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HAROLD M. JONES

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INTERVIEW

Q: This is an interview with Harold M. Jones who joined USAID in 1956 and retired in 1981. Harold, let's start off by talking a little bit about your early years, where you were born, grew up, your early education, and anything of that type that might suggest how you learned about international development.

Early years, education, military, and work experience

JONES: I grew up in Charles City County, Virginia, east of Richmond near Route 5 to Williamsburg, Va., where I finished primary school from a three-room rural school across from where I lived. I graduated in 1932 with a class of three young ladies. From there I went to Ruthville High School, in Charles City County, in 1936. There, we took vocational agriculture, which was offered in many rural high schools at the time. From there I went to Virginia State and earned a B.S. degree in agriculture education. Agriculture in high school gave me the impetus to want to continue with agriculture in some form. I thought maybe teaching agriculture education in high school would be a good start in life and then figure what I'd do from then on.

But when I first went to Virginia State College, I had in mind switching from agriculture to law, and I started off majoring in history. I was informed this would be a good forerunner for going into law. But later, I thought maybe it would be a long tough road to get into law and the cost would be prohibitive. It was tough having to work to help pay my way through college. I dropped the idea of law went back to agriculture education. I graduated in 1940 in agriculture education from Virginia State and was employed in Northern Virginia, at Manassas, teaching at the Manassas high school.

Part of the program there was under N.Y.A., National Youth Administration, a program of the Franklin D. Roosevelt Administration. From there of course, I was inducted into World War II, and I served in aviation engineers in the Pacific Theater in Australia, New Guinea, The Philippines and Japan. Following WWII, I went to Cornell and earned a masters' degree.

Q: Was there anything in that military experience that exposed you to national foreign lands and all?

JONES: Well, this is what really gave me an impetus to want to travel and to work in some of the poorer countries like New Guinea, The Philippines -- and, of course, at that time, Japan was not that well industrialized or aggressive. I thought about this a number of times after I left Cornell and went back to teaching at the Manassas regional high school.

Q: What did you major in at Cornell?

JONES: In agriculture engineering, dealing with farm mechanics. I had had farm mechanics in high school and thought I had an inclination toward building things, and seeing how mechanical things operated and understood the mechanical principle of

different devices. So I decided I'd major in what they call agriculture engineering. Agriculture engineering is a very prominent profession in the U.S. among agriculturalists. Many people are not familiar with it, but there are at least seven major areas in which one can get a degree in agriculture engineering -- farm buildings, farm power and machinery, rural electrification, etc. I decided I wanted to deal with farm power and machinery with emphasis on spray equipment. To supplement that, I decided to add courses in entomology. I thought if I were going to be dealing with bugs and trying to get rid of them I ought to know more about them as a supplement to mechanical methods of keeping them under control. From Cornell, I went back to teaching farm mechanics at Manassas, and then to Fort Valley State College, Fort Valley, Georgia, where I was expected to set up an agriculture engineering department. I stayed there a year.

Q: This was a college?

JONES: This was the black college of Georgia, where at that time a segregated system prevailed. From there I went to Tennessee State College, where I had the same responsibility. I was to work with the school of engineering in a collaborative effort to set up an agriculture engineering department. It was there that I got a real taste of wanting to get into the foreign service. Several of the members of the faculty of Tennessee State had joined AID and one of them was in engineering. More and more I thought about it.

Q: Do you know how they happened to be associated with AID?

JONES: I don't have any idea how they got into AID, but I heard about TCA (Technical Cooperation Administration) at that time. After having served in World War II and having had a taste of world wide travel, the urge kept coming back to join AID. In spite of the good living conditions in Nashville, conditions at the college were not good for me, mostly because the money wasn't being allocated to do the kind of development that was expected. I decided that if I were going to get into development, why not do it overseas instead of at Tennessee State.

One day I was walking along in front of the desk of my boss, Walter Flowers, at Tennessee State. He handed me some papers from the corner of his desk, and said, "Look at these and tell me what you think." I took a look at them but Flowers was so difficult to catch up with, I could never get back to see him. I saw it was an application that someone had sent to him to join AID for a job in India. I filled out the application and sent it in. It came back from AID-Washington -- not AID at the time, but TCA-Washington -- indicating that I had been accepted for this job in India.

First assignment with TCA in India - 1956

Q: So what was this job you were applying for?

JONES: I was applying to be advisor to the Minister of Agriculture of India, specifically to help set up a farm machine, tractor and testing center in central India, in the state of

Madhya Pradesh. Everything went along, and I wrote a letter to the president of the college and got released for two years and told him that if things went well I might not come back. He said all right. I never did get to see my chief head of the department about sending the application and results. I left Tennessee State and went to India.

Q: Did you spend any time in Washington to get some orientation?

JONES: I had two weeks' orientation in Washington. My wife, Loretta, came up for a few days at the end of that orientation because it was near the early part of January.

Q: What year was this?

JONES: 1956. It was January and the girls -- we had six of them then, still in school, at different levels and we didn't want to break them away from school until June. So my family didn't join me until mid-June.

I went on to New Delhi, where I had two more weeks' orientation, more Indian-oriented and with more Indian participants in the entire program. After orientation, I was issued a new station wagon and I drove about 500 miles south to central India to a place called Bhopal. My orders indicated my post to be Bairagarh, which was down the hill from Bhopal a couple of miles. Of course my family had to stay in Bhopal, since there was no place at the project for them to stay, and I would have to see them on weekends. The project site turned out to be Budhi, sixty miles from Bhopal.

When I got to Bhopal, I saw two Americans, a husband and wife, living there. He was an extension specialist from Montana. They gave me the mail. I went over and sat on the steps of our building and opened the mail. It was from a man named Mr. Elam, who was the supervisor for agriculture education and teacher training in the 17 southern black segregated colleges. Teacher training had to do with training vocational agriculture teachers for high school. My boss at Tennessee State was the teacher trainer. Once when Elam came to look around, I accompanied him to west Tennessee and other places and he did not seem very happy with my boss's work. I think it was kind of a political move to get him away from Tennessee State, and assign me the job by annuity, Flowers to take the Indian job. The letter from Elam read, "We got rid of the wrong man. Come and see me after your two years are up in India." So it was kind of a coincidence that I got in with AID. But that's how it all happened.

Q: What was the project you were supposed to work on? Was this a countrywide project?

JONES: This was a government of India project under the Ministry of Agriculture. It was to convert a jungle warfare training camp of World War II into an agricultural, farm machinery training and testing center.

Q: But this was just one institution you were working with?

JONES: It was just one institution. This was a part of the U.S. total assistance program to India. And this was a relatively small, one-person project. I was the only technician there. I was to advise and assist with the development of the project.

Q: Remember the name of the overall project?

JONES: It was the Farm Machinery Utilization Center.

Q: But was that just for that place?

JONES: The idea was that it would serve the whole country, training people how to operate, maintain, order, and standardize agricultural equipment. It was a tough assignment.

Q: What did you find when you got there?

Setting up a Farm Machinery Training Center near Bhopal

JONES: I found a few shells of old buildings scattered about a very thick jungle, and were being rehabilitated. The building that they gave me was small, but adequate for a bachelor. It had been whitewashed with the roof repaired. Outside was a dug well that I drew my water from with a bucket and a rope. Back up a little bit....US had bought and had shipped to the location \$120,000 worth of agriculture equipment that had been manufactured in the United States. Most were still in boxes and had to be assembled before it could be used. We got busy and got it assembled with a staff of young mechanics and Indian engineers.

Q: So there was a staff to this center?

JONES: Yes, there was a staff. A lot of the staff was in place, but there was a gradual adding of staff as the center developed. Interesting enough, to give you how jungly and wild the place was, I was told by one of the local citizens that they had walked by the place that I was to live in two weeks before I got there, and there was a big male Bengal tiger standing in front of the building.

We plugged along. After I arrived in Bhopal, the next day I decided to drive to Budhi, finding out that my post was 60 miles away from the place that my orders said they were. I met the then officer in charge of the place, a south Indian named Rao. We had a long chat. He showed me what was going on and introduced me to his staff. I asked him, "Have you ever been to the States?"

He said, "Yes, I spent a year there." "What do you think about the States?" "I think you people have lots of nice materialistic things that you provide for consumers, and a lot of them are useful. But I find spiritually you people are babes in the woods."

When he said that, I looked around and there was nothing but jungle, and I said, "We're all babes in the woods out here."

He said, "You know, when we come back to this country we must go through a spiritual cleansing, I'm now at the end of my spiritual cleansing, a series of exercises that cleanses me spiritually after being in the West, where the spiritual part of me was contaminated and we have to get that cleaned up when we return."

Q: He was a Hindu?

JONES: He's Hindu, of the highest Hindu caste. So I talked to Rao about what the center was to do and what he thought should be the approach to setting up the center and getting a program going. He starts spouting out -- he was, I think, a mechanical engineer, I'm not quite sure -- he lectured so much about machinery and principles of machinery I felt a little bit lost. I thought this man has a great capability. Why on earth have I come 10,000 miles to instruct an assistant with establishing a machinery training center, when this man seems to know everything about it. I was a little bit disturbed. When I rode back to Bhopal I said to myself, I wonder if he's a guy who just talks, or whether he's able to put anything on the ground, whether he can do it, the hands-on stuff.

I said, maybe that's the difference between Rao and myself. I think I can do it. I found out as time went on that this was exactly the case. He was a well-educated engineer but didn't know anything about the practical aspects of farm machinery.

I came back the following week to work. My main counterpart was a fellow named Mohan Taneja. Taneja was from the Bataan country in northwest India but had finished the Presbyterian college at Allahabad, where many of the faculty members were Americans. They taught farm mechanics at that school. I got together with Mohan. He was a very active, energetic, pushy type. I said, you know, this is the guy to link up with and just forget about who's in charge, and we'll go ahead and do things.

When I got back to work on the job, the second week, Rao said, "The Minister of Agriculture wants to see you in New Delhi." I said, "Is he in a hurry?" "Oh, yes, he's in a big hurry." "Why's he in a big hurry?" "They want this center opened by the first of July." This was in February. I said, "Well, give me a chance to get with Taneja to figure out a few things, and then I'll give you a date to get me an appointment with the minister in New Delhi."

I got with Taneja and we decided on some things that the Minister has to do before this center could open. There were other things that they should do after the opening to improve the quality of training. Rao took the initiative and called up the Minister and got me an appointment. I got on the train in the evening in Bhopal and rode that 500 miles overnight to New Delhi arriving the next morning and immediately went to the hotel to get cleaned up a little and got some of the dust and dirt out of my eyes. I went to see the Minister of Agriculture the same day.

When I arrived, the permanent secretary was -- as one often saw in Indian offices -- hid behind a stack of dog-eared files. He saw me and looked up and I said, "I'm Harold Jones, coming from Bhopal, from the tractor training and utilization center that you're setting up there." He said, "Oh, yes, we were expecting you." He called the minister who soon arrived. We shook hands and we sat around a table. I said, "Mr. Minister I have 10 things on the list that were worked up by the chief instructor and I at the center. Five of these things, we think, must be done before the center can open. Five others we wish you would do shortly after the center opens to keep it going and to build quality training as the center expands." I read them.

Q: What were they for?

JONES: They were the kind of things that most any facility would have to have put in place, classrooms, supplies, teaching aids, etc. A lot of help was needed to clean away the trees before the monsoon. You must provide the means to do these things. I asked, "Can you get these five things done reasonably soon?"

The minister looked at the permanent secretary and didn't say anything, but came back to me and said, "Can you open the center by the first of July?"

I came back to him and said, "Can you get these things done between now and the first of July?" This was repeated for three times. Finally he gave that usual sideways head motion to the permanent secretary, which I took to mean yes, and then he finally said, "Yes, we can do that."

They had agreed to do all the items requested. I told him I appreciated it and invited him to come down and see the center sometime. Then I left there and went on over to AID and checked in with the TCM (Technical Cooperation Mission) office and Dr. Frank Parker, who was the agricultural officer. I told him about the project and he filled me in a little bit more about what they expected the project to do. I got on the train and traveled overnight back to Bhopal.

Q: So you were fairly independent in your operations?

JONES: Very much independent.

Q: AID wasn't trying to tell you --

JONES: AID was minimally involved. In fact, only one -- TCM (Technical Cooperation Mission) -- person ever saw the project. That was because Senator Allen Ellender, from Louisiana, visited the project. The director had to accompany him, so he got to see the project.

Q: Who was the director at that time?

JONES: Houston. Howard Houston, I think. Anyway, Taneja and I went ahead and set up a training program, got the farm machinery assembled and ready to go into action. Notices were sent to all states, apprizing them about the training program. They were invited to send applications for people that they wished to sponsor for training. As a result, we received 400 applications for only 20 seats for trainees. That gave us a great chance to select the best out of 400. We went on ahead.

Q: From all over the country?

JONES: From all over the country, in every state in India at that time. They responded right away. We spread out the selection as much as possible. We got together and set up the whole program of these courses, and gradually filled in all places for those different courses that we decided to conduct. When the officer-in-charge came back into the picture, we figured that he may be as much of an impediment as he would be a support. So Taneja and I got together and went ahead and set the program up. When he got back into the picture, all of these things had been done and he hadn't kept abreast of the happenings.

Q: Why wasn't he there?

JONES: He was there, but he didn't seem to be that much concerned. Either that, or he thought what needed to be done should be left to myself and Taneja and me one or two of the other instructors there.

Q: How many in the faculty?

JONES: We had about seven instructors, one chief instructor and myself, several mechanics and equipment operators.

Q: What was their training? Were they also academic engineers?

JONES: Several of them had had some practical training in different kinds of mechanics and they were willing to get down and get a few things done.

One of the things that had to be overcome in India was the attitude towards education. It didn't matter whether your training was technical or not hands-on. Tasks were not for the educated. This was education for education's sake, nothing else. The educated saw themselves alone, doing things to get their hands dirty. The hands-on doing was generally missing. We had one who felt that way and when they saw me moving around, supposedly the big educated advisor from the United States, doing things, trying to put things together, and getting my hands dirty trying to make things happen, attitudes began to change. One of the instructors came to me and said, "I notice you're around here in all this heat and dry weather full of energy and going about like you were 15 years old. You know what I think it might be? I think it might be that lemon that you use in your tea."

Whenever we had tea, I wouldn't take milk with it. They all drank milk with their tea. I asked them to put lemon in my tea. He said, "I just figured out why you do that and why you have so much energy. It's that lemon you put in that tea. I'm going to start using lemon in my tea." He started to come around and finally they all came around to do the needed tasks.

Q: What was the living conditions like?

JONES: Living conditions were rough. No electricity, no bathroom. My quarters was a small A-roof stone building with a partition. I used one side for cooking and boiling water, and the other part to sleep. The table that I ate on, and did my paper work, was one that I built from the crating material that the equipment came in from the States. And for my bathroom, I had a tin tub and a stool with a hole in the middle of it with a pot underneath sitting in one corner of the bedroom, which was emptied each morning and cleaned. I used candles and had a kerosene lamp for night lights. That's about all.

Q: What was the climate?

JONES: Climate at that time ran from 110 to 120, zero humidity. I drank several gallons of water a day and never any a bit of moisture on my skin anywhere. AID had issued a kerosene refrigerator. If you want an extra something to pull you down and get you aggravated, light a kerosene refrigerator in that kind of temperature. Every now and then, I had ice cubes. I had a kerosene stove for cooking. My driver, a young Muslim, decided that he would clean my kitchen and wash dishes, and so forth. Outside where I lived was a dug well with a rope tied to a bucket for bringing the water up. I called it running water -- I ran from the well to the kitchen with it. That was the water system.

Q: Did anybody give you any orientation or preparation for living in a condition and situation like this?

JONES: No. This was far worse than what I experienced in rural Virginia as a youngster during depression years. It was not a good condition. After one year, there was generator that provided lights until about midnight, when it was shut down.

I did everything imaginable to try to get a little relief from the heat and dry weather. In India, offices were cooled at that time by using something called "Khas-Khas." Khas-Khas was a sweet smelling grass root that was dug up, dried and put over big wooden frames and set outside the open windows. Someone would dash water against the Khas-Khas all day long, and as the hot breeze blew through, the hot air was cooled slightly. At least it had a good pleasant odor to go with it.

Q: Because it was so dry, this was....

JONES: Yes, that's right. I put Khas-Khas over my window, and I dipped my mosquito net into buckets of water and hung it back on the rack over my bed. The dripping water evaporated, giving enough relief for an hour's sleep in the night. But for the most part, I got to sleep at four o'clock in the morning, when the air cooled slightly. Then got up about 6:30 or 7 to go to work, but this soon began to take its toll on me. Then after my family came in June I'd go to Bhopal on weekends to be with them. This went on for four years, roof sleeping there was very comfortable.

The other part of living was getting things to eat. I had my shotgun and rifle with me, so I went to the jungle and shot a few antelope and deer and a peacock once in awhile. That was my meat supply, and the family's meat supply, the whole time we were there.

Q: At anytime did the TCM office in New Delhi ever want to know what's going on and how you were doing?

JONES: No one bothered that much about checking on the project. I was out there alone battling and toiling and trying to get things going.

Q: Did you have any kind of a supervisor?

JONES: Nobody came down. I told you, Howard Houston was the only mission person to show up at the project.

Anyway, those awful living conditions was the thing that was knocking me harder than anything else.

Q: But what about for your family in Bhopal?

JONES: Well, the family in Bhopal had been able to get a rented place on the palace grounds of the former princely ruler from the days when Bhopal was a princely state. It was a Muslim state and they called the ruler, a Nawab, versus a maharajah for the Hindu states. We had what was called his weekend guest house. He had two big weekend guest houses on the palace grounds. One was rented to an extension advisor and wife from Montana, and we took the other one. My family lived there. It was a big place with about eight big rooms, eight big bathrooms, which were almost as large as any of the rooms, but with no hot water and no kitchen, because in the days when they had guests, the food was cooked in another place and was brought in and served. So they didn't need a kitchen. I had to design a kitchen. AID sent us a kerosene stove and kerosene refrigerator, and we had shipped our own deep-freeze. There were problems with keeping it operating because of different current voltages. We had running water but no hot water, which meant we had to boil all of our drinking water and to bathe, we had to heat the water.

Q: With a kerosene stove, that's slow going.

JONES: Kind of rough going. I converted one of the bathrooms into a kitchen by building a long workbench over the bathtub and a storage cabinet over the toilet stool, pushed the refrigerator in one corner, deep-freeze in the opposite corner, the kerosene stove required patience but was modestly efficient. We were in business. We carried on that way the whole time we were in Bhopal, which was four and a half years for me and four years for the family. One room was used for the family school. I made the desk and seats from the shipping crates and procured a blackboard in the local town market. Loretta taught the six girls, ranging from kindergarten to junior high for four years.

At the center, we struggled along. Finally, the government had what they called a Central Tract Organization. They had borrowed \$11 million from World Bank to set it up. CTO had big heavy equipment mainly to clear land for agricultural purposes. They operated in many places, clearing acres of grassland and bush for farming areas.

A group of those tractors were sent to the project site called Budni. Budni was as remote as you can get. When I got there I called it the one-step post. Which went on to say that one step backwards and you'd fall off the earth into eternity. There was nothing beyond Budni. I didn't believe there was. That was a bit of exaggeration, but not much.

Q: You mean there weren't any villages around?

JONES: Well, there was one small dirty village 200 yards from the center where one could get a cup of tea, basic staples were sold: rice, beans, cloth and some hardware materials. Otherwise you'd have to cross the river to get something that was reasonably edible and fresh. I used to go across the river to a place called Hoshangabad, located along the Narmada River. The Narmada River was central India's most holy river and its the only river in India that runs to the west coast. To get across that river I used to drive the Jeep station wagon. Sometimes I'd walk. A flat bottomed boat was just large enough to accommodate the Jeep, the wheels almost sticking over the edges, and it would be propelled to the other side with about eight men with poles pushing against the bottom of the river.

Q: How wide was the river?

JONES: The river was probably an eighth of a mile. I'd go there because there was a little village where fresh vegetables, tomatoes, and other fresh things were sold. They supplemented the meat that I'd got from the jungle.

Q: But this was not a heavily populated area, then?

JONES: No, it wasn't heavily populated. Not at all. We managed to survive. CTO came in and cleared about 200 acres of the bush country with the big heavy dozers, and pushed it all up in wind rows. At least there was enough land there to group crops and to allow us to utilize the different kinds of machinery for training.

Q: This was part of the training center.

JONES: This was part of the training center. On the first of July, the center opened. We had it opened right on time and it's been running for the past 40 years.

Q: Your 40 students arrived?

JONES: Oh, yes, every class was filled. Then we set up two other courses, giving us a total of three courses going simultaneously. One was six months and there were two for three months each.

Q: You designed the curriculum?

JONES: I and the chief instructor. I worked with him for setting up the curriculum. He was a good type to work with and he'd had exposure to the US missionary types of training at the Presbyterian college, which to some extent copied the land grant college models in the U.S. Not quite, but not without the U.S. missionary work ethics.

Q: What were the three courses?

JONES: Well, we had a course on farm machinery utilization and maintenance, another course on repairs and a third course on special machines and skills.

Q: What kind of equipment were you working with mainly?

JONES: Well, we had a variety of US-manufactured equipment. We had grain drills, threshing machine, weed control equipment, cultivators, and plows for plowing up the land or lightly tilling the soil. There were a number of pumps for irrigating. But there was no water available. At the end of the training center area, a stream ran through during the monsoons carrying large quantities of water. I suggested to the officer-in-charge that a couple of the dozers be sent there to push some dirt across the stream in kind of a dam form and that would hold enough water after the monsoon was over that would allow us to irrigate small plots. But they said, "We don't have pipe nor money to buy any. What do you do? I took a walk through the areas of the old jungle warfare training camp, and there I saw old two-inch pipe lines used for their water system. I demonstrated how to use a blowtorch and heavy pipe wrenches to disconnect some of the pipes. They were hooked to the pumps, attached to tractors which pumped water up the hill to level ground. Crops were grown by irrigation as a teaching demonstration on an approximately ½ acre area. I assisted with the entire operation, which was totally improvised. This was a good example of doing the best with what was available. It was an effective little demonstration.

Q: Were these students ones that would have access to this kind of equipment when they would finish this training?

JONES: Well what was happening was that a number of government farms were being run with some fairly modern equipment, and they could use these trainees. Others were employed by small equipment manufacturers. At that time, India's main form of power was bullocks. They pulled everything similar to what we did in this country a hundred years ago. They had primitive kinds of equipment that had been there for hundreds of years. But then there were a few entrepreneur types of manufacturers that were beginning to try and design and build a better type of farm equipment for bullock power that would be more effective in the farming operation. They took on some of the trainees to help with manufacturing and demonstrating to farmers.

Some of the people who had had some of the basic form of mechanic type training went with these manufacturers, and others went back to their village farms and tried to encourage improved methods. We even went to the point of trying to design and bring into being better hand tools for chopping weeds and cultivating. There was not much of a problem of placing the people who had attended the courses.

Q: Did it grow beyond the 40 students? How many students did you eventually have during your four years? Was the enrollment only 40 each year?

JONES: It started expanding. I don't know what it expanded to. When I was there we had approximately 140 students per year. When I was there in 1996, the yearly output had been as high as 1560 per year. At least six courses were being offered, along with a vigorous testing program.

Q: And they lived there on school grounds?

JONES: They had a dormitory in one of the old buildings that were left from the World War II jungle warfare training center that was converted into a cooking and feeding and dormitory facility. It wasn't all that great, but livable. They had a few portable tanks for water supply.

Q: You weren't so much involved in the administration of the school?

JONES: I wasn't involved in the administration. Indians handled that very well. The officer-in-charge had an administrative officer, who had two administrative assistants and there were several clerks in the office.

Q: How did you find the students?

JONES: The students were very enthusiastic and willing to learn. Many of them wanted to learn how to do things. Once in awhile some of the traditional types didn't think that this was the kind of thing that they ought to be doing, so they didn't apply themselves well. They thought that the more machinery was used, it meant that people would lose their jobs and wouldn't have a way of making a living. That kind of attitude was common across the whole country, which isn't unusual. The other thing that was a bit of a problem, as far as I was concerned, was the starting time. The morning temperatures at

about sunrise were bearable for field work, but the government working hours was of such that they didn't want to change. I got together again with the chief instructor, whom I knew to be progressive about things, and we ended up sometime going to work at 6:30. So with no declaration by government or anybody in terms of changing working times, the students were willing to do that. When it got hot they'd come in and cool themselves. Then later on, toward sundown, field activities were scheduled.

Q: You must have done a lot of teacher training, teaching the faculty.

JONES: A lot of the teacher training of the faculty was mainly in helping with assembly of equipment. They had a trouble putting it together, assembling the equipment and grasping the general principles of operation. I did a lot of demonstrating of how to do things, for instance, checking out the accuracy of a grain drill in terms of planting seed. It is called for calibrating and adjustments. I did an awful lot of that. We had one or two Indian instructors who had worked with power equipment -- a round tractors and pumps - - and they were very useful in helping to get that over to the rest of the faculty. Improved teaching methods were emphasized from time to time. Problem solving played a key role in the training.

Q: Were the student body and the faculty of mixed background or were they all --

JONES: Very much mixed background. Some of the instructors may had gone through certificate level training for agriculture but had little exposure to agriculture mechanics other than primitive aspects in use at that time, using the bullocks.

Q: What about their religious and cultural background?

JONES: Muslims, Hindus and Christians made up both the faculty and student body. Their religious and cultural orientation came out mostly when we had the animals from the jungle destroying the crops that were being grown, particularly the corn and the wheat. The wild boars and monkeys were the biggest problems. Monkeys are sacred to many Indians and the officer in charge realized that this could be a problem. But he was able to get a permit from the government to buy a couple of shotguns to shoot monkeys. But he would have difficulty to get anybody to shoot monkeys. So they thought that since I was from the West and didn't mind, since I had my own guns.

I told the chief instructor confidentially, "You know the quickest way to heaven, or the quickest way out of here back to the States, is probably to shoot a monkey. I'm not going to shoot any monkeys."

He looked around and got a local person that would come in and shoot a few of the animals. This was totally against the Hindu religion, but none of the students protested.

Q: All these people were Hindus?

JONES: They were from everywhere and mixed culturally. We had some big Muslim operators who they didn't mind. But the nearby village area was predominantly Hindu and whatever happened there in that village that was against their religion, would likely result in protest. No cultural or ethnic outbursts occurred during my four and a half year stay.

Q: But all these people of different backgrounds got along?

JONES: Oh yes, they got along very well. They seemed to have realized that we've come here to be trained about certain things. Everybody took to it as something new and something different with the hope that this would open up at least some job for them or a future that would allow them to get a job to earn a living.

Q: Were there any major incidences or crises that you faced or was it all just one big crisis?

JONES: Just one small crisis. I didn't come up against any particular problems. I did run into one government official at one time. A villager would often come and ask me if I would shoot a tiger or leopard for them that was killing their cattle or coming into their village. One villager went to the jungle with his bullocks near the training center to cut some wood for his village for cooking purposes. While he was out cutting wood and trying to get a load for his bullock cart, a tiger came by and killed one of his bullocks. He asked me if I would come out and shoot the tiger, before it killed his other bullock. This was his life, his livelihood. This pair of bullocks meant everything to him and his family in terms of making a living and doing things he had to do to survive. So I went out and found the tiger chomping away on the bullock. I shot and killed it.

A week or two later, a letter came from the state government forester, saying that we hear you shot a tiger in that area and what we are concerned about. We had spotted that tiger for the King of Nepal. The King of Nepal was coming down, and we were going to take him there for a tiger hunt.

When I went into Bhopal over the weekend to join the family, I stopped at the Forester's office. He was a tall, mixed gray south Indian. I told him the story, why I killed the tiger, and that I had no idea it had been spotted for the King of Nepal. I said, "If you want the King of Nepal to have a hunt, you contact me and I'll show you where two or three tigers live there that he can shoot. And frankly, when I went to shoot that one, a few hundred yards away, two others were coming to join him. They saw me and ran away." I said, "There are a lot of tigers out there. You get in touch with me and I'll show the king where he can find a tiger."

So he was satisfied and he appreciated me coming by to talk with him about it. That dissolved the case. The king never came.

Q: But there was a large tiger population in that area?

JONES: A big population. They were killing people's livestock and leopards were doing the same thing. Leopards were killing their goats and dogs. There was always a problem with the big cats and what they came to prey on in the villages.

Q: This was well before the concern about preserving wildlife?

JONES: Well before. In fact, when I first went there, peacocks were wild like turkeys, and could be shot in that Muslim state without any repercussions. It was very dangerous shooting them in Hindu villages, though. But since a lot of Muslims lived in that area, they had become wild. For our Thanksgiving dinner for several years in India, we had peacock . Very little had been said or done about preserving wildlife in those days.

The mixture of religious beliefs there meant that one had to sort of walk in between them, and to maneuver for one's safety.

Q: All the people spoke English?

JONES: All of the people at the center involved in administration and repair assistants spoke English. There was no problem with language, so far as I was concerned. My driver spoke Urdu and Hindi.

Q: And the students?

JONES: Students didn't speak English that well. Some of them did, but we had such a great leeway in selection there, that we had enough information on the forms to indicate whether or not they could get along in English or Hindi or whatever the case. But we had people on the faculty that could speak practically any of the major languages in India.

Q: Did you learn any of the languages?

JONES: I took some courses in Hindu, but not enough to carry on a conversation, but I could ask directions to places and speak to people and meet people, but nothing outstanding.

Q: Did you understand why you were there, apart from your technical role in training, why the US was sending somebody 10,000 miles away to work in this community?

JONES: I didn't think too much about US interests and US concerns. I thought I realized that US was highly concerned about India as a country, because of the massive assistance being given all over the country. Rockefeller Foundation was there, Ford Foundation was there and other U.S. organizations. I saw it as a major international effort, really, because other countries were there trying to get India moving in terms of its economy, in terms of its political objectives and whatever they had in mind to do, to develop the country.

But the situation I and my family were in was of such that missionary zeal was needed to deal with it. Even if I had paused a little bit, I hardly found time to think about much more than my job and what my family had to deal with living in Bhopal. So I never thought beyond job and family. But we were sensitive to and aware of the need to maintain a good U.S. image. We were proud of our actions in that regard. In Bhopal we were referred to as a new kind of "Rajah." All over India I could see things happening that I thought eventually would come together and India's agriculture and some of its rural development, would push on into bigger things, once these factors came into some kind of confluence.

Q: Such as?

JONES: Well, there was irrigation/hydroelectric dams being built, fertilizer factories being built, steel mills were going up, land grant college types were being established. All of these happening at the same time. Big extension programs by a Ford Foundation, and Rockefeller Foundation was doing research and development in agriculture. One could see all these things moving toward each other, and coming into some kind of confluence, and that's exactly what happened as the years went by. Agriculture production soared.

India was able to take advantage of the Green Revolution.

Q: Did you have any connection with any other agriculture programs we were sponsoring there at this time?

JONES: I visited several of the university's projects there, interacting mainly with the their agriculture engineers. I made a number of trips there to various locations exchanging ideas. In fact, several of the agriculture engineers with the universities came to the center at Budni, where I was assigned.

Q: Which University project?

JONES: Ohio, Illinois, Kansas, Tennessee.

Q: Working where?

JONES: Ohio was working in the Punjab. Illinois was working at a place up called Tarai in Uttar Pradesh state. Tennessee was in the Bangalore area and Kansas was in Andhra Pradesh. I visited all four of them several times. We discussed new equipment design ideas and things that they might include in the agriculture engineering curriculum. Because I had had that experience dealing with the basic kind of stuff that people were interested in. I went to Udaipur, where an agriculture engineer of Ohio lived. There were four of those university contracts in India. Missouri came in later.

Q: How did you find their programs?

JONES: They varied from place to place. I thought the place at Tarai near the foothills of the Himalayas were probably making the most progress. They had a huge state farm there

where things could be done other places. I think they faced different problems depending on their location and people's attitude towards being helped. But they all turned out to be wonderful institutions and all five were established. I think they made one of the greatest contributions that could be made in the area that I was working, farm mechanization, by producing agricultural engineers, and these specialists. When I went back to India last year, I was amazed at what the agricultural engineers had done and the organization they had for doing things to improve India's agriculture. India followed up by establishing 15 additional colleges, giving a total of 20.

Q: Like the one you were....?

JONES: No. I was assisting with an institute less than college level. But the one that I was connected with was used as a model to establish three other centers in different places in the country.

Q: These were sort of pre-university level vocational schools?

JONES: Yes. The one where I originally worked later changed from a center to an institute.

Q: What was its full title?

JONES: Central Farm Machinery Training and Testing Institute. This is its present title. The title changed over time. It went on first from Farm Machinery Utilization Center, to Training and Utilization Center. As the center grew with greater impact on agricultural production, titles changed.

Q: What was the situation at the institution that you saw recently?

JONES: When I went back in February, the only thing I could recognize are the hills and forest in the distance. Everything was completely new, completely redesigned and functioned very well in terms of competent testing and training. They had divided into two wings, a testing wing and a training wing. They had trained more than 23,000 students and had done tests on nearly 700 different kinds of machines, all in terms of standardization to make equipment more suitable for Indian agricultural conditions. Seven tube wells had been dug for irrigation and running water for the center.

Q: Was there anybody there that you knew?

JONES: Nobody was there that I knew. The first clerk who was there when I arrived lived in the village nearby the place. He had retired in the village. I told somebody later on if he had retired in the village at the time I was there they'd have called him a crackpot for retiring in such a place. The chief instructor that I found there 40 years ago was located in New Delhi. He was our host for the whole time we were there. We had a grand reunion.

His son, trained in the U.S. in aeronautical engineering and business administration, was doing finance consulting in New Delhi.

Q: He had moved up the line in terms of position?

JONES: No, what happened was that he had worked at the center for a number of years, then joined FAO and worked in Africa, retired from FAO, and was living in New Delhi. I called the officer-in-charge -- our first director, named Zachariah, in South India. I didn't contact Zachariah personally. I called him on the telephone and we chatted for about a half hour. Coincidentally, his little girl when he was director is now a medical doctor in Connecticut, and was visiting my family in Washington when I was talking to her daddy from New Delhi.

I've been in contact with these people since I left India, either through Christmas card greetings or a note once in awhile. So I've kept up with them.

Q: What were the agricultural conditions around the school when you were there?

JONES: Scattered around the area were very small subsistence village farms using hand tools and bullocks, growing mostly basic grain crops, pulses, and a few vegetables.

Q: But in any of the surrounding areas there was no farming going on?

JONES: Well, there were small village farms. But the people grew hardly enough to survive. But in terms of farming and farming country, across the river six or seven miles away, was the wheat research station. I spent a fair amount of time working with them to improve their bullock powered equipment. I helped design things they could use in their wheat research, particularly with land leveling equipment for more effective irrigation.

They were using all bullock power. I went over and met the director there and he and I hit it off well. I said, "You know, you're up against a pretty uneven situation here. That land that you're trying to irrigate, you can't get water to flow evenly over it. I could design a few simple wooden type implements that you could hitch behind bullocks and pull across that land and move some of the high spots into the low spots and you'd have a much better flow of water."

So I did that. We got them across the river in spite of having to put them on a flat bottom boat to be pushed over by poles. They found out that they worked very well to the extent that the government made a film of it.

When I was in Kenya, I was invited by the Minister of Agriculture to come and observe a film. To my surprise, it was the film of the work I had done at the wheat research station in India. That was the extent to which any kind of government farming was being done in that area.

Q: Was there any impact of this farming program of yours on the area? You cleared this land, but --

JONES: Well, a number of farms would borrow that equipment, not so much to irrigate their land, but when the monsoons came, it was better leveled they didn't have water pockets standing in different places in the field. But not a lot in terms of impact around that area at that time. But I understand now that that kind of thing led to people wanting to do things differently, better and more efficiently.

Another thing that occurred while I was there...USAID had spent \$12 million buying large size farm equipment for community development, but they didn't have anybody there who knew much about it. Consequently, it was prorated and issued to the different states, and went to the state headquarters and that's where it stayed. I found some of it in Bhopal, and I went to the chief of agriculture officer and I said that some of this equipment ought to be put to use. So he allowed me to take a couple of the big stationary threshers that we used in this country to thresh wheat early in this century. I took them to a number of villages and demonstrated the first mechanical threshing of wheat in that area.

I hooked up with a Canadian missionary and I took one of the stationary threshers to their place and demonstrated it. They liked it and asked to keep it. Villagers were delighted to see how their grain could be threshed without being trampled under the bullock's feet. For hundreds of years, the age-old practice was to trample it under a bullock's feet, grinding the straw to bits, and tossing it into the air to let the chaff fall away and the grain fall to the ground, after it had been well-flavored with bullock urine and manure. This went pretty well. Many of the villagers couldn't stand to see a grain of wheat being wasted. When you use the machines you don't get 100 percent efficiency, you lose a few grains. They'd scratch around on the ground looking for the few grains that would fall, careful not to waste anything. But the idea caught on and resulted in manufacturers building hundreds of small threshing machines. You go across rural India and most villages do threshing with machines. They range from huge self-propelled to small stationary types.

Q: Well, is there anything else on that assignment that you want to emphasize?

JONES: I connected up with extension people as well and often went to the extension meetings in towns not far from there. I would visit with them to get my points in about the extension program being more involved in trying to bring about the use of mechanical devices to increase agricultural productivity, and to increase labor and efficiency. I traveled over much of the state in that regard. The conditions found everywhere were very primitive.

But the British had done a pretty good job in setting up guest houses, so one had some kind of accommodation to depend on. I also took a couple of trips to Cuttack, below Calcutta on the east side where rice research was being done. I helped with equipment design and utilization there for planting and threshing rice.

Q: When did you leave?

New assignment working throughout India on community development - 1960

JONES: I left Bhopal in September 1960 and was transferred to New Delhi.

Q: What was your job there?

JONES: My job there. They weren't quite sure what to do with me. Finally, they gave me an assignment to see if I could move about over the country and get the ministers of agriculture and agriculture personnel to use more of the community development equipment that they had been spread over the country. That job I did for one year. In one year of bumping around, I drove cross country 25,000, trying to get that equipment into use. I went to every minister of agriculture in the country.

Q: Did you have counterpart with you on this?

JONES: I didn't have a counterpart. I worked with many of the governments that had either a mechanical type person or some kind of engineer in their state department, and I worked primarily with them trying to get them to understand the principles of operation and demonstrated how certain pieces of equipment could be used.

I don't know if that was an astounding success if you think of \$12 million worth of equipment. But during the first year, I got about a million dollars' worth in use.

Q: This was a time when community development was a big thing. What did you think about it?

JONES: Community development was a good thing, no question about it, in principle, but I don't think AID had the kind of approach, particularly in India, that was appropriate to the conditions. There was a tendency to want to do things in a big sort of way. You couldn't do things in a big sort of way in India at that time. You had to start small and grow incrementally.

Q: What do you mean by a big sort of way?

JONES: Well, for instance, this farm equipment. Whoever was in charge of community development in New Delhi at that time decided they needed bigger, more efficient farm equipment to get agriculture going in the communities, so they bought this equipment and it just sat there. There was no way Indians were going to translate a bullock drawn plow and a bullock-threshed wheat crop and to a big stationary thresher that broke up the wheat and threshed it. You can't make that kind of jump. In the first place, they couldn't afford it. You had to deal with things that were doable and affordable and build incrementally toward bigger things. You had to build attitudes as well as practices. That was a primitive

system, a very primitive system. But it had been there for thousands of years, people knew what they could get out of it. And what they could get out of it was dependable survival. They trusted it. To interfere with that in the way any new community development, there was resistance.

Q: Did you find the people weren't prepared to take risks?

JONES: That's right, because they had depended for years on this minimum input, minimum output, survival system. They just didn't do it. That was the biggest exposure I had to community development in my time with AID, but I could see that in India it's going to take time to get this thing moving in terms of developing any kind of community spirit and attitude.

Q: Did you get any feel for how the program, how people were involved with the program at all, how that process was supposed to work?

JONES: I didn't get that much appreciation for the community development people that AID had outside of the headquarters. I knew the community development people at the headquarters level. But I didn't have any contact in the field with the people working with the village people to see what was being done there to move the people. But the attitude I saw at headquarters was just buy something, send it out there and hope that it is put to good use. The contact I did have with the villagers told me it was not working.

Q: But traveling all over India, did you develop a view about agriculture, the situation and prospects?

JONES: Well, I could see the little things happening as well as the big things. I named a few of the big things that were happening. But I could see a few of the extension people working incrementally and this in the time would probably lead to larger kinds of efforts and larger outputs.

I'll give you another example. I went to work with the Ford Foundation. I went to one Indian community where CARE had been involved. CARE had decided to give 100 sets of improved farm implements to the village people. These were implements to be bullock powered. I did a survey on utilization of these implements by the local farmers. The local farmers took to them right away, and used them well. But when I did the survey, every piece that CARE had given them had been put away in storage. I asked why was that so. They said, "The implements were good and they do a good job, we like them, but they're worn out." They didn't have any replacement for plowshares or for the cultivator shovels to control weeds. CARE hadn't bothered to see that they had replacements. There were village blacksmiths. They showed me one. I said, "There's no reason why these village blacksmiths can't be equipped to make these replacements." I looked at his little devices for heating iron and shaping it, but his biggest problem was he didn't have any way of giving it a finished shape after the blacksmith stage. I said, "You've got a grindstone here and you've got a pulley on it. We can rig up this grindstone in such a way that it'll give

you enough grinding power to shape these things." I took an old bullock cart wheel and made a pulley out of it and put a leather belt down to the pulley on the new grinder. A young boy turning it was able to give the grinder sufficient revolutions to grind and shape metal.

But he says, "I don't have any metal." I said, "Well, I think you can find metal at that scrap metal place in town. He lived a couple miles from town. I said, "Why don't you go down and take a look?" He went and took a look and he came back to me and said, "They'd charge me money for it. I don't have any cash." He said, "What I do for the village farmers, they pay me in grain and a couple buckets full of beans. But I don't have any cash, I've never used cash."

I said, "Well, this is a problem." I got some extension workers in that area together and told them what this was all about. But, you see, at the same time, AID was accumulating local rupees from the PL 480 grain sales. And they would allow us in the field to have an account at a local bank and we could spend it on things of this sort. So I went to the controller in New Delhi and asked him to put a few thousand rupees in the local bank and I could authorize the blacksmith to procure a few pieces of scrap metal for replacements for the CARE implements, which were put back into use. That's the first time the village blacksmith ever handled any money. In a sense, I introduced capitalism for the first time into that village.

This is the kind of fundamental thing that often had to be done. Not to be critical, but many of the people who came with AID in those days came from urban backgrounds and they didn't have a clue what poor, devastated Indian villagers were up against, what they had to overcome. They had no appreciation for it. You didn't have people with the kind of practical approach that met the conditions that they were facing. It so happened that I grew up in rural Virginia and much of my work as an agriculturalist was with poor, black farmers in small places with little money, where resources were scarce and you had to be truly resourceful and do a lot of things for yourself and for each other in order to survive. With that kind of background I thought I fitted in reasonably well with the Indian situation.

Q: Was this a time when India had major famines and had to be helped by massive PL 480 assistance?

JONES: U.S. PL 480 provided five million tons of food grains, enough grain to feed and to keep 65 million people living for three or four years. Otherwise, they'd have faced starvation.

A result of some of the projects that AID was involved in and things I mentioned that India was doing with help on many fronts combined to provide chemical, biological, and mechanical technology, needed to convert agriculture food grain production from an import deficit situation into an export situation.

Q: So you would say that foreign assistance had had a major impact?

JONES: No question, foreign assistance had a major, major impact. Practically every one of these items that I told you that were being constructed or were being put in place, was being done with technical assistance, including Russian, U.S., Germany, UK, and many others. No question about the impact of foreign assistance. I don't know how long it would have taken India without assistance to produce enough food, feed and fiber to meet the needs of its people. Maybe 20 to 30 years longer.

Q: Maybe that's done well for the Indian side of things. Well, you left India and what year was that?

JONES: Maybe I should back up a little bit and tell you a little bit more about working with the British. Before leaving the training center, I assisted the government to get \$20,000 from the British to fund the testing component at the center. After I finished with this equipment inventory and getting some of it utilized, I was appointed liaison officer with the Ford Foundation. Ford Foundation had a number of major district projects.

Q: You left AID?

JONES: No, I was still on AID's staff, but was liaison between AID and Ford. I think it happened because the people at AID and Ford realized the approach that I had taken in central India could be duplicated effectively in the Ford Foundation district projects.

The big project that was closest to us in New Delhi was at a place called Aligarh, where the Muslim University was located in India. They had a big extension element in that district. I went there and looked at their workshop. It was in this area that I told you about the village blacksmith that I worked with.

Ford was trying to demonstrate some improved farming practices on crop production. So I decided that what was needed were some good demonstrations. They could observe improved, affordable practices that were better than some things that they were doing. One of the things that I had observed was that farmers were irrigating the plots of land, spreading water over it, letting the moisture evaporate until the land was pliable enough to plant their seed. I saw this as a waste of water, and waste of time, because I knew some places in the U.S. where they were planting rice, maybe in Arkansas, and other places, in dry land. There's no reason why Indian farmers couldn't plant rice or wheat in dry land and then flood the water on it and the crop would germinate and grow, saving time and moisture.

So I decided at the District Headquarters where there were plots, I would do this, beside two plots that were planted the traditional way. I invited a group of farmers and explained to them that this was what I had done. They looked at the crop plots which looked better than the plots done the traditional way, plus they had saved water and time doing it. A couple of the farmers came to me and said, "Do you think we should try this?"

I said, "You make your own judgment." This is exactly the way I did it, and the people at the extension office can verify that this is the way I did it. These are the people that come out to see you every day, and they would verify that this is how it was done and this is how it looks. You go home and try it.

Next time when planting time came around, one of them came back and said, "Jones-san, me want to show you my crop."

I said, "Well get in my jeep, we'll run over there. He was as proud as he could be that he had done it this way and his crop was looking good. He had saved water and time and the crop was off to an excellent start.

I guess what I was trying to say is you had to demonstrate things and things that you demonstrate must be affordable at that particular time until you can get things moving through the use of improved practices. That's another example of what I had done in India working with the Ford Foundation in addition to the blacksmith story.

Q: Was that replicated in other places?

JONES: Oh, yes, it was replicated. It was becoming a habit then. I was called up once to the Illinois University project, because they were planting sugar cane and the farmers were complaining that the cost of planting an acre of sugar cane was so much that it cut too deep into their profit. It took about 200 people to plant an acre in traditional fashion. I went up to look and they were hauling the sugar cane on bullock cart. They had people making furrows with the tractor.

I said, you know you can beat this method. You can save 12 or 15 rupees just on planting I showed how to space the rows so that two cartwheels go down the row and a third row in the middle. You can have funnels that run from the cart down to the furrows and just slip the cut sugar cane into the funnel, slide down into the furrow. Two people can do this sitting on the back of the cart. They calculated that saved about 15 rupees in the planting along.

So I asked some of the farmers what they thought about it and some of the local people what they thought about it. They said it's good. We'd like to do this, but it puts so many people out of work. You've got two people on a bullock cart -- a driver, and a tractor and driver, doing the same thing that about 200 people were doing. So they didn't take to that right away, but later on I understand they were using more mechanical devices for planting sugar cane.

Q: But that brings out a fundamental issue in technological change, doesn't it?

JONES: Right, it does. But interesting enough, just before we left India, I had done a few more useful things. Then came the industrial fair. The people at the Embassy who were concerned about the U.S. display at the fair were thinking showy, colorful. I got

concerned about it. I don't remember what they had in mind, but it certainly didn't suit anything I thought was right for India.

Here I would like to mention a family happening: our seventh daughter was born at the Family Hospital in New Delhi.

I went to them and said, "You know, what you're talking about makes no kind of sense for this rural oriented India." Most of the population depended on farming for their livelihood and their well-being. They said, "What do you suggest?" I said, "If you can come up with some kind of a device that can quickly turn a piece of metal into a plowshare, that would fit their plows, would be the greatest exhibit that you could put on. You'd have crowds of people looking at the display all the time."

They rethought the idea and came up with a big electric hammer, a huge thing. It must have weighed tons. It was set up as a demonstration. A person could take a piece of mild steel and move it in such a way that in a matter of minutes a plowshare was done. When they put that display on, there was never enough standing room.

Later on, a friend of mine whom I'd worked with that was making small farm implements at Allahabad near the college, came to me and said, "You know, I'd like to have that piece of equipment. Can you find out how much it costs?" I said, "I'll talk to people and they might even give it to you." But they didn't. They said, "We could let him have it for \$5,000."

I went back to him and said, "They'll let you have it for \$5,000."

He said, "I don't have that much money."

"How much do you have?" "I have the equivalent of what would be \$2,500 and I would have to hustle around to get the other \$2,500. But I talked to the Presbyterian missionaries and they're willing to give me a trip to the States so I can go the Presbyterian churches and raise the rest of that money."

He went to the States, and returned with the rest of the \$2,500, plunked down the \$5,000 and got the machine moved from the fair grounds to his workshop in Allahabad. He was banging out plowshares that would cover the whole countryside in a very short time.

Anyway, with all this under my belt, I was getting ready to leave India. We were accompanied by Doug Enismenger and his wife, who was the head of the Ford Foundation in India. I couldn't imagine why. I got ready to get out of the car at the airport and walk up to Customs and he said, "Why don't you come back and work for the Ford Foundation."

I said, "I'll think about it." I went home and thought, I've got too much time with AID (government) and I don't want to risk that, and not knowing what Ford's offer would lead

him to, I wrote back and told him I decided to stay with the government. He wrote me a letter back, said, "Needless to say, I'm sorry. All the best."

Q: Well, what was your next assignment?

Transfer to USAID/Nigeria in the northern region - 1963

JONES: My next assignment was Nigeria, northern Nigeria in 1963. I came back from home leave to Washington for orientation talks. I have a niece who lives in Columbia, Maryland. She called me and said, "I hear you're in town. Would you like to go with me to an affair tonight?"

I said, "What kind of an affair?" She said, "They're raising some money to give to somebody in Nigeria." So I said, "Yes, I'll go with you to see what's going on."

We went to the affair. They had a band and some dancing Africans. I told her, "I bet these guys come from New Orleans or Chicago and not from African countries. They found them from Chicago or New York. More interesting than anything else was the mistress of ceremonies, the former Mrs. Harry Belafonte. The show went on and on and on. Some money was collected for Nigeria.

The next day I went down to the AID Nigerian desk officer. The first thing he asked was, "Do you know any black people that would like to join the agency?" I said to him, "Give me some time to think about it and I can come up with a half-dozen good names, I think." He said, "But we don't have the time, we need instant black." I said, "I'm not sure what 'instant black' is. Whatever it is, I don't know any." So he shifted the subject and began to tell me about Nigeria.

A day or two later, I went on out to the airport. I flew to New York and took the "red-eye" express to Lagos, Nigeria. In Lagos, there was a shabby looking airport. I went up to a custom officer with my two bags. He wanted to know what I was doing in Nigeria. I told him why I'd come. He said, "I guess we need a lot of more people like you." I said, "Well, we try to do what we can."

He put his white crayon marks on my bags and waved me through. I looked back over my shoulder and said, "Two weeks from now there's a lady coming here with six girls and she's going to have 15 or 20 bags. You might want to get some extra help here with your customs. Don't give her a hard time. You let that lady go on through. She's going to join me in Samaru, in northern Nigeria."

He said, "I'll see that she gets taken care of." I went into Lagos, and found that place to be as near to a moisture laden heat furnace as any place I had ever been. In India at least it was dry. In Lagos, it was steamy. But it was kind of refreshing to see the street vendors with so much energy, so much enthusiasm, and personality. Some selling one item, others selling two or three items -- a shoestring, a comb, toothbrush, whatever. Finally I went to

the hotel, stayed overnight and went to AID the next day and got a vehicle issued. I decided to drive north, which was 300 or 400 miles, to Samaru in northern Nigeria.

Q: Did you spend any time with the mission at all?

JONES: Very little. They gave me very little mission orientation.

Q: Did you see the head of the agriculture, J. B. Davis.

JONES: I don't remember who it was, whether J.B. Davis was there at that time or not. It wasn't much more than an introduction, a word about what I would be doing in northern Nigeria. I had been told earlier what that might be anyway. I went on. Somebody told me at the office that a friend of mine from India was in Nigeria. He's in Ibadan. You pass right through Ibadan on your way north. I said, "Okay, I'll see if I can trace him down."

I went on this little narrow kind of black top road up to Ibadan and asked a few questions around and found the house where Ted Elder lived. Ted had been a grain storage adviser in India for building grain silos. J.B. Davis was in India then, at that time, because when Ted walked in his office in India, he saw that Ted was only a high school graduate. He told Ted, "You don't have an engineering degree, you can't do this job." Ted said, "If I can't do it, there's an awful lot of damn fools in South America, because I built an awful lot of them down there." I found Ted's house. His wife is the best guardian angel I think I've ever seen, she looked after Ted 100 percent. Ted was stone deaf. Through her, we got to exchange a few ideas about the differences of working in Nigeria and India. I said, "I've got a long trip ahead, so I better move on. Can you get Ted to drive me out to the highway to Kaduna?"

Cecil got the word over to Ted. I drove behind Ted. He went busting through like he was on a race track. I had a tough time keeping up with him. The street vendors fell back with their packages, hens and roosters scampered off the streets unscathed. Ted finally arrived at the airport, jumped out of the vehicle and came up to my vehicle window, pointed at the road and said, "There she is. Straight as an arrow, rough as a woodcock's ass," another one of Ted's earthy sayings. He had many.

I stayed on that road and arrived at Kaduna just before AID closed down. Some introductions of the regional staff were made and I headed out for Samaru, my posting about 50 miles away.

Q: They had an office there?

JONES: This was the regional office for AID at the time. The embassy had a consul there. So the U.S. set-up there was for the northern region. At Samaru, there was a certificate-level school called Samaru Agricultural School. The roads were awfully bumpy with red flying dust. I stopped at the Kaduna market to purchase a few food items. There were department stores run by the British and Lebanese, and were stocked well with a variety

of items. At Samaru, there was a five-person team, three men and two women, working at a certificate-level agriculture school. The team leader was Gene Swanson from Michigan. I drove around until I found where Gene lived. It was late in the afternoon when I got in touch with Gene. Gene had already made arrangements for a place for us to live. It was one of the British-built houses that had been tropicalized. It was a good-looking place, with three bedrooms and lots of fruit trees grew around. I chatted with Gene for awhile, then had dinner at the club. The British had a club and a nine-hole golf course about 200 yards from our house. It was then to bed. The house was in order for family living. AID's general services from Kaduna had done an excellent job getting it in order.

The next morning I went down to see the school, Jim Craig, Jim had had his training in Kansas and was married to an African-American girl named Lucille. Craig and I talked about the school program, the schedule and all. I met the other four members of the team, two home economists and two extension workers, working with the certificate-level, school two years beyond high school, trying to strengthen it where needed with the hopes of making a more reputable institution.

Jim said, "We come to work at 7, work until 9, then take an hour off for breakfast. We come back at 10 and we work 'til 1 p.m.," I thought the work schedule was such that I didn't see how much could happen.

He told me what I was expected to do, to be chief of the team, as well as try to set up a farm mechanics workshop, to teach farm mechanics to both men and women. Gene Swanson, who was head of the team at the Mission, had started working on the workshop but hadn't set up the program because the physical aspect hadn't been completed. I had to assist with finishing the physical plant and set up the curriculum. That took several months.

After two weeks, I flew down to Lagos and went to the little airport facility. When I arrived, there was a lady standing in front of the Customs officer with six girls and 21 bags. I reminded the officer, "You know I was here two weeks ago." He said, "Yes, I think I remember." "And I told you about this lady that was coming with all these bags." He said, "Yes. You told me how I should treat them. I remember." He went down the line and marked on all the bags and said, "Go on."

The mission car took us to where we spent the night. The next day, we flew up to Kaduna. An AID car met us at the airport and transported us to Samaru, where we settled in our house. AID's general services had furnished it to a comfortable level. The cook stove was electric, backed up by a wood stove. The electricity was not very dependable.

JONES: The family settled and I went on to work. We had a good program going. The home economics ladies were doing just what I thought they should be, dovetailing their kind of training into the home situations in the area and the region in general, which was pretty simple -- cooking, sewing, and trying to devise household items that could be useful in the homes. I went ahead with the farm mechanics program. The team met once

in awhile to determine how everything was going. I got the farm mechanics set up, with good tools -- AID had brought the tools and equipment. We finished the physical plant, set up and the training began. I told the principal both boys and girls could be trained in farm mechanics.

Q: The principal was a Nigerian?

JONES: Yes, Nigerian. Jim Craig, as I mentioned earlier, who had married the girl from Kansas. Jim was still there. I decided to set up a course in household physics and mechanics for women, and young men. How to use tools, how to keep tools in shape and different kinds of mechanical skills that were needed for woodworking, metal work, rope and leather work, and fabricating useful articles for the local farms. The training went very well. I found that the girls had a tremendous amount of enthusiasm. They caught on very quickly how to make useful things while understanding mechanical principles. I decided first to work with the six basic principles in mechanics -- levers, pulleys, wheel and axle, inclined plane, screw, and wedge.

They began to understand what this meant in terms of how these simple machines came together in a bigger, more compound machine and how each functioned. We put on a competition of building things. They built chicken coops, wheelbarrows, stools and tables, and other things that could be used in their home and farms. Late in the year, an agricultural fair was held in Zaria, the provincial headquarters. Many of the things that were built were put on exhibit and display for prizes, like at a county fair. To my surprise, the women got more blue ribbons than the men.

In the meantime, a Kansas State team came on the scene. They enlarged the American community because they had five or six project people with families. They had come to start a agriculture college, a land grant model, at the University of Ahmadou Bello in the north. Our team did what we could to orient them.

All used correspondence to train their children at home. Loretta had done this for years. Most of them came to Loretta and wanted to know how best to organize the home training and so forth. They got on well and moved into their jobs at the university, which was just a half-mile down the road from the Samaru school. Things went well, and good progress was being realized. Training started with the School of Agriculture and a veterinary faculty. Team members were being rotated every two to three years back to Kansas.

Q: How did you find the Nigerian students?

JONES: Nigerian students were enthusiastic and eager to learn.

Q: They were all Northerners, I guess?

JONES: No, not all northerners. They came from all over the country at that time. The Ibos were doing especially well, because many of them had been to missionary schools earlier. Several African countries sent students to the school.

Q: Where did the graduates of the school go? What were they being trained for?

JONES: They were being trained for agriculture projects that the government was promoting in the region. The permanent secretary was the head of the agriculture office for the region, and his whole program was designed to develop agricultural projects all across the region. The biggest export in northern Nigeria was peanuts. Nigeria almost had reached the point of producing a million tons of peanuts. They were the biggest export from the region. The young men were being trained as extension agents and specialists to work with agricultural development projects across the region.

Q: What was the agricultural situation generally in the north?

JONES: Generally, good in the north. In fact, the north was self-sufficient foodwise. They had this great export crop of peanuts that earned foreign exchange which contributed substantially to the economics of the region.

Q: What were some of the principal agricultural problems that you had to address or work with?

JONES: Well, they had an extremely primitive agriculture. The only thing that farmers had to work with was a machete and a hand hoe. Land cultivation and weed control were done by hand. All the operations from seeding to harvest were hand farming. The machete was the major tool in the country. They had an indigenous hoe that required back breaking labor to till the land. Digging the ground with that hoe was the ultimate in being labor intensive. The other problem was slash and burn. That was a major problem that we thought needed addressing, getting farmers to use as much of the waste material as mulch on the land as they could rather than just cut and burn it. Using it as an organic material to help fertilize the land was badly needed. But it wasn't easy to get them to convert to this practice, but we kept plugging away at it. AID had 48 people scattered across the region doing some of the best work that was going on in Nigeria, in addition to the Kansas faculty project, U.S. extension workers. There were very commendable programs in action.

We had an extension specialist named Tom Reynolds, who had done some extension work in other countries. He worked in a small farming area up country not far from the school. It was just amazing how the farmers were taking to his teachings of improved methods in crop production.

Q: What were they growing in that area?

JONES: They were growing peanuts, sorghum, and millet. These were the main crops in the region. A little rice in places and a few vegetables were being grown. AID provided a horticulturist for promoting vegetable production.

Q: Do you remember any of the technology that was being introduced by the extension people?

JONES: Well, mostly it was what they called "improved practices." Not a lot in the way of mechanics yet, but in the way of fertilizers, organic materials, spacings, timely plantings, weed control, insect control and things of that sort. These were the thing available and affordable at the time. This program was going very well. We had several people scattered over the northern region. In addition to farm mechanics at the school, AID provided three agricultural engineers setting up mechanical shops in different areas of the northern region. These were coming along at the same time.

Q: You were working with them?

JONES: I was working with them.

Q: What were some of the innovations you were trying to make?

JONES: Well, one of the first innovations that we started with was, a few people who were trying to grow vegetables along the streams, from pockets of monsoon water. The rainy season was during the summers and things dried up the rest of the year. But along the stream beds there were pockets that held the water, pools left from the rainy season. And many of them were trying to lift up this water up onto level land where it would flow down to the vegetables being grown. They were using the shaduf. Maybe you heard of the shaduf, from the Middle East, where they have a bucket on a pole and weight on the end and the pole to dip the water and throw it on the land. We designed a hand pump that could be set up over a pool of water and pump it upon the land by jogging the pump up and down in the water with a handle. It would lift water up to a ditch, allowing it to flow to the flat land onto the vegetables.

I set up a demonstration along the road where people traveled to the market and hundreds of people would stop by, children and grownups, who wanted to try to pump and see if they could make it lift water. The biggest kick came from the youngsters, when they found out they could use this pump and lift as much water as two adults with the shaduf. They figured they were as adult as the men when they used that pump. I went back to that spot after two months. I asked the owner, "How do you like it? What do you like best about it?"

He said, "What I like best about it, I got water put on my vegetables and didn't have to work." Passing people pumped and he sat there watching, as his vegetables were being watered.

Q: Did that spread, the use of those pumps?

JONES: I don't know how much that spread. You'd be surprised at that stage in Nigeria what a little cost of maintenance of something meant to people. There was a great tendency to hold onto the traditional type shaduf. It wasn't all that efficient, but the maintenance was practically nothing. I had left this idea with a number of mechanical students at the school of agriculture. They knew how to make the pump. They knew how to install it and how to operate it. But I don't know how fast that spread. That was toward the end of my time at the school. So I really don't know how it caught on or how it spread.

Q: Did you have a counterpart at the school, somebody you were trying to train to carry on the work?

JONES: This was a big problem in Nigeria. There were practically no college graduates in that part of the country. Most of the people in the north were Muslims and they didn't have a very good educational background. The most they had was certificate-level schools, and they hadn't been established very long, as there were not many graduates. That's just two years beyond high school. In the education system, that is a blue-collar type education. These people that went to that school could go out to the field and were assigned by the minister of agriculture to some project. Depending on their performance out there, they were allowed to come back and take an extra year. So the most schooling that any of them had was three years beyond high school, and most of them were two-year certificate holders working in agriculture.

So from the standpoint of counterparts, it wasn't very easy to get somebody that could fill the counterpart position.

Q: How would you compare that with the situation in India?

JONES: Oh, the Indian situation was way ahead, in terms of people to work with, as counterparts.

Q: They had many more advanced, educated people?

JONES: Oh, much more advanced. There had been a lot of missionaries working there, like this Presbyterian school I told you about in Allahabad. College graduates were many. The missionaries from the States had introduced a much more practical approach to agriculture training.

Q: That's of course why Kansas State was there, to help establish a college.

JONES: That's right.

Q: So it was sort of a generation behind.

JONES: Maybe two generations behind.

Q: Did you see the results of the work of the students that you taught and how they were able to perform?

JONES: Well, you see, civil war came to Nigeria, and that interrupted everything. We lost track of many of the things happening that we had been involved in. I learned later that the Kansas people spent nearly 16 years in Nigeria.

I'll tell you another little story that occurred while I was there that brought about some change. The principal of the school was an Ibo, who lived in the north. He was very articulate, studious and very aggressive. But he had a run in with our home economics teachers and he didn't like their program. They fell out with each other and a heated feud ensued. I intervened a few times. The principal promised to do better, but then he'd go back to the same old position.

In the meantime, I was told, the permanent secretary in Kaduna had little regard for expatriates, and less than that for Black American expatriates. He came to inspect the school one time and I saw him going around with the principal. The principal was giving him an impression of things being a lot better than I thought he should have. But he carried on anyway. So I thought something had to be done about our home economists and the principal feud. I went to a young British fellow who was helping with the planning in the ministry of agriculture, Don Pickering. I said, "Don, do you think you could set up an appointment for me with Mallam Lawan, the permanent secretary?"

He said, "Mallam Lawan chews up expatriates every time that he gets a chance." I said, "I'd be willing to be chewed up if you'll get me an appointment." He made an appointment with Lawan and I went to see him.

Lawan was sitting back in his chair with his big Nigerian robe spread out around him. I said, "Mallam, I want to talk to you."

"What you got to talk about?"

"You were at the school the other day. I saw you go around looking at and inspecting things. I think you left with an impression that was better than you should have left with."

"What do you mean?"

"There are some things going on there that I think you need to intervene in and talk with the principal about."

"What are you talking about?"

I said, "Well, he's having a confrontation with the home economics teachers and in my opinion, the home economics program is very much in line with what I see in Nigeria in terms of home economics at this time. It relates well to homes and what people are doing

in their home in that areas. I also have a couple of recommendations that I'd like to make."

He said, "But things are going well up there." I said, "Do you wish to take the impression that you got from a one-day inspection? Or would you rather listen to someone who is there every day, seeing everything that is going on and is interested in that school being a good school as much as you are?" I said, "If you want my opinion, I'll give it to you. If you don't, I'm sorry I've taken your time."

So he said "Go ahead and start talking." I told him about the home economics situation and he promised to do something about it. I said, "You mind if I make a couple of other suggestions? You are running a school there at certificate level, two years, and you've got some very smart people going to that school, some very bright young men. Those young men don't have an opportunity to go on further to explore their academic potential, which you need in this northern region to run your projects. Unless you get some people with higher training to do certain things, research extension and design, you're not going to have much luck with agricultural development."

"What do you suggest?"

I said, "You let the principal, and if he needs it, a committee of some sort, to select 15 or 20 percent of the top graduates from that school and let them go on to the university just down the road. That would allow them to get enough academic background to go over to the States or other countries overseas and then come back and work in your programs." I said, "The second thing I want to talk about is Kansas State and the agriculture faculty at the university. I don't believe they are including any courses in extension. The biggest thing that you have going in this northern region is the extension program. You need extension workers. Putting it at the common level, you need college-trained extensionists. That's all I've got to say."

He thanked me, got out of his chair, pulled open the door, shook my hand, and said thank you again. Don Pickering, who was the British planner with him, and I walked down the hall. I said, "Don, how did I do?" He said, "I thought he was going to chew you to pieces when you first went in there. But when you got to talking to him, I felt like jumping up and saying, Hallelujah, somebody's told him!" I said, "Is he going to do those things that I suggested?"

"He'll do them, don't worry about it, he'll do them." I said, "What about the extension courses by Kansas?" "He'll take care of that, too."

So it wasn't long before word was circulating around at the school that the best graduates could go on to university.

I saw the chief of the Kansas team a little later, and I said, "Are you guys putting in any extension courses here?" He said, "We think that'll come later." I said, "It should be up-

front. The biggest thing in this whole northern region is agriculture extension.” He said, “You know Mallam Lawan was up here the other day.” I said, “He was? I had just been to see him at Kaduna. He thought well of our program here. Did he say anything about adding courses here?”

He said, “Come to think of it, yes. When he was getting into his Mercedes and I asked him was there anything else we could do that he would like, he looked back over his shoulder and said add some extension courses.”

Q: I'm surprised that they would put that off.

JONES: I would think the same thing, but they hadn't gotten around to it. The reason I knew that the Samaru school people went on -- this is jumping the story a little bit -- to universities, when I came back from Africa I went out to Utah on a trip for AID and had lunch in the cafeteria on the university of Utah campus. A young man walked up to me and said, “You're Mr. Jones.” I said, “That's right.” “You taught me agriculture at the Samaru school in Nigeria.” I said, “I did. What's your name?” He told me his name. I said, “What are you doing here?” He said, “I'm finishing up my Ph.D. in agricultural engineering.” I shook his hand and we sat down and talked. I said, “That's amazing.” I never told him how he had come to be allowed to go to the university.

Then one month later, believe it or not, in Greensboro, North Carolina, under the same circumstance, another Nigerian youngster walked up to me and said, “You're Mr. Jones. You taught me at Samaru school of agriculture.” And he told me his name, he was from Ibo land. I said, “I think I remember you.” He said, “I married one of these girls that you taught, also.” “Where's she?” “She's downstairs.” “What are you doing here?” “I just finished my Ph.D. in economics at Ohio and she just got her master's degree and we're going back to Nigeria to work.”

I don't know whatever happened to them, but just to show you that what I had done with the permanent secretary had borne fruit.

Q: Planted a seed, and it blossomed.

JONES: He made no announcements about changing the certificate level training or any policy, he just went on and did it, because I suggested that he do it.

Q: You may have some more about the Samaru experience, but one of the comments from people looking back at AID's work in places like Nigeria, was that the technical assistance that was provided didn't last. It was not sustained. What kind of impression did you have? How would you answer a question like that?

JONES: The best answer I can give to it is, I think, is the intervention of the civil war, which was a terrible thing, interrupted the whole country. The other thing is that the progressive people had been uprooted. The Ibos, probably one of Africa's most

progressive groups, who had been posted all over the country, were killed, mutilated and were forced to be confined to their small tribal area. They had been missionary trained. They were administrators, managers, and technical people, and administered in all the regions of the country. That was their downfall. Loretta, my wife, used to say, the missionaries taught them, but they never taught them to be humble. They were cocky about themselves and they didn't feel that the Northerners were educated enough to mind their own business. The British had sent them all over the country to administer many things and the intervention of civil war was followed by military administrations from time which were never firmly linked with technical assistance. Technical assistance didn't get a chance to be established in a way to move another and grow in a way to incrementally improve the overall economy of Nigeria. This is my guess as to why many technical efforts did not seem effective.

Q: What happened to the Samaru school?

JONES: The Samaru school was still going on, but I don't know how it came out in terms of graduates, I don't know how it came out in terms of progress. I didn't go back to the Samaru school, although in 1983 when I was working with the Rockefeller Foundation I passed by that school at about daybreak one morning on a road trip coming from Sokoto. But I didn't get a chance to stop by and see what was going on. I had gone to Sokoto in connection with a Rockefeller Foundation project.

Q: Let's talk a little bit about the sustainability of the technical assistance in that northern area. You gave an interesting example how a little seed can grow and result in change, but the question is whether counterparts were trained. What did you think about the counterpart concept?

JONES: The counterpart concept I think is a good one. Many times it depends on the relationship that one develops with the counterpart and how his notions dovetail with project objectives and fit in with local and national development efforts. The counterpart concept, to be effective, has to have a goodness of fit of many factors, none more important than technical and counterpart relationship. Full support of responsible recipient country officials is a must.

Q: How did you find the Nigeria agricultural potential efforts to capture this potential?

JONES: Well, the potential was there. FAO had worked a bit in northern Nigeria. They were particularly interested in crops for export, round nuts or peanuts had become the big export crop objective for the region. They had set a timetable of producing a million tons. Northern Nigeria was about a year and a half ahead of schedule on reaching that million-ton target. Most of the north was self-sufficient in agriculture produce in terms of consumer, the area market. This was the situation when I arrived in northern Nigeria and probably would have continued that way with that level of growth had it not been for the civil war. It's difficult to say what happened to the potential due to the civil war and the series of military regimes that followed.

Then the other thing that interrupted development was the big oil money. I went back to Nigeria in 1983, I think it was, I couldn't believe the changes, but it was mostly infrastructure. Boats in the harbor loaded with all kinds of imports which couldn't even be unloaded. Decay, rot and rust claimed many items. Cement hardened in place on the dock. In a sense, the oil money interrupted many development projects. So much money was being allocated to states, they were able to spend it well, much of it wasted.

Q: What did it do to the agriculture sector? What was the effect of the oil bonanza on agriculture?

JONES: I couldn't notice much during the trip. I was told agriculture production had declined. During our time, cooking oils were in abundant supply due to certain amounts being processed from peanuts and the remainder being exported. During the early '80s, Nigeria was importing oils. A young Nigerian gave me a ride from Sokoto to Kaduna. Most of the trip was before daylight hours, so I was unable to see much of the countryside. By coincidence, the young man was on the staff of the deputy permanent secretary for agriculture, a very good friend of mine. He was then head of the grain board. When I walked into his office and embraced, he told his assistant, "Give this man a car and driver as long as he is here." He was on his way to the airport starting his trip to Mexico. We didn't have a chance to talk.

I told him what I was doing there. He said, "I'm sorry I can't spend some time with you. I'm on my way to Mexico. I'm in this grain business, and I must make sure enough grain is here for our people to eat and have a little surplus. Then he said to the assistant, "This is one of my best friends. He used to be here with us working in agriculture."

The point I'm getting at in terms of grain productions, Nigeria had realized that its agriculture potential was sliding down from what it ought to be and they were moving about from place to place to procure enough grain. Judging from that, I don't think agriculture went too well once the military regimes started taking over, but I don't have any statistics or facts on what has happened since then.

Q: The northern region, at the time you were there, was self-sufficient in food?

JONES: They were very close to self-sufficient and were exporting almost a million tons of ground nuts. I did hear when I was there that Nigeria was taking 200,000 plus tons of ground nuts and pressing them to get oil for domestic use, which was adequate, to market. I did hear when I was there that they were now importing cooking oil.

Q: You found agriculture in the north still quite basic and quite primitive in terms of the small farmers?

JONES: Yes, they were basic farmers. There was very little industry in northern Nigeria. The people were hard workers, mostly Muslims, and most of them weren't shirkers when

it came to getting out and getting things done. The women were just amazing in terms of production, marketing, and street vending.

Q: You didn't see any major transformation take place?

JONES: I didn't see any major transformation.

Q: Not like you saw in India, when you said you saw all these different forces coming together?

JONES: In Africa, you've got so many primitive situations and so many things to overcome, they haven't even come to the stage that larger components are in place which could come together for a major impact. Africa was basically a primitive hoe, machete, hand agriculture, with the exception of certain plantation farming exports such as coffee, sugar cane, and pineapples..

Q: What are those things that you're talking about?

JONES: Irrigation dams, machinery, steel mills, a well-trained corps of farm artisans, input distribution systems, food processing and storage facilities are lacking in Africa.

Q: I mean those conditions in Africa.

JONES: Oh, the hoe farming. Basically, hand hoe farming with slash and burn. Africa had not yet reached the animal-power stage. They still depended on hand tools and human power. India had 52 million pairs of bullocks for farming and transportation.

Q: Compared to the bullock.

JONES: India had developed a cadre of people that could fabricate things, repair and maintain. They had blacksmiths, they had different mechanical type operations in terms of using metal and wood to make things. They had people who were excellent at it. I was amazed at how well some of them could do things with their hands.

You couldn't find a blacksmith in Africa. The metal work that was done in Africa was largely for arrows and spears. You didn't have anything in terms of farm equipment and hand tool improvements. They imported the machete. They imported the hoes that they cultivated the land with. These were all part of the British system, I guess, but in terms of coming to a level where you could put things together to start a take off, just didn't exist. You can't be much more primitive and produce effectively than agriculture in Africa.

Of course, in some of the countries nowadays they've come to using machines like in Kenya where the British farmed, and left some infrastructure for larger scale farming. But not much in this regard had happened in Nigeria.

Q: What you were trying to do through the Samaru training program?

JONES: We were trying to train people and tried to get them to work with farmers and to get farmers to adopt what we call “ improved methods” from time to time and gradually build up a larger, skilled group of people that would be willing to do things a little bit better and more efficiently. We thought the training program was necessary to get this done. It just was impossible to get out and deal with farmers on an individual or group basis, due to language problems and other things. But if you trained the Nigerians who speak the language, in extension and improved methods of farming, gradually they could work in the villages help move agriculture along in terms of production efficiency, storage and processing.

Q: Any also on your Nigerian experience?

JONES: I left Samaru school of agriculture in 1966 and became the agriculture officer for the region. I had the supervisory responsibility of the whole region, which consisted of about 48 specialists in different categories of expertise, scattered all over.

Q: What were the different types of activities they were engaged in?

JONES: The activities were still fairly basic and what we thought would be the kind of thing that would be needed to come together that would lead to larger efforts and larger development activities that would move agriculture along. Much of this was agriculture extension. We had farm mechanics. There were technicians in cooperatives. There were people in veterinary and animal husbandry, poultry and soil conservation. Animal population in the north was sizeable and important.

Q: Soil conservation?

JONES: Yes, soil conservation was there. AID had a PASA arrangement with the Bureau of Land Management. They ran a training school and worked with provincial soil conservation programs.

Q: Who was the administrator.

JONES: The administrator for AID was former president of Michigan State John Hannah. His brother, Arthur, was the poultry specialist in Kaduna. Poultry production, was coming along very nicely. That was due to several things: AID had furnished some hatcheries that went with the certificate level school of veterinary medicine and animal disease and production. That was on the same level as the school at Samaru but they had one or two others that dealt with the animal side of production. At the same time the poultry production got started. Pfizer Pharmaceuticals came in and set up a feed mill in Kaduna where they produced commercial poultry feed. This gave a real boost to broiler and egg production.

It was taking off pretty well, until the civil war came along. I don't know whatever happened to the Pfizer business there. But these were things that were in the makings. And then the U.S. Bureau of Land Management had a school that they set up in the northern region dealing with soil conservation. They had a number of specialists there. We had three agriculture engineering shops in different locations, all in the northern region, and we had a poultry specialist at Joll working with the extension side of poultry, emphasizing egg production and fryers markets. Those were basically the programs. And we had some range management going on in the livestock sector. This is basically the summary of our agriculture program for northern Nigeria.

Q: And you said earlier that you didn't think much of this caught hold because of the civil war?

JONES: I think the civil war had a lot to do with how well it caught on. When I visited Nigeria afterwards, the World Bank had picked up and had projects in areas we had worked and apparently what we had done helped give them a very good start.

Q: Were you there during the civil war?

JONES: Oh, I was there when the war broke out, and remained 18 months after it started.

Q: What happened that it caused such a disruption in the north?

JONES: First place, there was a military coup. The Prime Minister, Balewa, in Lagos, and two of the premiers of regions were killed. One of those premiers was of the northern region, which upset things politically, and economically. Then the northerners went on a big killing spree. They killed Ibos by the thousands. I have gone into towns in the morning on some of my supervisory trips, and I have found Ibo communities totally burned out, their businesses, their homes, and 4-500 dead people laying on the street. And being collected on trailers and stacked like wood and dumped into large graves that were being bulldozed and covered.

The administration, general management of government and business were being done mostly by Ibos, who were blamed for the military coup and killings. Many of the businesses and services in the north were run by Ibos. There was no mercy. Anybody who was Ibo had to go. So that kind of interruption brought the economy to a standstill, certainly in the northern region, and I would assume it would be the same thing, or nearly the same thing, in the other regions. Coup and counter coup led to the war. Although none of the fighting was done in the north, they were left more intact than anybody else to build military machine for carrying on the war to get revenge against the Ibos. The north eventually won and took over the country.

Q: Did you anticipate this hostility before it broke out?

JONES: No. What happened is, we were on home leave when the coup took place. I was riding into Nashville from a little town called Franklin one evening and as we listened to the radio, the news reported a coup in Nigeria. But details were skimpy and they didn't know what had happened. Then later on they reported on BBC that a military coup had resulted in the assassination of top officials. And then things calmed down. But one other person tried to reorganize, and to get things back in some kind of stable condition. I think he was in the western region, but the Northerners didn't like what he was trying to do. They thought that he was trying to intervene to look after the Ibos interest. They had seen the Ibos as the persons who had carried out the coup. He too was assassinated later on. Then one thing led to another and finally they were just having pockets of disturbances where the Northerners were killing off the Ibos. Then all of a sudden they had gotten themselves together and put on a big regionwide kill, all happening at the same time. It was a coordinated killing drive. But we hadn't sensed any of this before we went on home leave. Because at the school, for instance, where we were working, there was a mixture of ethnic groups, students and the faculty, and things seemed quite peaceful. We had no feeling that such a conflict was in the making.

Q: What happened to the school?

JONES: The school stayed on. The school was there and was still training people for government service and pre-college students.

Q: Was it the same group of people?

JONES: They killed a few people at the school. There was a research station near there that the British were running, mostly with British staff. Wherever the Northerners saw an Ibo, they would kill him. I remember one time we were standing watching this happen, and the chief of party from Kansas State could hardly stand and take it. He just felt like intervening in some kind of way. He was told in no uncertain terms, "If you stay out of this thing and don't intervene, you won't be hurt, you won't be touched." They spread that word among all foreigners, among all expatriates. "You got to stay out of it, this is our business, if you intervene in any way you'll end up under the machete like the Ibos." This is the way it was happening. So we didn't feel anything that would give us cause to be concerned for our personal safety.

Q: But then the regions were found to be deteriorated?

JONES: Yes. Then when the money came along, the government tried to redo things through imports and building infrastructure. They built roads, public buildings, schools, and repaired and expanded all existing roads.

Q: While you were there?

JONES: No, not while I was there. But that's what I saw when I went back. You can't believe the spread of residential areas. I would drive into some towns and as far as I could

see were good-looking houses in all stages of completion, with tin and asphalt roofs and fine-looking lots and gardens. I asked someone, "Who's spending all of this money building these places?" He said, "These are the market women, the women that do the marketing. They handle the money in this country. And just about every house you see in any place belongs to a market or businesswoman."

But in terms of agriculture production and indigenous industries and things of that sort, it seemed to have been mostly abandoned. Because you could get just about anything they wanted imported from Europe, the US and other countries of the world. The markets were filled with a great variety of imports.

Q: Well, is there anything else there on your work there in the north?

JONES: That pretty much sums up my work in the north. At one point the civil war and the killing seemed so severe that I decided to send my family to Spain to live for a year. They left me in Nigeria and they spent a year in Spain. I went to visit them a couple times. I stayed on and battled with the civil war situation in Nigeria until it was time to leave.

Q: When did you leave?

JONES: I left in 1968. Went to Spain and picked up my family and then was assigned to Kenya. There was home leave in between with the whole family.

Q: Well, let's go on to your next assignment. After you left Nigeria you went in 1968 to Kenya? What was your position there?

JONES: I went there as deputy food and agriculture officer. That was my assignment there. After about a year I was given an assignment as agriculture officer for the AID program for the whole country.

Q: How did you find the agricultural situation in Kenya?

JONES: Well, agricultural situation in Kenya was much better than Nigeria. Number one, you had a good farming situation in the highlands of Kenya that had been conducted for years by the British. And there was a modestly good agricultural base from which to start, because they had seen and done mechanical farming as done by the Europeans. Crop production there was in those highland areas. But the basic Kenyan farmer, small acre hand-hoe machete farmer, wasn't much better off than in Nigeria. But the British had established a number of, I guess you could call them plantation, or large-scale operations, that took lots of farm labor for production. For instance, tea was a big crop there. Coffee was a big crop. In the highlands, major wheat and corn crops were grown. But overall there was a grain deficit situation in Kenya, because their main grain diet is corn. In Nigeria, they'd eat sorghum and other grains, but you couldn't get any native Kenyan, to eat anything but corn. And it had to be white corn. Because one of the things that was still

simmering when I got to Kenya was a batch of yellow corn sent from the US. This was truly a political faux pas. The locals would not touch yellow corn or maize.

But the British had established some good agricultural schools, although some of them were primarily meant for their own dependents. They were there after independence came to Kenya, both at certificate, diploma, and degree level. This meant a better working situation in terms of counterparts and people qualified to be sent to the States in participant training programs. They had the academic background required for higher training in countries overseas.

Q: What was the direction of the agriculture program for AID that you were working on?

JONES: The big direction of the program was institution building, food grain production and some livestock.

Q: Let's talk about the institution building first.

JONES: Institution building was mostly with a diploma level agriculture college and a degree college, linked with a veterinary faculty.

Q: This was Edgerton college?

JONES: Edgerton college was a diploma level school. But at the University of Nairobi veterinary and agriculture degree training was available. West Virginia University was on a contract with Edgerton College, and Colorado was at the veterinary faculty.

Q: What were we trying to do with those institutions?

JONES: The West Virginia group was trying to build stronger curriculum, better equipped lavatories and facilities, better libraries and just do generally a better job of training in the kind of things they thought were required in Kenyan agriculture, which was extension, agricultural engineering, livestock, and cooperatives. At the veterinary faculty, Colorado was trying to build up a quality veterinary faculty by using expatriates from Colorado and sending college graduates for further participant training at their university and bringing them back to gradually build up the Kenyan faculty.

Q: Did you get any sense of the impact of these institutions on agricultural development in the country?

JONES: At the same time we had several extension workers working in the field as well as working at these institutions. There was a major research program going on in hybrid corn -- you probably know about that. The University of Iowa sent specialists for producing hybrid varieties suitable for the climatic conditions in Kenya. That was mostly in the highlands where the British had farmed. They came out with some very good varieties that produced exceptionally well. With those varieties and the concomitant

measures that went with them -- disease and insect control, seed production and distribution, fertilizer, planting and harvesting, methods combined to dramatically increase maize production. The schools were training extension workers in all the essential elements for corn or maize production. Finally these things came together and a hybrid maize took off, bringing self-sufficiency in basic food grains to Kenya -- where they had been highly dependent on imports when I first arrived there, something like 250,000 tons a year. They didn't care where it came from as long as they got it and it was white.

I was talking to the permanent secretary one day and talked about that yellow maize. I said, "Yellow maize is more nutritive than this white maize you're eating." He said, "That's not the point. The people are accustomed to white maize and we won't take anything less than white maize if it means importing from South Africa." You know how they felt about South Africa at that time.

Luckily, some of the big white highland farms in the northern part of the country were being taken over by Kenyans. But Kenyatta had his own mindset about how land should be broken up and how Kenyans should be granted certain land masses to carry on in places where the Europeans had carried on earlier. There were some big Kenyan farms. I remember one lady there who had 150 acres. We took the US ambassador there once to see the crops and he was just amazed at what a job this lady was doing with her Kenyan farming operation.

Q: But did the yellow maize ever catch on?

JONES: Yellow maize was left out totally so far as I know in Kenya. I don't know if it ever caught on.

Q: I see. These people were raising white maize then?

JONES: They grew all white maize. Hybrid varieties of white maize. The plant breeders that had come in from the States knew this and they weren't about to introduce yellow maize.

Q: So they became self-sufficient in this?

JONES: In fact, by the time I left Kenya, they might have wished they hadn't done it, but Kenya exported 120,000 tons of white maize.

Q: Grown by mostly the large farmers?

JONES: Grown by the large farmers. The small farmers were growing family plots, mostly for family consumption. But their production was up and they could market some locally freeing up the government controlled food grains for urban areas.

Q: You talked about various things coming together to bring this about.

JONES: Good extension work. And the government fertilizer imports, hybrid seed distribution, timely planting and pest control. They had some custom mechanical operations that could plow the land, cultivate and harvest the crop. Of course, fees were paid for these services. They had large combines in the wheat fields, which was mostly what the Europeans were using. All this had become a part of many of the African farmers' thinking and doing. They were an exclusive, small group. The native Kenyans were still mostly on the small plot with a machete and hoe.

Q: Were you working specifically to help those small farmers?

JONES: Not much more than through the extension services and training of the diploma level workers. What was happening is, those diploma-level two year college students were being sent to many village areas to work as agriculture workers in extension teaching and demonstrating methods, hybrid seed distribution, insect and disease control, with hand sprayers, which were pretty effective.

Q: Were there any policy issues that you had to deal with in relation to the government...pricing issues or things of that sort?

JONES: They seemed to have been pretty well set regarding policy measures. The government did control maize prices and some other farm product prices. They manipulated this in a way that Greenspan manipulates the interest here. They were able to get responses from farmers with price manipulations.

Q: We weren't having any role in that?

JONES: We had some economists in the ministry of agriculture in the planning and in the policy section. But a very capable young Kenyan economist was the permanent secretary of economic planning, a very good friend of mine. He kept close watch on price control.

Q: Who was that?

JONES: Philip Ndegwa. Philip Ndegwa was married to a British lady and had some training outside of Kenya. I think he had a Ph.D. He had also written a book that pertained to the economics for East Africa. I hung out with Philip very often. He was a good golfer and I played golf and we'd discuss things over and over walking from one hole to the other sometimes. He had a pretty sensible approach to things in that regard, so far as his country was concerned.

Q: Weren't there some impediments to moving grains across the country from one zone to another?

JONES: I'm not aware of that being a problem. The bulk of the output for grain and becoming more self-sufficient came closer toward the end of my time and am not aware

of any movement problems. But movement to the coast posed somewhat of a problem as exporting, and importing increased. Mombasa was the only port, which was a long ways from the production areas.

Q: Did you focus on any particular region in the country?

JONES: Well, mainly we began with in the high-production areas in the north where the main food-grain crops were being grown, near the border with Uganda. These were called the highlands, where the climate was much better and the rainfall was adequate and the soil was good quality. Also, this was tea country and they depended on good weather for tea production. We didn't get into tea and coffee production in any way. We stuck with the basic agricultural food grain crops, and animals for meat processing.

Q: Was there any other dimension of your work in agriculture that you thought was significant to comment on? You can add it later if you'd like.

JONES: We assisted with the operation and management of a abattoir for processing animal products for export and local consumption. We had a major effort in farm credit.

Q: And livestock production?

JONES: Yes, and livestock production.

Q: How did that work?

JONES: I had a little bit of doubt about the final outcome of that. Some of the projects went reasonably well at a particular time but at the time we wished to leave them and turned them over to the local people they didn't seem to pan out that well. We had a major project going in the northeast, up near the Somalia border. In the beginning we had problems with the Somalis, who were bent on claiming that area as a part of Somalia. Something resembling a little bit of guerrilla warfare went on there, causing us some problems. But the government had set up compounds with guards and fences where we could spend the night when you were traveling in that area. I stayed in a few of those compounds from time to time. I didn't feel too easy about it. It wasn't uncommon to see trucks and cars burned alongside the road, where people had been killed.

Q: Was it because of that situation we had a private program up there....?

JONES: No, there was no private program there. However, the Russians were there. I am not sure if that was a factor in the mission's decision to be there. Gradually, the shifta or guerilla action went away. When I arrived, the program was beginning. We helped isolate certain areas that animals could graze on and allow other areas to rejuvenate itself with grass once this grass was grazed down and was in danger of being killed. A system rotation system was established. Fred Mass, a ranch specialist from Montana, got along very well with the local chiefs up there and got them to agree to what he thought they

should do. For awhile they were supportive of the program. At the same time, we had a soil conservation engineer and big dozers digging water pans for storing water to match the rotated grazing plots. There was a river that flowed out of the hills of Mount Kenya, to the project area but when it got out into that very dry country it disappeared. There was no more river. A mile back it flowed well, and all of a sudden, it disappeared. But in the area where it disappeared, the ground showed much growth, trees and grasses. So traces of the river could be seen above ground. And I said to our hydrologist, "It seems to me that that would be a place to tap water underground for some wells for the livestock."

They got together and down put some wells. They came upon a situation that they couldn't handle the sand. They got down to water, but the holes that they were drilling, immediately filled with loose sand. So I said, "Why don't you move up on the bank away from the stream bed?" They did and had wells that gave a very good supply of water. This kept the program going.

The other problem we had was that there were many wild animals in that area. I remember going there one day and the soil conservation person had a big track tractor up on the bank of a water catchment dragging out a big elephant that had drowned in one of those ponds. What had happened was, the slopes were too steep for the animals to climb out. Elephants would come and go down to wallow and drink water and the banks were too slick for them to climb out. That was not a major problem, but did happen a few times.

Q: There were some real basic problems I guess with that livestock program in the northeast?

JONES: Basic problem was that the herders, who don't necessarily get the word and understand what's involved in trying to conserve one land plot while grazing in another. Where there was grass, they tended to go. So, we had a basic problem with trying to get the herds under control. We would chief out and they would talk to the herders and get them going for a while but as soon as he left, they would start doing the same old thing. So it was difficult to get the kind of rotation that allowed the grass to restore itself once it had been grazed down.

Q: Was there a problem getting them, having them sell their livestock?

JONES: Actually, much of the livestock that AID was helping to produce was going across the border into Somalia and the Russians were buying it for their abattoir.

Q: Oh.

JONES: The battle was between Kenyan marketing people and the Russians. The Russians would raise the price two or three cents a pound and then all of the animals would swing towards Somalia. Then the Kenyans would come back and offer a little more and the flow would be reversed. This was one of the major marketing problems.

Q: But there wasn't a problem with the herders being reluctant to sell?

JONES: Not much of a problem there. They wanted to keep a certain number to show their status of ownership. Cattle were a status symbol among the cattle people in Africa, but if they had surplus they would sell. Kenya had at that time an abattoir, near Nairobi, where they slaughtered and processed and sold the skins.

Q: Is there any other dimension to the program there that you want to comment on now? Or you can add to it later?

JONES: The veterinary faculty went quite well, I thought, in terms of getting it in the hands of trained Kenyans. To my surprise -- I shouldn't be surprised, because African women are about as aggressive as anybody -- several women became qualified to go to Colorado to earn veterinary degrees. They came back and joined the faculty. They went ahead producing vaccines for different animal diseases. They studied, researched and investigated aspects of the dip program. The ticks were so bad in that part of the country, they was a major problem of livestock production. Chemicals were used to control ticks. From that standpoint, the impact the projects had on the production side of livestock were very beneficial.

The fact that the Kenyans were catching on and taking control of research and practical field applications of what they were finding out in research, I thought was worthwhile.

Q: How did you find working with Kenyan people?

JONES: I had a very excellent rapport with Kenyan people. Starting off with the minister of agriculture, I visited the office of the minister of agriculture and his farm. Occasionally, I gave him ideas of how he could improve his operations. His wife was doing most of the farm operations.. Occasionally I would stop off in villages and talk with the head of the family and practically everyone that I went to see, I would ask the wife, what kind of farmer is he, they would tell me, "He's a good farmer, but he doesn't do it on the land, he does it under the tree." When you go to those places, if you get to talk with the women, you can get them to be more expressive and open about what they are doing about applying improvements needed to increase their crop production. I did a fair amount of that to gain confidence of the people and to establish a rapport with the minister of agriculture, who wished to see that sort of thing going on.

Q: What was the scale. Do you remember the dollar value of the agriculture program at that time?

JONES: I don't have any idea what the agriculture program value was. I have it somewhere among my notes here, but at the moment I don't remember it. It was considerable when PL 480 participant training loans, commodities and technical expertise are valued.

Q: You can add them later. What about working in the mission in Kenya, how did you find that?

JONES: I found working in the mission quite good in Kenya. I served under six directors and several deputy directors.

Q: How long were you there?

JONES: Eight and a half years.

Q: In Kenya?

JONES: Yes.

Q: I didn't realize it was that long.

JONES: Yes, I had a long assignment there. I had no problems. At least most of the mission directors allowed me to do and listen to a great extent, to how it thought the agricultural projects should be implemented. They respected my judgment in terms of agricultural projects and activities and the kinds of things best suited for Kenya. But I got a bit disturbed in terms of the mission director's attitude when we left Kenya.

Q: Well, we want to talk about that after this, but let's finish up now on Kenya. What could you sense or how would you describe the impact of the agriculture program, if you'd been there eight and a half years you must have seen a lot of results, hopefully?

JONES: I had not mentioned one of our very successful projects in agriculture credit. The Agricultural Finance Corporation under the Ministry of Agriculture, a European, the only minister in government, requested that AID provide the manger, head of accounts, and three regional supervisors. The AID furnished personnel to set up a very effective credit program to provide loans to small and large farmers at low interest rates. A vigorous counterpart training program gradually brought Kenyans as replacements for the US furnished personnel. Excellent support from the government provided the impetus for the success of the project. I think this might be AID's first and only experience of providing a manger for a politically sensitive financial organization.

Well, in terms of the impact, it was mostly in food grain production increases. It was in strengthening and building the institutions that were turning out the kind of people who were working in the production, the processing, and the preservation of food grains at the village level. The impact on improving the livestock breeds was a good thing, as well. They were beginning to improve the cattle herds by better breeding, quicker maturity and better meat quality. Of course, the institutions responsible for animal production were substantially strengthened.

Q: Did we have a PL 480 program then?

JONES: We had a PL 480 program for maize, and wheat, which gradually diminished as food grain production increased. Emergency PL 480 often filled the basic food grain needs in areas bordering the drought-prone areas of the north and northeast Kenya. I often visited these areas to determine the emergency food needs.

Q: Okay, well let's move on and maybe you can add something more later. After Kenya, then you were in Washington?

JONES: I joined the AID Africa Bureau in early 1977.

Q: What was your position there?

JONES: I started off as the deputy agriculture officer and was assigned primarily to give support to agriculture projects in eastern and southern Africa. I was working with -- you probably remember -- Bill Johnson. Bill Johnson eventually came in as the agriculture officer for the African bureau. I was working closely with Bill.

Q: Was there a particular strategy that the technical office there was trying to promote?

JONES: Not particularly. I didn't know of a particular strategy. Just about all of the programs in eastern and southern Africa had been set up over the years and were in full operation when it arrived. Our concern centered primarily on implementation, how to reach the time-phased objectives and to maximize impact, progress towards objectives, and solving problems.

Just before I left Kenya, the program officer and the mission director decided that they wanted to put about \$30 million into Edgerton College. You probably remember this project proposal. I thought that this was certainly the wrong move in terms of using AID money. I knew very well all about the school. AID had been assisting Edgerton for more than 10 years. But they were determined to do it, and there wasn't anything we could do to slow it down.

But what was interesting, the meetings that were held to determine whether or not the project should be done, I was not even invited to attend after having been the project manager for eight years. I think they thought that I had a negative attitude toward the project, at least to the magnitude that they proposed. Roy Hoffarth, who had been in Kenya as livestock specialist, had had two tours in Kenya that added up to 11 years, and my eight years equaled 20 years of technical work. He too wasn't invited to attend the meetings. We didn't feel too good about that.

Q: Why did they want to put \$30 million into Edgerton?

JONES: They said they wanted it expanded the school and triple the output. I couldn't see Kenya absorbing that increase in output. They were graduating approximately 200 a year, I think, at that time. I don't remember the exact numbers. But they wanted to triple the output and thought that would cover all of Kenya's agriculture ills and move it ahead much faster. But Kenya didn't have the means to absorb them. They would all be government workers. Kenya didn't have that kind of money and the other things that go with agricultural workers to make a quick impact. But they went ahead with it anyway. I don't know what happened after the project was completed. I talked with several of the contract workers their first time overseas. They thought it was too much too fast. But I didn't feel too good about the project after having seriously worked with the original project to strengthen the school as advisor, and project manger in cooperation with the University of Virginia.

Q: Were the -- let's go back -- counterparts trained at Edgerton so that the staffing could then be Kenyan? Was that achieved?

JONES: Yes. I don't know what happened during the second project. They sent out a lot of technicians. I knew some of the people that they sent out there, but I don't know what was achieved in terms of graduates and counterparts. But the three-year diploma graduates that were already coming out, were of good quality. I never got a feel for the impact of the second phase project.

Q: I'm talking about the teaching staff now.

JONES: Teaching staff at Edgerton. Oh, yes, they were coming back. The principal was Kenyan. He had been to the States and had some training. The people in the dairy section were Scandinavians. They were doing dairy manufacturing there -- cheese, milk, ice cream yogurt, frozen yogurt. In fact, I had my first frozen flavored yogurt at Edgerton College, not here at Safeway. The agriculture engineering department was doing well farm machinery and equipment. The takeover of the teaching positions by Kenyans when I left was near total. I don't know the status following the extension of the project.

Q: But with Kenyan staff.

JONES: Kenyan staff were coming in and replacing them. By the time West Virginia left there, it was nearly all Kenyan staff. A few Scandinavians were still there. In fact, before I left, I was visiting with the assistant principal and the principal, who were both Kenyan. A US trained principal was there when I arrived.

Q: Well, let's go back to Washington. Was there anything more on the Washington side that you wanted to comment on?

JONES: Well I did some traveling. I went on a trip that took me to Kenya, Malawi and to Botswana, Swaziland, Lesotho and a couple of stops in South Africa.

Q: What did you find that the agricultural situation in those countries was?

JONES: Well, the program in those countries, let's take Swaziland first. There was a pretty good agriculture program going on in Swaziland. Again, mostly working with small farmers, building participant training programs and working with an agriculture college there. I found that program going quite well and they were turning out people at a level that could come to the States. I intervened at times in terms of what type of training they should receive, whether it be extension, agricultural engineering, agronomy, soil conservation or whatever and gave names of people they should contact, about the best type of training for African conditions. One of the problems I found with participant training, more in Kenya than anywhere else, was the lack of universities willing to try to evolve and administer the kind of training that was more appropriate to Africa. That was a major problem, I thought, because West Virginia for instance, had been on a contract with Uganda and Kenya for 13 years. I found that the school didn't put forth any special effort to try to give the fundamental and basic training elements that was appropriate for Africa and Africans.

The other factor that was taking place was, over many years, US is so fastly becoming urbanized, that they're having problems with their own people studying agriculture. Students are coming from city areas. The people who are administering and managing programs came from city areas, and AID was assisting countries with basic rural agricultural economies. For instance, when I came from Kenya, I reminded West Virginia that they had been in Uganda a number of years and they had been in East Africa a total of 12 or 13 years. So I called the dean of agriculture out there and discussed it with him. I asked, "What have you people done to change your participant training to make it more relevant to African conditions which you know a lot about? You been out there a long time and you've had a lot of people in training from Africa."

He said, "Frankly, we haven't done that much. But we have recently dovetailed some of the Africans training in with our own agriculture students who come from the cities who need an orientation course before they can go into agriculture. But we have not made any specific changes in training to cater to African needs.

So from the standpoint of training that was a bit of a problem. I had at times run into a few people in Kenya, I don't remember their major subject areas, who didn't find the place in government that they thought they should have when they came back from participant training. It worried me a little bit as to their being fit for a particular job that was available in government. So I talked to them a lot and I got the impression that they felt they had not received appropriate training for them in the private sector.

Q: Were there other issues like that that you observed while you were working in the Washington office?

JONES: Well, I got into a situation that took me to Lesotho. I think Washington State was concerned about what had happened. I believe it was Washington State. I may be wrong

there. Washington State had an agricultural program in Lesotho and a couple of the officials went there to get the project started. I can't recall the comments that they made to the minister of agriculture there, but the minister of agriculture construed it to mean that the Washington State people weren't genuinely interested in what they were doing. But AID had set up the contract. The dean of agriculture and one of the other agriculture officials from Washington State came by and I went with them to Lesotho. The secretary of agriculture, the permanent secretary, and the senior secretary of parliament who had been the ambassador to Kenya, whom I knew there, and I got together and talked about the situation. I argued to prove that Washington State was sincere and had gone to the trouble to send out senior official to prove it. The locals all got together with the dean and settled the matter. The project went forward.

Another instance happened in Lesotho. Colorado University was a contractor there. Colorado had sent out a team for planning. Anyway, their chief of party had aggravated the people in government and they wanted to make a change. I had a long chat with the secretary of agriculture there, and several other relevant officials and solved the problem. I got a handwritten letter from the chief of party in Colorado stored away in my file that told me how much he appreciated me intervening and getting them back on track again.

Q: You found that this university contract arrangement was not all that worked out too well?

JONES: In general, it worked out well. Sometimes contracts were pitched beyond the appreciation and comprehension and the wishes or thoughts of some of the people in government. But there was at times a little too much insistence from the contract people that, we know what we're doing and we know what's good for you people, let's get on with it. That was a fairly common thing among some of the contract people. But many of the contracts that I ran into were willing to bend and make adjustments, even though some of them had made some moves that weren't totally in the best interest of the recipient country according to local thinking.

What you've got to remember is that much of agriculture as it existed in Africa existed in the US 100 years ago, or more. The business of bringing that situation up to a level that it would take off and have a major impact needed a lot of simple and elementary things in place before that could happen. Many of the US university professors were at a level that they didn't visualize such elementary stuff. It's very difficult for some of the contractors to get down to the host country level and have a good fit with needs to be done from the locals' point of view.

Q: One of the things that occurred during your long tenure, of course, was that AID reduced or eliminated most of the direct hire agricultural technical people that went from direct hire technical systems to contract. Did you observe that and how did that effect what you saw was going on in the program?

JONES: We had, let's see, West Virginia was there, Colorado was there.

Q: I'm talking about in general, over the years.

JONES: Oh, in general, over the years. What was in Kenya when I got there didn't change much. It was already there. But over the years in India and Nigeria and the whole rot, I thought at times, maybe because I was direct hire and some of my biases crept out. I thought the college contract business was overly done. Frankly I saw the Findley-Humphrey Act that brought the colleges into the AID program. I think their intentions centered around what the situation that once existed in this country. When land grant colleges first came into being, much of the work with agriculture and farmers was done by the colleges, done by the institutions, through basic extension, and the basic farm machinery and equipment type thing, research and demonstrations. College people went out and worked with farmers and farm groups and they established themselves as kind of an agent of change. Then came the involvement of private business. You know, our private companies took over many of the functions that government and government supported institutions did. In developing countries, the government or public institutions still do much of the basic services. I think the original intent was based for how the universities use to do things in this country before the universities would serve as a needed constituency for AID. The universities seemed too bent on transposing a developed situation to developing countries. That didn't fit that too well.

Observations on agriculture in Africa

Q: I see. Well, let's turn to some general observations. You can add more detail later on specific parts of this. As you viewed the agricultural situation in Africa, where you had long exposure, what did you see as the main impediments to its growth or the main opportunities for improving agricultural production and incomes?

JONES: A whole range of things still go on in Africa and much of it is what I would call extremely primitive agriculture. You've got pockets of government efforts and assistance, organization efforts, that use more up-to-date methods of farming and increasing production, but the bulk of Africa as I had seen it when I left there was at such a primitive level it was going to take a vast transformation to bring it into anything that resembled modern in terms of production.

Then you had so much political upheaval. You haven't had a steady kind of institution building politically and socially that would do much to change things and then the economics of many of the African countries didn't lend themselves to doing things in a more costly manner, which is required if you're going to do anything toward modernization of the agricultural system. And I'm not sure what it's going to take to change that. You've got some good institutions in place in Africa. You've got some pretty well trained people. But I don't know what kind of policy and what kind of support -- certainly policy is one kind of thing that African countries need to work on, policies that are appropriate and aimed at significant change.

Q: Such as?

JONES: You've got pricing policies for one thing. You've got import/export policies. But you don't have much to balance the cost of imports that are needed to raise agricultural production, like fertilizer, tools and other quality inputs. I'm not sure how all this figures out. I hadn't thought about it so much, other than seeing the conditions. Having dealt with the condition by implementing small increments. Even small increments don't impact much unless you've got a political or economic situation which will support them and have the kind of policy that will give them a lift and make them go on to bigger things. Land tenure policy, always tricky politically, needs overhauling in many African countries.

Q: Some people argue that the structure of the farming in Africa or the size of the farms is just not viable, sustainable, and that there needs to be an approach that encourages larger farm units.

JONES: You can see that example very well in places... I saw it in Zimbabwe. I saw it in Kenya.

Q: What did you see?

JONES: I saw where the bigger farmlands that had been farmed and are still farmed either by the Europeans or those handed over to capable Africans of good farming. The highlands in Kenya are a very productive area, and you have all the things needed for high levels of production.

India was able to take care of that because India had all of the elements needed to take advantage of the green revolution. Africa didn't have that, and probably it'll be some time before they get it. There is very little manufacturing in Africa. I saw five steel mills and fertilizer factories in India. I didn't see one in Africa. So you don't have the industrial base that produce things that are needed for a higher level production and the means to import them is very limited.

Q: So what do you do for the very small farmer in the African context?

JONES: Only thing you can do for the small farmer in Africa now is try to improve his tools, his equipment, make him more efficient and try to provide the kind of inputs that he can afford. Maybe a little more organic, farming with more commercial fertilizer, and try to improve and bring about some improved methods in performance. But also there is a land policy that gets in the way. I don't know how it happened. I don't know what India did to bring it about. India had a terrible situation in terms of a small farm. Some were so small that people abandoned them. They had sometimes 35 or 40 plots side by side with nobody farming them, because none were big enough to be profitable. But when you go back to India now, somehow these small plots have come together and they're using bigger equipment, they're using more fertilizer, improved seed, and generally improved methods.

Q: But you don't know how that came about?

JONES: I don't know how that came about. I should have asked about that while I was there.

Observations on USAID

Q: Okay, let's turn a little bit to how did you find your career in AID over the years. How did you view your experience?

JONES: I found my career in AID very satisfying, in spite of being in some hardship areas and up against some very difficult conditions. Sometimes I think I outstripped the Peace Corps in ways in that regard. But I persisted, I persevered. I got along well with people and had a good camaraderie with people in government, as well as people in the villages. I had one or two things to happen. When I was in India, for instance, a young lady came out, a Vassar graduate, knocked on our door and told us who she was. She said, "I'm here in India here, trying to get a story."

I said, "What kind of a story are you looking for?"

She said, "I went to the TCM mission in New Delhi and told them I wanted a story of somebody working in development assistance." They said why don't you go down to Bhopal and contact Harold Jones. She came riding up to our place in an Indian buggy, pulled by a small horse and hopped down and told who she was and what she was trying to do.

I said, "How do you see this coming about?" She said, "All I want to do is follow you around for two or three weeks, look at what you do, look at what your family does here and not talk about anything. If you want to strike up a conversation about why I live in New York City or something like that, you can do it, but nothing about work. I just want to follow you around and see what you do, how you dovetail it in with people."

That's what she did. I said, "You know, I don't work here in Bhopal. I go out to Budni and out there this has been the monsoon season and it's muddy. Out there, I don't know if you can follow me around in those fields with your little sandals you have on." She said, "You leave that to me, I'll handle it." She followed me around for two weeks and she came out with a story in the national Catholic magazine *The Sign*. For that month, my picture was on the cover. The thing that satisfied me more than anything was the results of her polling and investigating what I'd been doing, she talked to the local people, "What do you think about him and what he's doing?" One old-timer there at Budni said, "He's the first person that has made us love Americans."

Q: Very good. That's wonderful story. Do you have a copy of the article?

JONES: I have copy of the article.

Q: Could we attach it as an annex to this?

JONES: Yes, you can annex it. I had a little going away party, so they gave me a statue of Mahatma Gandhi, which I have upstairs. But the thing that pleased me as much as anything else was one of the workers there, one of the mechanics, was kind of a poet and he wrote a poem talking about how I behaved, how I related to people and how hard I worked, and this, and that. I prize that poem and I still have a copy of it.

The other thing that came to me was this thing that I did in Nigeria, about trying to get the permanent secretary to allow those young men go to the university. It was a great pleasure to meet those two people in Utah and in Greensboro, North Carolina who had been my students that I didn't even know, who had been given a chance to go on to the university.

Q: You said when we talked on the phone that you had written an article for the Foreign Service Journal?

JONES: The article isn't quite finished.

Q: What's that about?

JONES: That's about the return trip to India. They wanted to publish it. I've got two-thirds of it on my computer and edited. The other third I farmed out to my daughter and she's going to bring it by this afternoon.

Q: Well, maybe that we could add to this as well.

JONES: I think you could add that. These little things that I mentioned were some of the great satisfaction that I got out of my career. I felt that I helped a number of people. In that article that's going to be published for *The Foreign Service Journal*, they wanted to know what I considered my legacy to India. I told them about the center that had contributed so much to the mechanization of agriculture in India, with equipment that's suited the climatic conditions of India, and the standardization and the amount of inputs that they had given to manufacturers in terms of the kind of things that they should be manufacturing in India. I thought that this was a legacy. I thought US got it at a very cheap price. They paid me \$6600 a year when I went to India. The US put \$120,000 of US manufactured equipment there. This is what we worked with to bring about this condition in India. And India, as I said earlier, has used that as a model to set up three additional centers. They have trained thousands and thousands of people. That's kind of a legacy as far as I'm concerned.

Q: Right.

JONES: I think our family had a bit of a legacy. I said, “Well, we owned a Mercury station wagon, nine passenger. My wife had made clothes for all the girls. We had a well-furnished place. I had an issued Jeep to do my official work in. We rode around town in a big car and lived on the palace grounds. The local people saw us as being rich people Indians saw us as rich people. We saw it as a basic US necessity.” In spite of the conditions under which we lived in India, our family earned the title ‘new kind of rajah.’ When you talk about the Maharajahs, you’re talking about wealthy people. This is a ‘new kind of rajah.’ “ We were viewed as well-to-do, but the concern and interest we exhibited towards all people, the officials, the high caste, the lowest caste, everybody, we were being seen as new kind of rajahs. Our girls move around freely, much more freely than the local women-folks in this Muslim area. We were told you dress well. You treat everybody with respect. We watch you in the villages. We watch you at the ministry level. We watch you at the princely receptions, cocktails, and you interact with everybody. We consider you rich people and that’s why we call you ‘new kind of rajah.’ “

So I said, “I think that’s kind of a legacy.”

And here is another example. My driver was a devout young Muslim, 18 years old, and he saw what my wife had been doing to train our girls at home, to educate them to go to college. And you know how Muslims think about their women-folk. I went to visit him on my next trip to India. He is now the carekeeper for one of the big palace areas, for one of the Nawabs in India. He worked for AID as a driver after I left. He took his retirement money and bought a taxi, manned that taxi and bought another taxi. He took the money from the taxi and business educated his sons and a daughter. Two of his sons were sent to technical schools. One of his sons was graduating from military academy. When I was there, he was coming out as a second lieutenant. His daughter, mind you, a Muslim girl, was sent to college. She has a degree in physics and computers and is teaching.” I think that kind of impact was a legacy itself!

Q: Yes, extraordinary. Well, this has been a terrific, excellent interview and extraordinary story. Thank you very much.

INDIA: PASSAGES REVISITED

Thoughts of India grew to preoccupy me during the last few years. As a young technical advisor with the Technical Cooperation Mission, I was first assigned to the India -- Budni, India, a remote agricultural training center in Madhya Pradesh State (central province). On the weekends I visited my wife, Loretta, and daughters living 60 miles north in Bhopal, the province capital, where at least they might enjoy the basic conveniences of running water and electricity, not yet available in Budni. The family was reunited later in the more comfortable national capital of New Delhi, where I worked an administrative desk position. I spent almost eight years on the subcontinent between 1956 and 1963, almost equally divided between Budni/Bhopal and Delhi. I arrived at my post in Budni in January 1956 to greet some of the toughest but most rewarding challenges of my life on professional and personal levels.

In February, 1996, 36 years later, almost to the month, I was on British Airways flying to New Delhi on a personal mission of rediscovery. I was finally heading back -- back to satisfy haunting urges to witness the new India. Over the years, the press and other media had titillated my interest with news and features projecting India as the awakening giant or tiger coming of age. Some of my post-retirement work took me to places I had lived formerly. But I was never to return to my first post, my first trial by fire in a foreign nation. While under contract in the 1980s with the Pan American Development Foundation in St. Vincent and The Grenadines in the Caribbean, I had been invited to attend the India Agriculture Engineering Society's 25th Anniversary Conference at the suggestion of some members that I be considered among the top four non-citizens who had contributed to the profession. I was unable to attend. Yet my curiosity needed me, and I knew peace would only be found in a personal pilgrimage. I wanted to visit my former homes and other old stomping grounds; to learn about the destiny of Budni; and to meet my old colleagues, including former chief instructor Mohan Taneja and former director P. John Zachariah with whom I have kept in touch. I was keen to discover what had happened to my driver and friend, Abdul Rafiq Khan. Christina (Chris), my second eldest daughter, living in Europe, would meet me in Delhi.

Saturday, I arrived at the Indira Gandhi Airport where the first major change struck. The spacious facility handles passengers with a remarkable dispatch, efficiency, and courtesy unknown thirty years earlier. En route to Delhi, I didn't recognize a square inch of landscape. The highway once had been trafficked by an assortment of small cars, numerous bicycles, scooters, and bullock-drawn carts, a popular means of transporting everything, even jet fuel. Now motor vehicles dominated in a much denser stream.

We were booked at the Ashok, touted as the hotel premier of southeast Asia when built in the latter '50s. The hotel had held its ground, still dressed in imposing splendor and rated five-star. This trip had actually received minimal planning on my part. I had only sent Taneja a letter with a vague reference to a possible visit some time in February. Principally, I was going to play the journey by ear and hope for the best. We would rely on coincidences and our collective memories.

Chris remembered our exact former address in New Delhi that day. We learned that then Captain Singh, our former landlord had died, but members of his surviving family had taken up residence in the two-story house we had rented in the early '60s. We spent the afternoon visiting with the late Admiral Singh's wife, daughter and son. His son, Colonel Randhawa, had three sons living in the U.S. Later, the Colonel drove us to Mohan Taneja's residence where we met his wife and parts of the extended family. His son had attended school in the U.S. and had since returned to India and set up a consulting business. Our meetings with families gave me some indications of how traditions in extended family values survived.

These impromptu encounters set the tone for our fortuitous good fortune throughout our travel. All my former colleagues and persons to whom we were introduced showed us warmth, delight and a genuine feeling of welcome. Taneja became the perfect host for our

stay. My colleagues presented me keepsake photographs of their families. Most of them had a connection in the United States through adult offspring and their families living currently or formerly there.

Monday morning, I registered my presence and trip plans at the American Embassy. I found no marines, no Americans at all. Local citizens handled my entire business. The only American faces hung on walls in the photographic likenesses of William Clinton and Al Gore. The embassy grounds and adjoining compound of staff quarters were now almost obscured by shrubbery and walls. In the compound I caught a rare glimpse of a cow, once more common in the urban area.

Later, Mohan Taneja drove us to an annual national arts and craft show outside of Delhi in Haryana State. Here we saw products based on centuries of tradition, although the variety and quantity indicated the magnitude of the explosion of the industry since our time. On our return, we stopped by a supermarket. Nothing prepared us for the wealth of fresh and packaged local foodstuffs on display -- and lack of imports. No dependence on foreign trade here.

Traffic had never been so congested and difficult. The roads required completely defensive driving as well as double the time to reach a destination ("You get used to it," Taneja consoled me). Services and industrial systems for domestic and export products had expanded immensely along with pedestrian crowding and motorized traffic. Conveying products to points of utility was problematic in spite of tremendous highway improvements. Everyone, everything was moving -- but in slow motion. When I first arrived in the 1950s, India was the country of teeming millions. Now the population had tripled to close to a billion. Clearly, procreation still rated as the largest industry. I thought population dynamics in India defied a basic principle of physics -- that two stationary properties cannot occupy the same space at one time. In 1956, I thought two people in India stood in the same space, never so evident as at parades. In 1996, I imagined the number of people sharing the same space had increased to four.

Dramatic changes around Delhi had obliterated the details that were second nature in my memory. The old monuments remained true to my recall, but their surroundings had become drastically different. Nevertheless, we were elated with our first explorations. The days had been delightful and intriguing; we had made two key contacts; and had witnessed major changes. If our opportunities had taken an opposite turn, we would have been content to have achieved as much as we had at that point.

The next leg of our trip took us to Madhya Pradesh. On Tuesday, a 737 Indian Airlines flew us down to Bhopal and presented an excellent view of the great growth of the city. Still, I recognized the remains of a tattered windsock and tiny hangar which had housed the Nawab's five private airplanes. A travel book told me that a hotel now occupied the grounds of our former home, Pavilion No. 1, on the Nawab's estate. Formerly one of the guest houses of the Nawab, our house was designed in a neoclassical style with marble floors, commodious rooms and a central open courtyard. Still coasting high on

expectations, we were crestfallen to learn from our taxi driver that the building had burned down. “I’ll take you to another nice hotel,” he obliged. We were not to be deterred, however. At least we might pay our respects to the memory of a ruin, I determined, and instructed the driver to momentarily drop by the site. At the gate a large polished sign announced “Welcome to the Hotel Saber Imperial.” Not a trace of ash or destruction appeared. Beyond the gate we were rewarded with the sight of our old home facing Pavilion No. 2 on the east side of the roundabout where American neighbors had lived.

Now the premises had received a fantastic facelift with a renovated landscape, exterior lighting, and ornamental structures creating an inviting garden atmosphere. We approached the reception desk and offered our story, who we were and why we had come.

“We will not be open for a couple of days,” came the response.

“Is there any way you can accommodate us?” We had not come this far to simply back off. Yes, one suite had been completed. We were delighted. The fates had not abandoned us yet.

The hotel staff laughed when I repeated the cab driver’s story about the fire and claimed the hotels played that game with cab drivers. Our south wing suite once served as rooms in the home of an American couple, Velma and George Puckett. After tea, we poked around both pavilions. The open central courts had been roofed. We ascended to the flat rooftop where the family had set up bedding to spend nights for relief against the scorching summers. Now empty, the concrete spaces reeked nostalgia.

Close by, a decaying catwalk had afforded a view of a man-made lake at the foot of a long slope. Now the elegant architecture, including wrought iron rails and a marble promenade, had been fully restored to its former glory and romance. Small bistro-type tables and soft lights lined the walkway. Guests could gaze at a stunning sunset while enjoying a repast on a warm evening. A large sign at one end reading “HAMBURGERS AVAILABLE” seemed almost pedestrian and incongruous, especially given the lingering sacredness of the cow in India. But the sign signaled yet another new order in India.

Our explorations continued into Wednesday. I found the late Nawab’s palace badly deteriorated and abandoned to weeds. But the mosque, by which we kept time from daily calls to prayer, was still in active use. I discovered a new college had been built and another hotel under construction on the estate. The villages dotting the landscape down to the lake all enjoyed running water and electricity.

My inquiries about Rafiq came to naught. But I happened to strike up a conversation with a retired Major, who seemed delighted to find a companion to reminisce. He responded to my questions about Rafiq with a recitation of the latter’s history, current occupations, and contact numbers in Delhi.

I telephoned Mr. Dass, the sixteenth director of the Central Tractor Training and Testing Center. On Thursday morning, he graciously sent us a car and driver to deliver us to Budni. The old partially-paved road to Budni had blossomed into Nagpur State Highway No. 23, a broad, busy, blacktop lined with fields of cash crops and small factories instead of the forests and brush of wild countryside of my day. At Budni, I immediately was reminded that my name had become popularly identified with the establishment of the center. We were fed a scrumptious lunch of traditional foods with as many chapatis (a wheat bread staple -- soft, flat, unleavened -- similar to a tortilla) as we could stuff at the comfortable guest house. We spent the remainder of the day and part of the next day touring and discussing Center operations. The two major wings for instruction, training and testing, were well-equipped and conducting training very professionally. Dormitories and dining facilities were clean, neat, well-kept. A well-equipped library provided reference material. Virtually nothing struck a chord in my memory. But, yes! I spied one of the single-story, tin-roofed barracks which had been utilized as staff living quarters when the Center had first been converted from a World War II jungle warfare training camp. This building survived as a commissary. The only other feature I recognized from the past was the natural setting -- the hills and surrounding forest.

I described the beginnings of the Center in a class session. I noted how staff was tasked with the arduous labor of physically developing the grounds and assembling imported machinery. I explained the difficulties of working with the government bureaucracy, the Ministry of Agriculture in New Delhi which initially resisted our recommendations for opening, maintaining, and developing the Center's size and quality. If my story seemed implausible, I had some photographs for proof. The students marveled over depictions such as the first tree being felled to clear ground and such accounts as the huge Bengal Tiger seen planted stately and undisturbed in front of my house before my arrival. Sightings of tigers, leopards, bears or wild animal tracks were common on the farmland in my time. The fauna that really threatened our crop survival, however, were deer particularly, and wild boars. Now 300 acres were solidly fenced against the impingement of most animals except wild boars and monkeys. Government support we had won over the years now spoke for itself. The trainees expressed their appreciation of the long way they had come.

Just before closing the staff was assembled, and I was asked to speak to them after being garlanded with flowers. Christina was given a bouquet. I spoke about the beginning struggles followed by a number of questions which revealed many facts about the center's successes: over 23,000 students had received training, nearly 700 tractor and equipment tests conducted, seven tubewells, established, 100 additional acres of land cleared, the total area of 300 acres fenced, old buildings replaced with new ones, a guest house in operation with meals and lodging, and both irrigated and dryland farming were being demonstrated. The center had been used as a model to establish three additional centers across the country.

Around dusk, Mr. Dass drove us across the river to see Hoshangabad, where frequently I used to purchase fresh vegetables from street vendors, representing the main business in

the town. I had often made the trip by jeep, crossing the river on a flat wooden boat propelled by several men using poles. This time, we crossed the river on a high two-lane bridge. I recognized nothing in Hoshangabad except the railroad. The town had become thickly settled with various bustling business and public service establishments, vehicles crowding the streets, and pedestrians vying for walking space. Access to the river banks was now possible from the center of town via a sweep of broad concrete stairs.

After dinner, a discussion session ensued with the new director and key staff members. Talk centered mainly on introducing new curriculum, particularly moving into two new areas: exhaust analysis of farm equipment, especially tractors, and the maximization of driver safety structures on tractors. I promised I would look into these areas when I returned to the U.S. I also suggested that their training explore more completely the problem-solving method as a tool for teaching repair, maintenance, and operation of machinery. I thought, here I am back in technical assistance, this time on my own with no mission backup support.

Early Thursday morning I walked the farm perimeter with my camera. As I ruminated on the history of the Center, the thread of my memory caught on an anecdotal event -- the visit of Senator Allen J. Ellender from Louisiana. He had been accompanied by Howard Houston, the Only AID official ever to visit the Center. The Senator hoisted a State Department issue movie camera which he called "foolproof," just aim the device and push a button. His every action was an aim and press, except when he occasionally paused to pin Democratic buttons on top Center staff and compliment them on a job well done. However, he complained bitterly to me about U.S. money spent on a wheatland disc plow, considered totally unsuitable for Indian conditions. The plow cost \$122. Nothing I said could ease his dissatisfaction. Finally, the pilot of his chartered DC-3 aircraft leaned toward me to say, forget it -- keeping the old son-of-a-gun in the air for one hour cost more than that plow. He needs to have something to complain about. At the end, the Senator faithfully promised to send us a copy of his film. Later, the package arrived post-marked U.S. Senate. Luckily, we held a preview before the invited audience of staff and local citizens assembled. The film was totally blank! We had lost an opportunity in documenting history. The Senator had nevertheless kept his promise; he had sent the film!

On our return trip to Bhopal that day, Mr. Dass instructed the driver to take us to the Central Institute of Agriculture Engineering, a national Institute established in 1976 in Bhopal under the Indian Council of Agricultural Research (ICAR). This occasion was my first knowledge of the Institute which conducted a wide range of agriculture engineering research. The annual meeting of the agricultural engineers had just convened there. We were introduced to the Director, Dr. Gyaenda Singh, who recognized my name. He spent a good deal of time with us despite his busy schedule. I was highly impressed by the inroads agricultural engineering had made in India and by the profession's many contributions in wide ranging areas in production, storage, and processing of farm produce for the national good. Much of this work had been enabled by the far-reaching

impact of five land-grant college models established with U.S. assistance during my tenure. India had since added fifteen such institutions.

I was also introduced to Mr. M.M. Mehta, vice president of Escorts, a tractor manufacturer. He also recognized the name Jones in relation to the Center at Budni. We accepted his invitation to a dinner he had arranged for institute members at one of Bhopal's top hotels. He sent a car to transport us. In no exaggeration, the dinner affair was sumptuous. The occasion also gave us an opportunity to learn more about current pursuits in agricultural engineering and farm equipment manufacture in India. I was also proud to be listed among the Americans who were considered the forerunners of agricultural engineering in India. I was glad for the dedication, hard work, and tenacity I had poured into the success of the project. Mason Vaughn, a missionary whom I had met in my day, was credited as the father of the profession.

Friday, I made my final contact in Bhopal with Mr. and Mrs. P.N. Baija, a former agricultural engineer in the State. Mr. Baija and I had collaborated on several occasions during my assignment to encourage increased use of donated AID farm equipment for community development. Now living with respiratory ailments from a poisoned atmosphere, Mr. Baija was my first personal contact with the impact of the notorious Union Carbide disaster, a clear case of development gone awry.

Back in New Delhi, we located Rafiq, first reaching him by phone. He paused to overcome his shock and incredulity. The first words he uttered were, "How is memsahib (Loretta's title as mistress of the house)?" Rafiq immediately requested that on Sunday we join him and his family in Pataudi, about 60 miles north of Delhi. On the drive we caught up on the last 35 years. Collecting his retirement from AID in a lump sum allowed him to operate a taxi service in Nanitol, a resort town in the foothills of the Himalayas. With this business income, he sent his four children, three sons and a daughter, to school, inspired by the example of Memsahib Loretta's interest in educating our children. Two of Rafiq's sons had completed technical school. The third son was attending a military academy. His daughter, Nusrat, having obtained a B.S. degree in physics and computers, was unmarried and teaching. She lived in contrast to the generation of her mother, Siddiga Johan, who had never attended school.

Fear of heightening crime drove Rafiq out of the taxi business. He was now caretaker of the palatial estate of the Nawab of Pataudi, the grandson of the late Nawab of Bhopal. We toured the impressive place and gardens, later spending dinner with Rafiq and his family.

The return drive to Delhi with Rafiq and his two sons found us competing for road space with hundreds on family rides. Rafiq remarked that Indians seemed to be earning much more money, beginning in the 1970s. Cars, modern electrical household appliances, radios, televisions, and other modern consumer items have become a regular part of many households in the past twenty years. He philosophized, "I have found that if you keep on working, treating people right and doing the right thing, you will come out well in life. I

took my example from how you used to treat everybody no matter who they were or what they did in life. I am convinced that is good.”

Our last week in Delhi, Christina contacted Mrs. Jacqueline Singh, her former high school English teacher at the American International School in New Delhi. Now the school only served children of American Embassy personnel, and Mrs. Singh still occasionally substituted as a teacher there. Originally from California, Mrs. Singh was living in India, married to a Sikh. She invited us to her home for high tea for Monday. Mrs. Singh had just published *Seasons*, a novel based on her own life. Her husband, Ranjit, an amiable gentleman, had retired from government service as a horticulturist. Thus I found some common ground for conversation.

We missed seeing one contact on our agenda, despite our remarkable batting average. I learned that Mr. Zarchariah, the third person to direct the Center at Budni, was living in Kerala State, south India. Amazed to hear us, he and his wife chatted extensively with us by phone.

Colonel Randhawa Singh invited us for Tuesday to his home in Chandigarh, the capital of Punjabi State, the Sikh homeland. Planned by Corbusier and built a few years after we left in 1963, Chandigarh could boast broad, tree-lined avenues, an attractive business district, and lavish gardens designed by Shah Jehan, builder of the Taj Mahal. We toured the city and lunched on Indian cuisine in the gardens. Also notable was our ride on the great Indian Railway, credited with hauling an average of 11 million passengers daily. We found this service punctual and capable. We had risen early to make the 6:00 a.m. train to Chandigarh only to find that we had mistakenly held the wrong tickets. The conductor resolved our plight by selling us new tickets and directing us to claim a refund for the incorrect tickets at our destination. We had no problems collecting our money. I thought, in my day, the red tape would have seemed endless with little hope of a refund.

Wednesday night, we hosted a farewell dinner at the Ashok for Colonel Randhawa and the Singhs. Mr. Singh and the Colonel engaged in lively debate on philosophy and Sikh religion, even broaching the issue of the low percentage of eligible citizens who exercise voting rights in the United States. One challenged, if the government is not of the people, could it be by and for the people? The other responded practically, “Whatever you wish to say about the system, it seems to have worked for many years and is still working.” I suppose one also might argue that democracy resembles religion in that way. All in all, I thought the pleasant evening, the mix of company and conversation, was a fitting adieu. Chris flew out at midnight. I hung in another day.

Thursday, my final day, was spent with Mohan Taneja touring the agricultural engineering section of ICAR, the national research station in New Delhi. We became absorbed by the extensive research and displays of invented and modified farm equipment models. My work had taken me there a number of times to visit the many Rockefeller and Ford Foundation scientists researching to strengthen the facility and program. These

scientists had substantially contributed to gearing up Indian agriculture for increased production.

Later, Mohan and I found our way to Connaught Place, the heart of New Delhi's shopping district. The area seemed better organized and much more tidy, but more concentrated since my last encounter. Billboards almost completely enclosed the place. Taneja finally accepted one of my repeated offers to buy him lunch. Usually, he would reply, "You are in my country, I am your host. Keep you money in your pocket." After lunch, we strolled back to his car. I thanked him and wished him all the best. We embraced, successfully restraining tears in that emotional moment.

Once home, I set about executing my promises to the staff at Budni. I contacted several manufacturers of exhaust analysis equipment and driver safety structures; then called the tractor testing station at the University of Nebraska to learn about developments in their latest areas of interest. Fortunately, I was put in contact with Dr. Leviticus who had coincidentally visited Budni a few years previously and gave me a good rundown on the subjects of my inquiry. Some of the information I needed was in possession of a firm in Germany. Chris made the contacts there and mailed the information. I sent my information, also enclosing my resume and historical photographs of the Center as Dass requested in the hope of starting a museum one day. My technical assistance was a fait accompli, probably my last effort in the field.

The Center at Budni left a small but significant legacy as an agent of change in India's economy. The development, application, and extension of mechanical technology to agricultural production and processing has been largely responsible for closing the gaps in economic capability which had forced India's dependency on food-grain imports. The Center had served as a model for establishing three centers in other regions of the country and for providing the background and instruction for domestic food production and relief from want and poverty. In collaboration with manufacturers. the Center assisted in the production of animal- and other power-driven equipment more suitable to Indian conditions. Philosophically, the Center helped diminish a notion of education as an intellectual pursuit for its own sake with negligible interest or obligation to matters of practical application. The attitude that the educated man need not dirty his hands in manual exercise limits the hands-on approach so necessary in realizing the maximum benefits of a highly applied science like agriculture. Subsequently, I have conducted demonstrations to explain how the accumulated impact of small innovative improvements in farming practices can lead to incremental to models of high productivity. The total U.S. contribution to the success and utility of the Budni project constituted \$120,000 of U.S. manufactured farm equipment, and the annual starting salary of \$6,600 as well as post allowance for the only American technician associated with the project -- me.

As a family, we might have left a small diplomatic legacy. At the time, India's middle class was only burgeoning. The material possessions that we considered basic to our lifestyle were regarded as the trappings of wealth by many of the citizenry. Our nine-passenger station wagon, household conveniences, full closets, feministic freedom of

movement, and our home on the Nawab's estate earned us the title of "new kind of rajah." We exhibited democratic attitudes toward people in all stations -- respecting alike the princely families, the top government officials, the lowest caste members. We had given high priority to educating our family of females, a devalued gender at the time, and one reason I received sympathy despite my "wealthy" status. *Sign*, an international magazine and *Trend*, a leading national magazine in Bombay, circulated the story of our life in Bhopal/Budni, including the home study teaching Loretta vigorously pursued. The Begum, wife of the Nawab, had once approached Loretta about tutoring her young grandson, but Loretta had her hands full. In our own way, we were in the vanguard of changing social attitudes now reflected in the booming middle class. We are aware that we touched the life of at least one associate, Rafiq.

Personally, I had fulfilled my aspiration to return to India. I felt better physically and mentally for the achievement without an excess of ado or contemplation on the extent my life was enhanced.

At home in Washington, DC, I sampled a souvenir gift of garlic and pepper paste I received at the Tenaji household. A nip packed a wallop, as rich, concentrated, explosive and resonant as the amalgamation of India.

End of interview