The author was appointed under the University of Missouri TCM contract operating in the four states of Eastern India to serve as a Farm Management adviser to the Government of Bihar, and to be located at the new Ranchi Agricultural College, at Kanke, Ranchi, Bihar. The Ulrey family, including Eva (the Mrs.) and teen-aged daughter Sara arrived in India on August 10, 1958.

Although the author had spent nine months at Peshawar, Pakistan during 1954-55, and had visited India three times during that period, and had many score of Indian student friends from different states of India, he found he has much to learn about the education and agriculture of Bihar.

Bihar was not ready to push Farm Management rapidly, because of shortage of personnel and plans. A small farm planning project, sponsored by the Center and coordinated in Bihar by Dr. Shastri of the Department of Agriculture in Patna was started through the colleges and extension training centers in 1959. A staff member in Social Science and Extension, B.N.Singh, left to complete his Ph.D. in the U.S. in June 1959. The teacher of Economics, D.K.Singh, was sent to the U.S. under the contract program in September 1959 for a year's training. The remaining teacher of Extension, E.W.Massey, found himself also with the programs of these two absent persons. The author consequently had many opportunities to handle classes in Economics, Farm Management and Extension.

At the agricultural college at Sabour, the two teachers in Extension, Farm Management and Economics were overburdened with both undergraduate and graduate teaching and training. The Professor of Extension, P.R.H.Acharjee was retired in early 1960.

The author realized that the entire field of rural social science needed analysis and development in Bihar, and that the educational environment largely determined both the quantity and quality of research, teaching and extension in the
social sciences. Consequently, he has given attention to a legion of issues and problems which affect the operations of the agricultural colleges, as shown by the summary report below.

The specialist has real opportunity to assist in the development of both Agricultural Extension and Agricultural Economics teaching programs when he was requested by the Committee on Agricultural Education in Bihar to prepare course outlines for both B.Sc. and M.Sc. programs. Fortunately he had an excellent reference library of books selected from a social science and education bibliography he prepared in 1958 before coming to India. The library was assembled from books sent over under the University of Missouri contract, and from American and Indian books collected by the specialist. An adequate library is essential for any rural social scientist who is to serve as an adviser in India -- or for any scientist.

The author has prepared below a summary-type report on his activities, findings, recommendations and accomplishments since arriving in India. It contains a review of:

I Summary of significant activities
II Significant conclusions and recommendations
III Jobs and responsibilities for the future
IV A few final observations.

I Summary of Significant Activities

1. Counselling and discussions with members of the college staffs and students, and with numerous other citizens on a legion of educational problems and issues. The average has been at least 4-6 per day.

2. Lectures and discussions with classes in Farm Management II, Economics II, Agricultural Economics III and Agricultural Extension III -- approximately two periods every three weeks for each of the classes.

3. Assisted Committee on Agricultural Education in Bihar on revision of the curriculum and syllabi for the agricultural colleges of Bihar and prepared syllabi for:

   1) Three courses for undergraduates in Agric. Extension

   2) Three courses for undergraduates in Agric. Economics
3) Twelve courses (8 papers) for postgraduate, or for a complete M.Sc. program in Agricultural Extension.

4) Sixteen courses (probably 8 papers) for postgraduate, or for a complete M.Sc. program in Agric. Economics.

This has probably been the most constructive accomplishment, since course outlines have been prepared which the author believes are in advance of others in India. There is much work yet to be done on the course outlines.

4. Cooperation with the Directorate of Economics and Statistics of the Ministry of Food & Agriculture, Government of India, on farm management and farm planning programs in Bihar, which involve the colleges and extension training centers.

5. Study and analysis of several hundred books, publications and reports on India and Bihar -- on the economy, agriculture, education, development programs, history and culture, etc.

Special attention was given:

1) To agricultural education, research and extension in the total educational programs of Bihar and India,

2) To the relationship of teaching, research and extension in the agricultural colleges,

3) To the relationship of the agricultural and veterinary colleges in handling animal husbandry training and programs, and

4) To the needs and possibilities of programs to develop agricultural universities in Bihar.

6. Assisted in the operations of US-TCM college contract program in Bihar -- selection of books, equipment and personnel for training in the U.S.

7. Counselling with college and government officials in Assam on college curriculum, organization of agricultural education, training managers of state farms, and the field management program.

8. Counselling with agricultural marketing officials in West Bengal and in Bihar on programs and plans -- past, present and future.
9. Garden and orchard enterprises on the 3½ acres of the bungalow compound, to learn about soils, crops, irrigation, insects, disease, markets and prices, etc.

10. Preparation of more than 165 reports and articles on educational, economic and social problems -- to clarify the thoughts of the author, to stimulate thinking by officials, and to present plans for action.

II Significant Conclusions and Recommendations

A. Higher Education in Bihar

The present affiliated-university system is weak, and can only result in mediocre training programs and services to the citizens of the State. It does not and will not provide the essentials for a strong university system -- a community of scholars, adequate specialists, adequate variety of training programs, an elastic educational system, and the different educational elements to fulfill the aims of education for every student. See reports No. 96 and 94.

The Government of Bihar, in June 1960, provided for four regional affiliated-type universities, to replace one local and one state affiliated-type universities. Provisions were not made for integrated teaching-type universities, as proposed by the author. It would be possible to develop a combination of integrated-teaching and affiliated-type universities at the headquarters of each of the four regional universities.

Planning and policy making

1. Create a Bihar Study and Planning Committee on Higher Education. It should consider the development, responsibilities and relationships, etc. of the colleges and universities for at least two decades. It should be composed of the best minds of Bihar and other parts of India, and use the experts on higher education of India and other countries.

2. Develop at least four integrated one-campus teaching universities, where students make take courses in any of the integrated colleges which are administered as one educational unit. For example, there will be only one department of chemistry.
economics, etc. — but each department will contain many scholars.

3. **Take evolutionary steps to give colleges and the teaching universities a greater amount of autonomy and responsibility** over planning and budgeting, personnel selection, courses and teaching, examination, standards, etc. A system of certification by professional bodies and inspection by an external commission is preferred by the author instead of the present system of control by the affiliate university and the state agency.

4. **Train the vice chancellors and presidents of universities, and the principals and deans of colleges on the principles, democratic philosophy and methods of administration; planning and programming, financing and budgeting, coordination and cooperation, personnel relations, principles of education, principles of social relations, delegation of responsibilities, etc.** Such officials should be selected on the basis of their training and ability as administrators, rather than because of scholarship in their speciality or because they are ranking officials.

**University and college operations**

5. **Establish a system of semesters or terms to replace the annual course plan.** The final examinations would be given at the end of each term or semester. The course titles would be more accurate if more courses were offered. Students would work more systematically. The examination period would not be more than one week at the end of each term. Students who are not studying or not capable would be eliminated more quickly.

6. **Take evolutionary steps to shift from external examinations to internal examinations.** This will materially raise standards, reduce costs, and save energies of scholars for productive work. See report No. 56.

7. **Increase the number of effective weeks of class work from 22-27 up to at least 34-35 weeks for an academic-year program and to 45-46 weeks for a calendar-year program.** This can be done by reducing the number of holidays, reducing the period of study for and taking of examinations, and by shortening vacation periods.
8. **Employ educational and teaching methods so that the learning process will be maximized.** Listening to lectures is one of the most inefficient methods of learning. Visual aids speed up the learning process. Learning by doing seems to be the most rapid. Consequently, more use should be made of practicals, laboratory work, class exercises and reports, class discussions, panels and forums of students, creative extracurricular activities, etc.

9. **Supply more funds to colleges for secretarial help and for mimeographing materials.** Many teachers resort to dictation of lectures, since texts are not available and they do not have access to a stenographer and funds to cyclostyle their notes.

**B. Rural Universities**

The 59 or so agricultural and veterinary colleges of India are really technical institutes, with few exceptions. They do not provide general or liberal or cultural education. They are not a part of a teaching university and consequently not a part of an association of scholars. They are designed primarily to supply extension officers and subject matter specialists for the extension blocks, research officers for the research institutes and teachers for the colleges. They could be expanded to supply other educational technicians, such as vocational teachers for secondary schools, home economics specialists, marketing and cooperative officers and employees, youth workers for villagers, etc.

Uttar Pradesh, Orissa and West Bengal are among the states making progress towards establishing integrated teaching rural universities. Growing rural universities are needed for the legal establishment of educational jobs ahead, which cannot be performed effectively by the small, separated agricultural and veterinary institutes now operating in India. See report No. 104.

1. **Develop the agricultural colleges at Ranchi and at Sabour, and the veterinary college at Patna into rural universities—or use other sites in the same area.** A fourth rural university probably should in time be developed in the area north of the...
Space and plans should be developed to provide for the following colleges at each location: agriculture, home economics, education, science and arts, and post-graduate. Veterinary, and engineering and technology colleges should be located at two of the universities, a college of communication at one site, a forestry school at one place (Ranchi), and rural business and industry schools at two of the universities. Each of the four agricultural colleges should have strong departments of animal husbandry -- dairy, poultry, sheep, goats, and bees. Agricultural engineering should be developed most at the two sites where the engineering and technology colleges are located, but the other colleges should have strong departments of agricultural engineering.

Such educational institutions could expand as they gain experience to serve the unfolding needs of citizens who are increasing their productivity.

The Government of Bihar developed plans to start a third agricultural college a few miles from the Pusa Regional Research Institute in North Bihar in 1960, using temporary facilities. There was considerable discussion in the press that this college should become a rural university.

The Bihar Government developed plans to start a second veterinary college also in 1960 at Kanke, on land obtained adjacent to the Agricultural College, to relieve the pressure on the existing veterinary college in Patna. The author has proposed that the two adjacent colleges be closely integrated--common library, students live together in hostels, attend common beginning and foundation courses. See report No. 163. The author hopes that a strong animal husbandry program will be developed by the two colleges -- and that in time, programs or colleges of home economics, education, science and arts, communication, agricultural engineering will be added as steps towards the creation of an agricultural university.

2. The four universities should be under an independent and autonomous board of control, which would have representatives from the government, the universities, and the agricultural community.
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2. The universities should be under an independent and autonomous board of control, which might consist of representatives...
from the directors and secretaries of the governmental departments concerned plus citizens of insight and integrity. The latter might be selected by the Governor of the State.

One of the rural universities might serve as the parent institution, with a president who would report to the board of control. Each of the four might have a vice-president who would be directly responsible to the president. The university staffs might have representatives on the board. Each college would be administered by a principal or dean who would be responsible to the vice-president.

3. Animal husbandry must be taught at colleges where training in crops and the social sciences is provided. All general extension workers in India need training in these fields. The agricultural teachers for the primary and secondary schools, who should constitute the largest group trained in the agricultural colleges within two decades, must have excellent training in crops, animal husbandry and the social sciences.

It is not imperative that animal husbandry be taught in an agricultural college instead of a veterinary college, provided the two colleges are on the same campus. However, if the agricultural and veterinary colleges are on separate campuses, it is imperative that animal husbandry be in the agricultural college. An extension specialist cannot provide the service of both the veterinarian and the expert in animal husbandry. See report No. 97.

4. Teaching, research and extension should be integrated in each section of the agricultural, veterinary and home economics colleges. Steps are underway to integrate teaching and research, but progress is very slow in bringing extension into an administration and operating relationship with the other two phases. Progress towards the most effective teaching and the most practical research is retarded unless the extension specialists are constantly working with the teachers and researchers. Research must be organized in relation to both teaching and extension so that it undergirds both of these educational functions. See report No. 100.
5. Each college should have one, two or more extension blocks under its responsibility -- which would be used for training students, for bringing the researcher into constant contact with problems faced by the villagers and extension workers, and for experimenting on projects and extension methods for wider application. This does not mean that the colleges should assume the responsibilities for all extension in the State. The job is too big for the colleges now and in the immediate future.

The officers of the adjacent extension block should be located near the college, so there may be daily contact and exchange with the staff members of the college.

6. A basic agricultural school and an extension training center should be located on the campus of each agricultural college. The school and the center should be under the operational direction of the principal and the professor of extension, and be used for experimental training in both subject matter and methods. Any educational improvements could be applied in other similar schools and centers. In the future, the facilities could be used for a wide variety of short courses for villagers and extension workers.

7. The six training centers and institutes in the Ranchi area should be brought together under one administration and in one set of buildings and facilities. Such a center should be located adjacent to an integrated teaching university, preferably near Ranchi Rural University since almost all of the training programs are concerned with the villagers.

The training center should be near a university so that the scholars and specialists of the university may be readily used. In the future, the contents and methods of the programs will change, perhaps some will disappear, and new programs will be added. The administrators and teachers of the training programs need to confer with the university staff regularly, utilize the library, and take special or graduate courses at the university -- otherwise their lectures and programs may become a bit stale, during the years ahead. This assumes that the university
will have an active service program. Each rural university in India will need a continuing education center to service youth and adult groups. The author would expect that such a training center would in time become an integral part of the university.

8. The social sciences need more attention in the agricultural colleges and the future rural universities. The social sciences, include: economics, psychology, sociology, anthropology, and the economic aspects of history and geography. In the future, agricultural economics in the rural universities should cover principles of economics applied to agriculture, economic development of agriculture, international economics applied to agriculture, farm management and farm planning, production economics, marketing, prices, finance, cooperation and farm organization, policy, land economics and conservation, economic geography, economic history, economics of consumption, economic research, and economic education and extension. Rural sociology also has several sub-fields: principles applied to the villages, community sociology, social psychology, social and applied anthropology, population and resources, social research and sociology education and research.

The author recommends a section on rural social science to include both economics and sociology. It is necessary that these subjects be together in the Indian rural universities in teaching, research and extension. See report No. 58.

The Bihar Government should request the Government of India to establish a farm management center at one of the agricultural colleges, and an agro-economics research center at another college. The centers should be associated with the section of social sciences at the colleges.

9. Establish a communication training center at Ranchi Agricultural College which could in time be developed into a college of the rural university. The communication arts are fundamental for the educational programs ahead in India. India needs three or four regional communication colleges which should be a part of rural universities. The Government of India
might assist in this project. See report Nos. 55 & 57.

10. Provide a home economist for the staff of the agricultural colleges, to assist in the regular extension courses, in the special extension refresher courses, in diets and sanitation in the hostels, and in the extension blocks affiliated with the colleges. In a few years, a section in home economics could provide training of several types: diploma course for village level workers and school teachers, B.Sc. program for block supervisors and secondary school teachers -- and could also engage in research work on several problems needing attention. See report No. 60.

11. Start a vocational education program at each of the agricultural colleges, to train teachers for both primary (diploma) and secondary (degrees) schools. This can be started immediately through cooperative relationships with the teacher training centers. The agricultural colleges must maintain close contact with the teachers of agriculture in the primary and secondary schools, and consequently will need sections on education -- which should in time be developed into colleges of education in the rural universities. See report No. 59.

12. Develop effective poultry programs at each of the agricultural and veterinary colleges -- for the training of students, the supplying of eggs and chickens to the nearby blocks, the improvement of breeds and the carrying on of needed research on nutrition and feeding, housing, management, etc. Five types of projects are needed: breeding flock, commercial flock, broiler production, village-type production, and experimental groups. See report Nos. 27, 37, 38, 39, 61, 87, and 163-A.

13. The State of Bihar should start a program to develop college training, research and extension in forestry and resource development. The college or school should be located at Ranchi Agricultural College since it is the area of forests, wildlife and future recreational potential. The educational areas to include are: multiple-use forestry, forest products, resource development, and fisheries and wildlife. Training
programs are needed for both the diploma and B.Sc. levels -- and later for M.Sc. training. See report No. 72.

14. Each of the agricultural colleges should start a youth program in the extension blocks near the college -- to determine projects and methods which will be effective in developing skills of improved farming and an understanding of the potential of farming and rural life. The findings can be used to expand youth programs to all parts of Bihar. See reports No.26, 86, 117, and 133.

Youth programs are scarce in Bihar and India. Only youth has the energy, the will and the potential vision to rehabilitate village production and life. Youth programs could be started with two youth workers, a young man and a young women trained in youth work. They could assist in projects which would utilize the college and secondary school youth in village service activities.

15. The libraries in the agricultural and veterinary colleges in Bihar need attention. The reading and study rooms should be located on the first floor convenient to students and staff. More space is needed at Sabour and Patna. The librarians should be trained and hold status equivalent to that of a professor. The library should be centrally located in the future rural universities, and with adequate space for expansion. See report Nos. 22, 67 and 80.

16. Training of cooperative employees and officials in agriculture. The cooperative program in India is primarily rural, yet few of the employees and officials concerned with the promotion and operations of cooperatives are trained in agriculture. The managers of the credit societies, who in the future will plan the farm business and supervise the use of credit must be trained in agriculture and especially in farm management and farm planning. An undergraduate major should be provided at the agricultural colleges for the cooperative employees and officials who are to take the lead in developing this new program of business credit for the villagers. See report Nos. 8, 41, 82 and 128-2.
17. Training practical and efficient farmers. Each extension block needs successful farmers, who will be the leaders in adopting improved practices, profitable combination of enterprises, in experimenting in cooperation with representatives of research and extension agencies, and in serving in various other leadership responsibilities. A small proportion, at least, of the graduates of the agricultural colleges should engage in farming. A larger proportion of the diploma holders from the basic agricultural schools should become farmers. In time, as the secondary schools provide courses in agriculture and the teachers gain experience, they will supply the initial inservice training of young farmers. Special short courses at the colleges can supplement the training of the secondary schools.

A proportion of the students at the agricultural colleges and the basic agricultural schools should be selected on the basis of their interest in becoming farmers, and also on the finance available to them which could be used to establish an adequate farm.

The State of Bihar might provide a program of financial assistance, in the form of repayable loans, for capable and trained young men to enable them to develop efficient and profitable family-type farm business. See report No. 110.

18. Training in marketing of farm products. Marketing training programs should be developed at the agricultural colleges immediately -- probably at the diploma, B.Sc. and M.Sc. levels. Men trained in crops, animal husbandry and agricultural economics are needed to develop a sound system for marketing and processing farm products. The present plan, of using those trained in science and arts, to develop agricultural marketing in Bihar is inadequate. Persons are needed also who understand the physical and chemical properties of the products to develop quality, grading, standards, processing, storage, and transportation programs. Marketing begins on the farm and in the village, so some of the marketing personnel must understand the business of farming -- farm management, farm planning,
farm finance and farm prices.

19. **Student cooperatives at agricultural and veterinary colleges.** Students cooperatives should be developed to manage and operate the food service in the hostels, and perhaps the canteen service, a book shop and supply store. If the students are to serve in the extension blocks or in any education job in rural India, they will be associated directly with group activities. Experience in managing and operating their own business has many advantages: savings, quality, understanding of principles and practical problems of cooperation. See report No. 77.

20. **Post-graduate program at Sabour Agricultural College.** The graduate and research program can be quickly strengthened, by a relatively small outlay of funds which will provide secretarial and other service workers, and supplies. Additions to staff are also needed. See report No. 103.

21. **Water conservation program.** Water is one of principal limiting factors in farming in Chotanagpur. The author has recommended a research and extension program, to be carried out in the block adjacent to the agricultural college, involving the services of soil, crops, animal husbandry, irrigation, forestry, and farm management specialists. The findings can be extended to other blocks. See report No. 74.

C. **Other Education and Development Programs**

Other programs, which should involve the agricultural and veterinary colleges, but which are more closely related to the broader aspects of community development include:

1. **Farm planning, supervised credit and production expansion.** Pilot projects should be started immediately in different sections of Bihar to determine the methods of combining planning, supervision of credit use and the expansion of farm output -- using all of the educational and service resources. The expansion of farm production has been very slow since 1952, when the extension program was started. The population is growing at the rate of 1.5% a year.
Calories consumed per capita per day should be raised from 1700 or so to probably 2300. See report Nos. 8, 82 and 119.

2. Recruitment and training of leaders among the tribals of Bihar. The Governments of India and Bihar have recognized the need for special attention to the scheduled tribes and castes, to enable them to develop and fulfill their proper responsibilities in the life of the nation. Young men and women from these groups are not coming forward in adequate numbers for technical and professional training to fill their proportional share of the service jobs available in extension, education and other opportunities. Only one tribal entered Ranchi Agricultural College in the new class in 1959, and none entered the Veterinary College at Patna. Welfare programs are inferior methods of developing a people. The scheduled tribes and castes must have their own trained and dedicated leadership, obtained from the village youth.

The author has recommended a study committee for recruiting and training of tribal leadership, to prepare programs which will provide technically and professionally trained persons who will become the progressive leaders in village life. See report No. 53.

3. Youth program for Bihar. A program should be initiated which would utilize the labour and imagination of all college and university youth in constructive educational, recreational and service work in the villages and communities of Bihar, and of India -- for a period of time during or following the formal training period. This might be part of a national youth service program. The college youth could work in cooperation with the youth of the secondary schools.

The author recommends that a committee be created to outline a practical program. As mentioned above, only youth can build a revitalized India -- in the shortest time. The potential resources of youth are not being adequately utilized. See report Nos. 26, 86, 117 and 133.
4. **Poultry program for Ranchi, Sabour and Patna areas.** The future success of the poultry program in the blocks may be directly related to efficient production and marketing programs around the large markets of the State. A poultry husbandry specialists, should be located in the area surrounding each of the three colleges, where he could use the resources of the scientists to assist in the development of disease control, management, housing, a feed industry, a storage and marketing program. When such poultry centers are developed, marketing outlets of surplus poultry and eggs from the extension blocks will be available. See report Nos. 27, 37, 38, 39, 61, 87 and 163-A.

Development plans and budget provided for a poultry development officer for the Chotanagpur Division. A young man trained in both poultry production and veterinary medicine in the US., has been available in Bihar since December 1958. The author has pointed out the situation, and hopes that the young man will soon be appointed.

5. **Inservice training program on human relations.** The author has suggested an inservice training program for the employees of the departments of agriculture and animal husbandry, and perhaps for others, to cover such areas as: administrative processes in a democratic society, communication philosophy and arts, motivation and action, cooperative policy making and planning, building morale, ethical and moral relationships, democratic leadership, self discipline and control, etc. Such a program should serve to step up both efficiency and integrity. Perhaps the Orientation Training Center in Ranchi is supplying many of these educational services. See report No. 44.

6. **International City-to-City program.** The author proposed, when visiting Columbia, Missouri in 1958, that a program be developed which would involve the leaders of Columbia and of Ranchi. Paul Gwin, an agricultural editor of the University of Missouri had similar ideas. He was in contact with Win Graham and Private Enterprise Inc. of Wichita, Kansas.
which has assisted small business in several countries. Contacts have been maintained between Gwin and the author since coming to Ranchi. The Rotary Club of Ranchi will further the idea in the Ranchi area. An International City-to-City Committee has been set up in Columbia, with representatives from several civic group. A plan to develop relations between the Rotary Clubs in the two districts, around Columbia and in the area in which the University of Missouri has the college contract, is being considered. This program will require some time to develop on an effective basis, but has tremendous potential in the years ahead -- in cultural exchange, training, machinery, and equipment, new business enterprises, and business assistance of many types.

7. **Student cooperatives.** The author recommended that attention be given to the organization of and operations of cooperatives for the agricultural and veterinary colleges, and the basic agricultural schools of India. See report No. 77. If India is to develop a strong cooperative segment for her planned mixed economy, and especially in the rural areas, the future educational leaders should have practical experiences in their school and college programs. Consequently, cooperatives of many types should be encouraged and promoted among the students and staff of the primary and secondary schools, as well as in the colleges and universities.

8. **Library and clearing house for materials on agricultural extension and agricultural economics.** Books, publications and resource materials are being prepared currently by Indian and foreign authors. The teachers of these subjects, as in the agricultural colleges and extension training centers, have need for information on usable materials, and perhaps should automatically receive selected publications. The author has recommended that one of the libraries of the Ministry of Food and Agriculture might provide such services for the training institutions. See report No. 130.
9. Special meeting of rural social scientists. Several American agricultural economists and rural sociologists are working on TCM and foundation program in the states of India. They have not had an opportunity for group meetings to exchange experience, to confer as a group with center agencies, and to consider their potential contributions. The author has recommended that such a workshop conference be arranged in Delhi. See report No. 131.

10. Suggestions for graduate studies in American universities for students in India. The agricultural and veterinary colleges, and the research institutes of India are short of well-trained personnel -- both specialists and administrators. The colleges are starting M.Sc. programs. Hundred of young men confer with the U.S. specialists annually about educational opportunities in America. The author has recommended a type of correspondence course program for the five Land-Grant Universities working with the colleges -- which could provide foundation courses for U.S. college programs, would reduce the time required and cost of obtaining advanced degrees in the U.S., and also provide a better basis for selection of graduate students for training in the U.S. See report No. 137.

11. A Joint Indo-American team to survey, analyze and make recommendations for education and development of agriculture, animal husbandry and related fields in Bihar. The author is certain much more rapid progress could be made in the development of educational facilities and personnel to serve the villagers and to raise the level of farm output in Bihar. He has presented the following objectives: 1) to investigate, analyze and offer suggestions on programs, policies, plans and operations, 2) to stimulate thinking, to evaluate, and to present programs and future plans, 3) to prepare and discuss the recommendations with officials and leaders of Bihar, and 4) the primary objective is to assist in improving the quality of educational services for villagers, as related to all aspects of farming. See report No. 138.
The analysis should cover: 1) all aspects of education and development which affect farming, 2) teaching, research and extension -- organization, administration, relations, policy making, and planning, 3) colleges, research institute, and training centers and institutes; and 4) programs at the state, division, district, block and village levels.

12. Cooperative projects in village to expand production group activities. The national policy is aimed at developing many types of cooperatives to serve the villagers. Some national leaders advocate the development of cooperative firms in the immediate future, and others are critical of this position. Perhaps both groups could find considerable agreement on a program to develop scores of economic and social group activities -- which might provide the understanding and motivation for voluntary cooperative farming, processing, marketing, etc. in the future. The author has recommended experiments in selected villages. See report No. 127.

13. Suggestions on curriculum for agricultural colleges of India in the future. The author examined and evaluated the report of the Joshi Committee on Curriculum prepared for the I.C.A.E., and the Agricultural Education Committee for Bihar, and has prepared principles and suggestions on which liberal and practical training programs in the agricultural college may be built. He has proposed courses in communication arts, in humanities and integrated courses in the social sciences for all agricultural college students. He has also proposed a curricula in agricultural and animal science which will permit specialization at the undergraduate level. See report Nos. 147, 148, 152 and 154.

III Jobs and Responsibilities for the Future

Among the responsibilities for the author during the months ahead are:

1. Counselling and assisting in developing the programs and projects outlined above. The main service should be to assist in developing a sound educational structure, which could mature
and provide the most efficient services for the citizens of Bihar, and especially the villagers.

2. To assist in developing the rural social sciences, agricultural extension and education at the diploma, B.Sc. and M.Sc. levels, and to survey and analyze the uses of the subjects and methods through the extension service to the villagers.

3. Course outlines have been prepared in agricultural extension and agricultural economics for the B.Sc. and M.Sc. programs. These outlines should be tried, weaknesses found, corrections made, and applications developed for Indian conditions. Bibliographies should be prepared. Many of the courses need to be outlined in more detail to assist the teachers. Mimeograph materials should be prepared. In time, the teachers should prepare books which could be used in other states of India -- since new methods and contents are included in several of the courses.

4. The functions and services of the agricultural economist needs to be analyzed not only for the colleges but also for various governmental agencies serving the villagers.

5. Attention should be given to aptitude and attitude tests for students who wish to enter, and after they are accepted by the agricultural and veterinary colleges. Books and publications are being collected, and contacts made with psychologists in Bihar.

6. The field of evaluation needs much attention, not only in the classroom (both theory and practicals) and training programs but also in the operations and accomplishments of meetings, projects, programs, etc.

7. The rural university plan should be analyzed in more detail -- objectives, advantages, organization, administration, board of control arrangement of buildings, steps in development, etc.

8. The author should visit more of the villages and extension blocks, to obtain a more complete understanding of the agriculture of the State and of the operations and problems of the extension service.
9. The author should continue to assist in analyzing the marketing programs and in formulating plans for their improvement in Bihar and West Bengal, and to continue to assist Assam in various educational programs of the colleges and the departments serving the villagers -- and should assist in developing the rural social sciences and agricultural extension in Orissa.

10. The vocational agriculture and home economics training programs for primary and secondary schools should be studied, especially in respect to services which might be provided by the agricultural and future home economics colleges.

11. The agricultural colleges must assist in providing training for:

1) The agricultural personnel who are to prepare the farm plans in the intensive training programs which are being started in several states, including Bihar.

2) The personnel who will experiment with intensive production programs associated with the colleges, if the special grants from U.S. funds in India are obtained.

3) The marketing personnel who are needed in many of the technical and operational problems of marketing and processing farm products.

4) The farm management personnel who will undoubtedly be operating the cooperative farms in the near future, and

5) The farm management and farm credit personnel who must be associated with the local cooperative credit societies, if the latter are to be successful.

The author has had many years of experience in farm management, marketing and cooperation, and consequently should be of real service to the agricultural colleges in developing and operating such training programs.

12. The author has developed an intimate knowledge of educational, economic, political, and social conditions in Bihar. He is prepared to submit proposals he has...
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12. The author has developed a fair understanding of the educational, economic, political and social programs and issues in Bihar. He is prepared to spend more time with the busy officials who may wish to plan, modify and expedite the suggestions and proposals he has offered -- or to counsel with them on other
programs where he has competence.

IV  A Few Final Observations

The author and his family have been treated very courteously in Bihar, and have developed many friendships. He cannot conceive of a more interesting experience, or perhaps a more productive experience, than he has enjoyed during the past two years.

He has found the citizens, leaders and officials very receptive to the ideas he has advanced. They have been pleased, apparently, at the frankness of his comments and recommendations.

None of his ideas have been presented as finished proposals, since he has much to learn about education in Bihar and India. He favors the steady evolutionary growth of educational institutions based on the needs of the citizens and the competence of the university to provide the services.

The Ulrey family has attempted to become a part of the Kanke and Ranchi communities. The specialist joined the Ranchi Rotary Club, which has many creative projects. Both he and Rotaryanne Ulrey have attended the Club on Thursday evenings. They have also joined the Ranchi Club, a social club of the area. A contribution was made to the Children Park promoted by the Rotary. A small loan fund was provided for students at Ranchi Agricultural College. A fine collection of 78 volume containing about 1400 bulletins on agriculture and related fields was presented to the College. A contribution was made to the Dhumkuria School in Kanke, a tribal school which uses music and dance in the training program. A pint or so of Type 0 blood was given to a patient in need at a local hospital.

Mrs. Ulrey tutored a lad of 10 in English during the past year, and was pleased when he rose from last to first in English in a class of 42. She also tutored three young boys and a girl from one family during their summer vacation. She was able to determine some of the basic weaknesses in training in both English and Hindi, and to begin the rehabilitation of their English. She has been making progress in Hindi by studying with a tutor for a year.
The author is increasingly aware of the legion of tough problems which face the leader of Bihar and of India, as they attempt to build a modern society and develop the talent and resources of the citizens. The officials and officers, the educators, private business, labor and all citizens have the author's best wishes that the tremendous democratic experiment underway will be successful in developing productive and creative citizens and consequently a modern dynamic society.

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