerphone with C. Payne Lucas. Luke had talked with the '65-67 group in the morning. In spite of ill health, he engaged us in lively conversation about memories of Niger. His personality has not changed: he is upbeat, happy, and always joking.

Wednesday, we took off in the morning for hikes in the Rocky Mountains National Park, the highest in the country. There were many trails and we went in small groups. The vistas were extraordinary: elk in the meadows at the jumping off point, a roaring stream along the trail, and steep, rocky cliffs on either side. We encountered other people going up and down, as well as riders who looked like they had stepped out of a Marlboro ad—a rider on a horse, followed by a spare horse, then a pack horse. We got out of the way of the horses—and their droppings, which were distinct markers on the trail.

After leaving the trail, we took a break to eat our box lunches before returning to the lodge that afternoon as rain started to come in. Many of us were worn out after the hike and decided to take the afternoon off to rest.

In the afternoon, Jamie Thomson and Warren Enger presented talks on governance in the Sahel and on agricultural development in Niger. (WAS THIS THE PREVIOUS AFTERNOON?

In the late afternoon the Niger III and IV groups met to decide on which of six proposed projects to support with funds left over from the reunion and future donations. The Senegal IV group met next door to decide on their project.

-----I can't find my email and notes about the choice of project and the funds share with the Senegal IV group.

The funds for Niger will be channeled through Friends of Niger, a non-profit organization with 1,000 members. Larry Koff is the treasurer.

That evening we viewed a slide show of photos contributed by everybody, and watched a film edited from a collection recorded by Ron Dubé in Carbondale and Niger. The images of us generated much laughter, especially those from training. Did we really look that youthful, cheerful, and carefree?

The high point of the reunion was the performance of Irish and folk music by Jesse Winch on the guitar, the harmonica, and the bodhran, a traditional Irish instrument with some similarities to a tambourine. He shared the 'stage' with Paul Grant, partner of Kathy Graham, who sang and played the three-row melodeon, an accordion-like instrument. He and Kathy had come all the way from London for the reunion. Jesse led us in singing songs from the 60's—*We Shall Overcome* (theme song of those who discovered the racist town of Wilson, Arkansas, on that infamous agricultural education part of our syllabus), *If I had a Hammer*, and other favorites. Although our memories had faded a bit, we discovered that we could find the lyrics quickly on our smartphones.

---DID JESSE PERFORM BOTH EVENINGS?

Thursday morning, we had breakfast and said goodbyes. Someone asked if we could have another reunion in five years. Gabriella Maertens, who did such an excellent job as the lead organizer for this reunion, did not immediately step forward for another turn—she no doubt needed time to recover from this reunion. Maybe someone will volunteer to take the lead next time. Maybe someone can find a site that is closer to sea level. Let's hope. See you in 2019!

Summaries of talks presented at the reunion

Peter Easton

Getting Stuck in (and on) the Sahel: A Literacy Story about Peter Easton

Peter traced his life and hard times from college in Massachusetts to Madaoua, Niger, four post-PC years in the country and recurring stays in West Africa ever since. The underlying storyline has been work with adult literacy and a love for Hausa proverbs (and those who use them), plus a close personal relationship with amoebas.

The literacy line took some twists and turns. The variety that Niger IV and V PCVs helped their host country counterparts to dispense back in the mid-'60s proved not to have much use. There was little of real importance to read in Hausa and little to do with those skills.

After three years of trying, Peter moved to UNCC and shifted attention to the agricultural markets where the Niger government was offering to transfer management functions and an appreciable slice of their proceeds into the hands of village cooperatives with enough literate and numerate staff to take over. Bingo! A bonanza for literacy instruction, which had to be designed to alternate between learning and practical application -- and typically then stretched well beyond the functional minimum.

Over the years, Peter found new opportunities to develop and further apply these lessons in Mali, Burkina Faso, Ghana, Senegal and a variety of other locations, culminating most recently in a book issued by UNESCO on *Sustaining literacy in Africa: Developing a "literate environment,"* available at http://unesdoc.unesco.org/images/0022/002252/225258e.pdf.

As for the rest of the story, a Hausa proverb best explains Peter's love of that culture and medium... and describes how the language is learned: Wanda ya yi zama da b'arawo, in bay koyo ba sata, yaà koyo b'oyo: If you live with a thief, even if you don't learn to steal things, you'll learn to hide your stuff well. ϑ And as for our friends the amoebas, the novelist San Antonio put it best: Les amibes de nos amis sont nos amibes. Happily, French doctors guided him to a spa at Plombière-les-Bains in the Vosges mountains where he spent parts of two summers drinking and bathing in the slightly-radioactive water, playing bocce ball in the parks and eating/drinking pretty darn well.

Dr. David Nicholas

Health in Niger

1. What I did in Niger

When I arrived, there were only 16 PCVs, so I could do a lot of volunteer work myself. There were only a total of 20 doctors in the country of 3 million people at the time, so I was welcomed to help. For the first year I was the pediatrician for the national hospital in Niamey, and for all 3 years, I worked an hour each morning as a Pediatrician at the Niamey Centre Sociale.

Based on my work at the hospital, I felt it was a bigger priority to prevent malnutrition in children than to try to treat it in hospitals, so I helped put together a Peace Corps program using female PCVs to educate mothers in proper infant feeding and weaning. Many of the Peace Corps 3 PCVs worked in that program, as did many others in the years that followed. This program continued until 2 years ago when the Peace Corps had to leave Niger.

2. Perspectives on Health in Niger

The WHO definition of health is "the state of complete physical, mental and social well-being, and not just the absence of disease or infirmity." I learned an important lesson from the woman who sold cigarettes, soap and other objects on a wooden table outside the Peace Corps office. I used to wave to her when I left the office in the evening, and one day she asked me,

"Why has the peace corps come to Niger?"

After thinking a bit, I said that President Kennedy wanted to send Peace Corps volunteers to help people in countries like Niger develop and improve the lives of its people.

She said, "Don't give me that! I know why the Peace Corps has come. It's to steal our wealth." I said, "What wealth is that"?

She pointed to her mud brick house, and asked, "Do you have houses like that in America?" I said "No."

She then pointed to 2 large 50 Kg sacks of millet standing near her doorway. She asked, "Do you have millet like that in America?" I said, "No."

She said, "See! You are here to steal our wealth."

Back in those days, I don't think most Nigeriennes thought of themselves as poor. They had food (usually), clothing, shelter, children, and a strong social network and culture. In most ways they met the WHO definition of healthy. So. I sometimes cringe when I hear all Africans labeled as poor, or living in "abject poverty". We have been teaching Africans to think of themselves as poor. Is this really helpful? Certainly, inequity is as important there as in our own country, but I think we need to be less arrogant in our judgments about other countries and cultures, and what really constitutes wealth and health.

3. Health Indices in Niger Today

When we were in Niger, the Infant Mortality Rate was about 250/1000 live births, and the Maternal Mortality was about 1500/100,000 births. Both of these indices have probably been reduced by about 50% since then. There are a number of reasons for this improvement:

- An improved health system, with many new clinics and staff, and community health workers, a program that started in Tessaoua in 1964, with the help of 2 PCVs in the Infant Nutrition Program.
- More food security during droughts
- Better immunization coverage and Oral Rehydration Salt (ORS) distribution to combat dehydration from infant diarrhea.
- Malaria control measures, like bednet distribution.
- Better roads leading to better access to health care, better markets for produce, leading to higher incomes.
- Cell phone networks, country-wide, which facilitate better access to care
- Relative peace
- 4. An example of a maternal care intervention in Niger lead by a former Niger PCV About one half of maternal deaths in Niger are caused by post-partum hemorrhage (PPH). PPH can be largely prevented by employing 3 simple low cost interventions: umbilical cord traction at delivery, injection of oxytocin at the moment of delivery and uterine massage after delivery. Dr. Katherine Hill, a former Niger PCV, a member of the USAID funded Quality Assurance Project, co-lead with Dr. Maina Boucar, the head of the QA Project in Niger, a nationwide program in 28 maternal facilities to reduce PPH. Within a year PPH had dropped by 75%. This program is having a major impact on women who deliver in health facilities. Work is needed to tackle the problem in women who deliver at home, about 85% of all deliveries.

Tom Hale

Everything you Always Wanted to Know about African Literature in 15 Minutes

A professor of African literature at Penn State, Tom offered a quick overview of the subject he taught for 39 years. African literature goes back 5,000 years. One can trace it from ancient, old, middle, and late Egyptian down through Geez, Swahili, Hausa, Xhosa, and recent literatures composed in hundreds of languages. Chronicles in Arabic may be found as far back as the 17th century in the Sahel region as well as works composed in African languages but written in Arabic script. Two oral epics from the Sahel, *Soundjata, ou l'épopée mandingue (Sundiata: an epic of old Mali*), recorded and translated by Djibril Tamsir Niane in Guinea in 1958, and *The Epic of Askia Mohammed*, recorded by Tom in Niger in 1980, are typical of the oral tradition. The epics prompted Tom to do research on the narrators for *Griots and Griottes: Masters of Words and Music*.

From the contemporary written tradition two novels by Senegalese writers stand out: *Une si longue lettre* (So Long a Letter) by Mariama Bâ, and Les bouts de bois de Dieu (God's Bits of Wood) by Ousmane Sembène. Others texts include a romanced autobiography, L'enfant noir (The Dark Child) by Camara Laye, from Guinea; Les soleils des indépendances (The Suns of Independence) by Ivoirian novelist Ahmadou Kourouma; and a series of novels by Amadou Ousmane in Niger.

A few verses from songs, in particular two from Niger, illustrate the power of women. They are among 80 in a recent anthology, *Women's Voices from West Africa*, co-edited by Aissata Sidikou from Niger and Tom.

Sahelian values are important for understanding the diverse peoples who composed these oral and written works. One example is based on blood and milk—the blood relationship linking father and son, and the milk relationship that marks the close tie between mother and son. The first conveys individuality and rivalry with half-brothers, the second collectivity and cooperation with brothers of the same father and mother.

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Charlie Stover

Lessons from my Peace Corps Experience

I'm very glad to be back with our groups to remember the crazy and wonderful (and hard) times we had as Peace Corps volunteers. Peter asked me to talk about my work in health services in developing countries (as an economist/manager). Dave has given a much better picture. I will explain some of the lifelong lessons I learned in Bande.

My station was in Bande, a small village north of 10 miles north of Magaria and 20 miles south of Zinger. Newt Baker was my roommate for the first year, Rick Forbes for the second. We all worked for UNCC that ran a cooperative peanut export market from October through February each year. Between cycles, I was assigned to do extension work promoting the use of the small donkey-drawn plows and seeders that UNCC made available through loans from the cooperative. My counterparts were the UNCC "encadreur" in his mid 20th, and the local agricultural agent in his 50's.

Lorraine, Ann Tsuchida and Mary Alice were in Magaria. We visited there often for parties or just to hang out. Periodically we got to Zinder, where Jamie and Linda Ewing were stationed. We frequented local bar- warm Sobrado beer with lots of commotion.

Most memories are of personal experiences and what I learned rather than what I did. In retrospect, I don't recall any specific accomplishments, but the lessons come back to me, often instinctually, in many situations that are totally unrelated to living in Bande.

Here are a few lessons for what they are worth:

1. "Education and intelligence are not well correlated. Don't confuse them". On the first day of the peanut market, my colleague Abdul, Newt and I briefed the weighers about the procedures for the market. I don't even recall how the weighers were selected. They turned out to be "power elite" from the village-older men with large families, many of whom were "El Hadjs" because of a pilgrimage to Mecca. The price for peanuts was set by UNCC at 22.375 CFA per kilo - a difficult number to multiply by hand. Each time I sat with a weigher to verify what he was paying a farmer, I would still be on the second line of my multiplication when the weigher was finishing paying the farmer for his peanut crop. Wow. I caught up with the weigher after the farmer left, and the amount was always correct.

Both the weigher and farmer knew the value of a 40 kilo bag ("bokaji") of peanuts and of a 2-kilo bowl ("tiya") and used these in their calculations. The farmer and weigher understood that the number of "bokajis" and "tiyas" multiplied by x and y resulted in the amount due. Over my head and 3 times as fast. The weighers and farmers had only attended a little Koranic school, and probably never studied math. But they were much quicker and accurate than I was with my sixteen years of school. "Education and intelligence are not well correlated." I find this lesson helps in most situations.

2. Never underestimate anyone's intelligence. Most people know how to solve their own problem. Perhaps some insight and perspective can help. I concluded this lesson from many different experiences. My reasoning is thus. If I assume someone can accomplish a reasonable task, I empower him (her) to try. While the person is trying, I can sometimes help them by pointing out blind spots or unseen hurdles. But I can't solve their problem. If I assume the person can't solve the problem, I discourage him and take over responsibility for solving the problem. If I succeed (in my opinion), I may well be wrong, he's not engaged and is unlikely to complete the solution. This lesson has served me well in almost any situation.

- 3. Situations are not what you see. The answer may be correct, or it may be the opposite. This lesson must have come from grappling with culture shock-"What's really going on?" By entertaining opposite conclusions at the same time, at least I can see the range of possibilities. That range helps me look hard at whether I know enough to make an informed choice- or am I really guessing. This particular habit can drive my wife crazy at times!
- 4. If I'm 51% sure about my conclusion, I proceed comfortably. If I'm 90% sure, I'm probably wrong. Stop. This lesson is a practical application of #3 above.
- 5. "Do no harm. You can always make things worse." I use this more broadly than a physician does. This lesson derives from the prevalence of unintended consequences. By approaching a decision with this in mind, often it makes sense to be cautious until you know more about the outcomes.

Warren Enger

Agriculture in Niger

I worked on several projects and studies in Niger from 1972 through 1985. However I have not returned to Niger in the past 20 years, although I have worked elsewhere in the Sahel. Also I worked up through 2002 in West, North, East and Southern Africa, in addition to many other places in the developing world. The remarks and observations made below are taken mainly from my work as a Peace Corps Volunteer at the agricultural school at Kolo from 1964-66 and a dozen or more trips to Niger during the period 1972-1985.

In addition to several specific project assessments and designs (small irrigated areas in the Irhazer Valley near Agadez, irrigated perimeter at Tara, Dosso Department, Design of the Niamey Department Productivity Project, Consultant on the National Cereals Project, Ag Extension Specialist, among others) I led a team of specialists in late 1979 to undertake the Niger Agricultural Sector Assessment for USAID. In 1983 I led a 3-man team to undertake an Assessment of the Agricultural Inputs and Input Delivery. Most of the observations are related to those studies and assessments.

The Development of Agriculture and Modernization of the Rural Economy in Niger:

From the early days of colonialism the mandate from the Metropole to the colonies was that the administrative cost of running the colonies must be paid from the colonies themselves, so as not to put a financial burden on France. It was up to the local colonial administration to determine how to accomplish this. In Niger self-financing was limited. After some attempts at finding products from which financial extractions could be made it was determined that groundnuts and cotton should be the main engines for financing government.

To energize the population to produce these commodities two things were done. First a head tax was imposed both to provide funds directly to government and to bring the rural population into a money economy. Second, an extension service was set up to show farmers how to grow these crops and encourage them to do so. In the early 20th century the money economy was not well developed in the rural areas. By demanding that a head tax be paid in currency, the rural population was forced to produce something that could be marketed to generate the needed funds. Further efforts would be made by the colonial administration to encourage the market for goods produced in France. Thus cloth, cooking ware and other items were put into the rural market towns to encourage farmers to earn cash from farm activities in order to procure these items.

The introduction of a "cash economy" would have other major impacts on rural society in Niger. It is beyond the scope of this brief presentation to discuss the impact that the gradual monetization of the rural economy had on families, land, wealth accumulation and differentiation. Suffice it to say that the imposition of the "head tax", increasing over time not only paid for the administration of government but

also caused the expansion of "cash crops" for export. The imposition of the head tax was relentless, increasing in amount up through 1973 when it was finally abolished except for local administration purposes. The combination of taxes and purchase of manufactured goods put pressure on rural families in ways that were profound. In areas where conditions were suitable for the production of cash crops, money could be raised directly from agricultural production. Where groundnuts or cotton, or some other crop could not be produced and sold for cash, money had to be raised from other sources. Sales of cereals or livestock were often done, as was entering into petty trade or undertaking speculation in buying and selling small livestock was done, selling prepared food within villages by women increased and sale of labor became increasingly common. The monetization of the rural economy had profound impacts on rural society as noted by several observers.

Formation of Government Policy:

At the beginning of 1980 the Government of Niger (GON) estimated that there were 15 million hectares of arable land in Niger with 3.5 million under cultivation. Population figures were given as 5,377,700. Our Agricultural Sector Analysis estimated that about 1 hectare per person was under cultivation and that considerably less than 15 million hectares of arable land was available. Certainly the arable land estimate of the GON would mean a large amount of land above the 450 mm isohyets was included. These isohyets approached the northern limit of cultivation delineated by the 350 mm isohyets, above which only small, irrigated areas were cultivated. Patterns of settlement, land tenure and economic activity seemed to support the assumption that little land was truly available for expanded cultivation. Gaya and Say were about the only arrondissements where land was available for expanded cultivation. This was due to the presence of onchoceriases, and control of the black fly vector would be required before land under cultivation in these areas could expand.

Even in the areas considered suitable for cropping the soils are of poor quality. Most contain a very high sand content with a low water holding capacity, low capacity to hold soluble fertilizer nutrients and are highly susceptible to wind and water erosion. Millet is the principle cereal crop grown, with sorghum produced in the heavier soils of the low lands. Cowpeas are grown both as a food crop and a cash crop. With good rains, coming early enough in the spring and dispersed throughout the growing season farmers could usually produce adequate cereals for family consumption. Some households were able to maintain reserves that could last for2-3 years. This was considered necessary as the rains were often insufficient or short in duration or came late. In the drought of the early 70s many of the households had exhausted their reserve cereal supplies and had not rebuilt them by the end of that decade. Many families moved to urban centers where food aid could be obtained (Niamey grew from 30,000 inhabitants in the early 1960s to an estimated 300,000 by the late 1970s.)

Cotton and groundnuts were the main cash crops and principle source of export earnings. Expansion of cotton and groundnut production continued in the first post-independence decade, but declined substantially after the drought of the early 70s. Growth of population coupled with the need for food crops reduced area in cash crops tremendously.

Government policy was oriented to increase cereal production such that the basic food needs of both rural and urban populations could be met without diminishing the production of cash crops. This would require interventions that would increase yields as opposed to simply expanding acreage. Government extension services would have to address food crop production as well as cash crops as had generally been the emphasis in the past.

The production system:

The basic production system in Niger agriculture is the family unit. This unit is usually considered a nuclear family of about 7 members with farm size determined by the amount of available labor in the family. It is assumed that family units are little changed over several generations with homogeneity exists across all farms. This description and these conditions do not hold and changes both subtle and dramatic were occurring in rural Niger. Studies found that there was a wide variation in everything from household size to land holdings, degree to which wealth had been accumulated and the financial and food security enjoyed by individual households. Poverty in some households had reached such extremes that the head of the household was forced to sell grain at harvest time even though he did not have adequate supplies to last until the next harvest, often forcing the members of the household to purchase grain before the next harvest at inflated prices. Household members were found to hire out to wealthier families during the cropping season, neglecting their own fields thus causing lower crop yields and creating a vicious cycle of shortage, procurement and often debt. Sales of land were increasingly common in order to meet cash needs or pay loans.

The traditional "bush fallow" system of maintaining soil fertility was rapidly disappearing, and time in fallow had been greatly reduced or even eliminated. To mitigate the decline in soil fertility, previously done through letting the land lay fallow, the use of household waste and animal manure was practiced where possible. However, as land in fallow is reduced, the ability to keep livestock is also reduced, so that the amount of manure that can be gotten from livestock is also reduced therefore making it difficult to maintain soil fertility.

In order to maintain production of cash crops the colonial government established agronomic research stations at Kolo near Niamey and at Maradi. These were put under the operational control of IRAT (Institute du Recherché Agronomic Tropical) later to be given to INRAN (Institute National du Recherché Agronomic du Niger) after independence. It also set up a national extension system.

Under the French system of extension of government services practiced up until Independence in 1960, a centralized top-down approach was practiced. To provide rural extension agents a national training institute was established at Kolo, where young men that had done some basic education through primary school were recruited. These recruits received a formal training course in agriculture for 2-3 years. The number of students was limited and for the most part the graduates were assigned posts in the highest potential areas for the "cash crops" selected.

A similar program was set up for livestock production (elevage) though this centered mainly on the control of major disease outbreaks. Other animal husbandry techniques such as nutrition, herd management, genetic selection and improvement or range management were never incorporated. Livestock services did have a small sheep and goat research facility in Maradi where it also maintained a flock of improved poultry and a cattle research station at Toukanous. It also built and operated a slaughter house in Niamey.

The Department of Waters and Forests had a separate Department to look after concerns with forestry and conservation. This was sort of like a department of natural resources and functioned mainly as a regulatory agency, controlling the harvesting or trees, and poaching of animals. Little was done to research and promote better and more extensive silivicutural practices or reforestation.

Rural engineering was also established as a separate Department. Its main effort was to construct and manage a few small irrigation projects. It also helped in the design and construction of buildings and facilities for the Ministry of Rural Development.

In this classic model extension agents were assigned by government to geographic areas to carry out general extension in the area of specialty – agriculture, livestock, forestry etc. - the organizational structure was vertical. Each specialty such as agriculture (crop production) is a separate service that controls its own personnel. Authority is vested in a National Director and is transmitted downward through sector or Department heads to each lower level until it reaches the extension agent. Integration among services only occurs at the National level at the office of the Minister of Rural Development.

A second approach developed where there was a tendency to concentrate agents more, usually in zones where groundnuts or cotton was promoted, or in irrigated areas. This system is usually vertically organized as in the first model. A partial horizontal integration may occur, particularly where outside financing is available, and the promotion of such things as animal traction, conservation or water management is incorporated. In these instances the chain of command may bypass the usual system going directly from the Minister to the Project management, which then coordinates all activities. This will usually revert to the old system when outside financing ends.

In 1978 the GON's Department of Agriculture had a total of 251 personnel. 18 had university training, 48 had secondary school and some vocational training, and 165 were low-level technicians who had primary school plus some technical training in general agriculture. These people were to man the 6 divisions of the Department of Agriculture (of which rural extension is one), staff the 7 Department-level offices, 28 arrondissement offices, and 142 agricultural districts headquarters. They would cover approximately 8500 villages in Niger with about 500,000 farms. Given that some of these people had responsibilities outside of extension (plant protection, statistics, marketing, and general administration, this meant that each extension agent was responsible for 2500-3000 farms in 50 villages.

The Ministry of Plan noted that this situation was tragic and would require an improved allocation of personnel, more training, or a review of the approach to the extension efforts to rural people.

In the mid-1960s the GON tried a new model. This was based on a cooperative movement to create a more localized system to transfer technology and undertake marketing. The Nigerien National Cooperative Union (UNCC) was tasked with a broader program of village-level services based on the election of leaders from among the village population by the population. Later this would be broadened so that the entire village became the cooperative. This was coupled with the launching of the service of Rural Animation who was tasked with energizing the villagers and helpig coordinate the activities of the various agencies that were supposed to provide services at the village level. The concept was to establish a dialogue

between the agents and the villagers as a means of building trust and improving communications. The 2 main characteristics of this approach were that villagers would be chosen by their peers to perform certain function on behalf of the villagers and secondly there was recognition of the lack of contact between villagers and professional agents and the need to improve that contact. As we moved into the 1970s and the launching of the large productivity projects (Integrated Rural Development – IRDs) this auto encadrement became the major approach used by most of the projects, regardless of donor.

What followed was a localized extension effort. In some cases lower-level extension agents were recruited and trained by the Project or Department of Ag staff. In others local villagers were selected to become "model farmers" receiving training (sometimes up to 9 months) and provided with equipment and other inputs to undertake farming in the more technical approach that was being promoted. In some cases young couples were brought to training centers and given instruction in agriculture as well as home sciences and childcare. The use of demonstration fields was commonly included, where either rural extension agents or model farmers would set up demonstration fields using the modern techniques. In most cases the training of agents was to be "progressive" in that a few techniques were presented in training, agents were sent back to their villages to practice these techniques and demonstrate them to their village, then return to the training site for reinforcement training and to be given new techniques to use.

The Production Projects (IRDs) became the main effort in Niger's food production program. They were set up in 5 Departments: Zinder, Maradi, Taoua, Dosso and Niamey. In addition some national projects were also set up to provide inputs and support such as the USAID-funded National Cereals Project to produce and test seed, the National Soils Lab to perform soils analysis, and the National Inputs Center among others.

Results:

A review of project reports, GON data, as well as independent case studies led to the conclusion that proper use of modern inputs could lead to significant increases in crop production. This was particularly true for the use of fertilizers in cereal production. When this was coupled with the other techniques being promoted such as proper spacing and plant density, proper weeding, use of fungicides for seed treatment, and in some cases the use of animal traction, spectacular results could be obtained. Reports of double and triple yields were noted. Several observers questioned if the technical packages promoted by the projects and the GON gave sufficient economic returns to induce farmers to invest in them. Our findings were that the weakness was in the extension of those technologies and the failure of the input supply chain that caused failure of the technology.

Two other conclusions were drawn from the review. First, the tremendous demands put on the rural household for cash money often precluded the use of that money for agricultural purposes, and two, there was not a convincing technical package that gave sufficient enough results in the production of food crops as an alternative use of scarce resources. These points may seem inconsistent with those made in the previous paragraph. However, more in depth review of the forces that were operating on the rural household, the alternatives that rural people saw for investment and cash-generating activities, the traditional position of the head of household and how he allocated land and resources within the household, as well as the position of women within the household and the economy in general gave another picture.

The pressures put on the rural households in Niger and the concomitant changes that were taking place in the 1970s did not come about suddenly. There is sufficient evidence going back as far as the pre-World War II imposition of the head tax to demonstrate that changes in the social system and family structures were already taking place long before independence. These influences were often mitigated by the "good" years when rainfall was adequate to provide food security to most Nigeriens. The drought of the late 1960s and 3early 1970s created conditions that made these paramount in the lives of rural people. With the addition of a population growth rate that is putting tremendous pressure on land resources, unless production practices can be found and efficiently disseminated throughout the country, shortage of food will become the main source of instability in Niger. There are no "green revolution" solutions, such as were found for maize, wheat and rice in the 1960s, for millet. To my knowledge, the International Millet Research Center in India has yet to come up with superior germ plasma that can give spectacular yield increases or drought resistance. Unless some new GMO technology for seed is developed it is unlikely that the cereal production in Niger will reach new heights. When I was last there, it was believed that the upper limit of millet production was 1,000 kg per hectare. Here were some few cases of yields above this, however they were rare. In the 1970s and early 1980s agricultural inputs were heavily subsidized. This policy is unsustainable in a country so resource poor as Niger. Where then to put investment money to bring Niger out of poverty and continual threat of food shortage and famine?

Jamie Thomson

Contemporary Conditions and Governance in Niger and Other Sahelian Countries

The talk covered six points, which, taken together, structure the contemporary conditions and governance in Niger a half century after we arrived.

DEMOGRAPHY: The population of Niger has ballooned to over four times what it was in 1964: 16 million plus people now occupy the areas formerly home to only 3.5 - 4 million. Environmental stresses have resulted which leave people subject to famine and marginalized in terms of their survival chances, much less their life chances.

INSECURITY AND TRAVEL: In 1964, most of us blithely boarded a TransAf bus to get to our posts. Despite SAWABA guerrilla attacks during that year, Luke and Paul Cromwell had few concerns about sending us out. Now, Peace Corps has shut down its program, reflecting the high degree of insecurity that now exists throughout the country. Not just the far north, the far west, the far east, but much of the central area – where many of us were posted – are now too dangerous for foreigners to visit, much less work for two years at a stretch. Westerners have been killed and others kidnapped; some of those not ransomed have ended up dead as well. Islamic fundamentalists have not overrun Niger as they did two-thirds of Mali in 2013, but the situation seems precarious.

DRUG TRADE: Latin American drug lords have developed routes from their home countries to West Africa (Sierra Leone, Portuguese Guinea), thence to Blaise Compaore's Burkina Faso and from there by light plane across the Sahara (using refueling facilities organized and maintained by terrorist groups in northern parts of Mali and Niger) to the Mediterranean littoral and then into European markets. The flood of money this trade generates facilitates arms acquisition by Islamic fundamentalists (A.Q.I.M. in North Africa, and various Tuareg groups still seeking creation of a central Saharan independent state).

GOVERNANCE IN NIGER: Formal governance in Niger has been authoritarian since independence; Hamani Diori, the country's only civilian president, has been followed by five military leaders. Decentralization, introduced around 2006, has devolved some power from the capital and the provincial capitals to lower-level jurisdictions, but it will take decades to determine whether these developments will in fact, as intended, enhance people's capacity to solve their problems.

Coping with this array of problems (limited land and economic resources, famine, violence, authoritarian governance) has led many Nigeriens to seek 'insurance' for themselves and their families by entering into relationships with patrons who have the political clout and other resources to assist them when they get into tight spots. In exchange, such clients execute their patrons' instructions, generally focused on advancing the patron's political career. Life remains pretty precarious for most Nigeriens at the beginning of the 21st century....certainly more so than it was when we started half a century back.