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THE HISTORICAL BACKGROUNDS
OF THE
MEXICAN AGRICULTURAL PROGRAM

(Annotated Edition)

by
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The agricultural program of The Rockefeller Foundation as an operating entity began in February, 1943, when J. George Harrar, a young scientist recruited to the Foundation staff for the purpose, crossed the border at Laredo and in a new station wagon drove south over jolting roads to Mexico City. His mission was to start a research section in the Ministry of Agriculture dedicated to the proposition that scientific study of Mexico's agricultural problems and the application of the results to the improvement of food crop production would benefit the welfare and economy of the Mexican people.

From this modest, one-man beginning, the agricultural program has grown in a brief twelve years to an enterprise operating in ten Latin American countries, manned by thirty-six trained agricultural scientists who conduct research in thirty-three experiment stations. Staff work in improving agricultural production in particular regions and countries is augmented by a scholarship and fellowship training program which has already reached over three-hundred and fifty individual graduate students from 14 countries. Supplementing this work of direct operation is a grants program for the support of basic research in the sciences which may lead, either immediately or over a longer run, to the increase of the world's food resources.

The scope and complexity of the program is described briefly in the "Twelve-Year Report on the Agricultural Program of The Rockefeller Foundation" by the same J. George Harrar who initiated the work in 1943

and who is now the Foundation's Director for Agriculture.

The purpose of the present paper is to set forth the historical context out of which the program itself originally grew. Future papers by the same writer, it is expected, will recount the highlights of the development of the major phases of the operating and training programs.

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Though the establishment of the operating program in Mexico in 1943 was the first venture of the Foundation on its own initiative into agriculture, it was by no means the first operating program of The Rockefeller Foundation. Nor was it the first venture into agriculture by the closely associated group of endowed funds often referred to jointly as the "Rockefeller boards."

Like most events in history, Harrar's first journey to Mexico grew from a complex of historical sequences. The roots of the Mexican agricultural program reach back beyond the establishment of The Rockefeller Foundation to the first grant made by any Rockefeller board. (1). *one of earliest*

not first This first grant, made in 1906, was the one by which the General Education Board initiated its support of a cooperative farm demonstration campaign in the Southern states. This support continued until 1914, when the campaign resulted in the establishment by the Congress of the county agent extension system of the United States Department of Agriculture (2).

Directly linking this early venture in agriculture with the present one was the interest of two men, both Southerners, who had seen the farm demonstration campaign at first hand. Meeting again years later in Mexico, they decided that a similar campaign would be of great value in

raising the living standards of the people of Mexico; from their efforts grew the sequence of events which eventuated in the establishment of the Mexican program.

Another early effort, that of the International Education Board in the 1920's, must also be given recognition as a contributing influence on the setting up of the Mexican work. The connection is directly through the interest of one man, himself an agricultural scientist, who directed the agricultural program of I.E.B., and who by chance was in New York with another Board at the time the new venture was being discussed. His wise counsel did much to set the plans for it on the right track.

The historical connections between the earlier activities and the later one, as is so often true in human affairs, depend on a set of coincidences so improbable they could only have happened in real life; written as fiction they would appear much too forced. To tell the story chronologically is the simplest way to narrate these connections.

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The fact that the first grant made by a Rockefeller board was to an agricultural agency was itself the result of an odd historical coincidence.

About sixty years ago, in the 1890's, the boll weevil, an insect pest new to the United States, migrated northward from Mexico and was first observed in a cotton field near Brownsville, Texas (3). Stretching north and eastward from Brownsville lay the cotton fields of the Southern states, a succulent and defenseless Cotton Empire for the new invader to conquer.

Sheer panic followed the boll weevil's early onslaughts. The speed with which it traveled, the voraciousness with which it stripped the fields, and the hardihood with which it survived over the winter, seemed to herald the ultimate ruin of the chief cash crop of the Old South. In the vicinity of Brownsville, farmers abandoned their farms, merchants went bankrupt, whole counties were depopulated (4). No agricultural disaster in recent times could possibly produce such feelings of black despair; in those innocent days science had not erected the defenses of chemical protection and entomological control which stand between the modern farmer and his natural enemies.

The coincidence began in the little town of Terrell, Texas. A special agent of the United States Department of Agriculture, then nearly seventy years old, had for a couple of seasons been running some model farms in the Gulf States. The purpose of the model farms was to convince local cotton growers they should break away from their slavery to a single crop by diversifying their production. The model farms were owned or rented by the Department and were worked by Department employees. The success of these "ocular demonstrations," to put it in the kindest terms, was negligible (5).

In 1903 the special agent changed his sales pitch to take advantage of the boll weevil panic. The way to check the weevil, he began to argue, was to farm according to his methods. He went further: if some farmer would volunteer to raise a cotton crop strictly according to his directions, he would see to it that the volunteer would be guaranteed against loss should the experiment yield him less profit than he might have made with the old methods.

A farmer did volunteer, offering to try the new methods on 70 of the 800 acres of his farm. At the end of the summer, when the cotton from the 70 acres was picked and ginned, the farmer found himself with \$700.00 more profit on that plot than on any other 70 acres he owned (7).

The effect was sensational. Pleas for help and offers of financial support poured in on the old man from banks, railroads, chambers of commerce, merchants, and farmers. The Department of Agriculture allocated \$40,000 for him to hire and train 33 special agents to spread the plan throughout the length and breadth of Texas. In the next growing season -- 1904 -- several thousand farmers tried the new methods, most of them with just as much success as the lone volunteer of the year before. In 1905 the Department increased the budget and more agents were trained to extend the campaign into surrounding states. The Farmers Cooperative Farm Demonstration program was rolling (8).

But the old man was not satisfied. He had devised the cooperative farm demonstration method to diversify southern agriculture, not to entrench the one-crop system by protecting cotton from the weevil. He dreamed of a rural South where prosperity would be protected by several cash crops. He wanted the fertility of the farmlands built up by good farming, not depleted by wasteful exploitation. He wanted farm families to enjoy a better diet by raising their own vegetables, poultry, and meat. He wanted farm children to learn good farming in their youth, and to grow up respecting the dignity of farming as a way of life (9).

The elderly gentleman should now be introduced. Seaman A. Knapp probably thought he was retiring when he took the job of running a few model farms for the Department of Agriculture. His career was already a distinguished one: he had been president of Iowa State College and had

successfully promoted a large project in land development in Louisiana. As a sideline to his land scheme he revolutionized rice growing in Louisiana, devising a system of controlled irrigation by which the crop could be planted and harvested with machinery (10). As a plant explorer he had gone to Japan to find a better variety of rice to supplant the poor ones then grown in Louisiana (11). He was an associate of the first Henry Wallace, a friend of James Wilson, then Secretary of Agriculture, and of Walter Hines Page, publicist of the "New South." But his place in the history of American agriculture rests on the cooperative farm demonstration system which he envisioned and organized in the last eleven years of his life, between the ages of 70 and 81 (12).

Knapp's method of cultivation was anything but revolutionary; he prescribed nothing "except those things already practiced by the best farmers. Thorough preparation of the soil, the use of the best seed, the liberal use of fertilizer, and thorough cultivation of the growing crops, were the essentials of his program" (13).

His innovation was in pedagogy, or in salesmanship, if you prefer: inculcate good methods not by demonstrating them yourself but by persuading farmers to demonstrate them to themselves and their neighbors. The Department of Agriculture's model farms failed because dirt farmers would not believe they could raise crops like those grown by the trained employees of the Department. But when they did the work themselves and saw the results in their own fields, they were convinced (14).

Knapp's method succeeded in keeping the weevil under partial control because he insisted on clean farming. The boll weevil thrives

best on slovenly farms, hibernating during the winter on the dead stalks and litter in the field and in the leaves and trash at its edges. Fall plowing, which Knapp urged, turns under much of the field litter, and the neat fence rows he recommended likewise cut down the number of weevils which survive the winter. In the growing season, the crop, started with good seed and urged on by plenty of fertilizer, grew fast enough to escape much of the weevil's attack (15).

"If the demonstration method paid in dealing with a pest-ridden farm," one observer asked, "was there not every reason to suppose that it would pay still more handsomely when no handicap existed?" (16).

Knapp thought emphatically that it would, and that it would pay in enriched human values even more than in money. All he wanted was a chance to prove it.

The chance came when, in the city of New York, the other half of the coincidence took shape.

In that city a man of wealth with a moral sense of stewardship established the General Education Board for the promotion of education, especially in the South, "without distinction of race, sex, or creed." The time was 1903, the same year Knapp shifted from model to demonstration farming. Guiding genius of the Board was Frederick T. Gates, a former Baptist minister who advised John D. Rockefeller in most of his major philanthropies (17).

When Gates looked around in the South for opportunities to promote education, he found little education to promote. Average farm incomes in many southern states were \$150.00 a year, compared to \$1,000.00

in a state like Iowa. With 85 per cent of the population rural in character, the South simply did not have the money to pay for good public education. Gates, believing in the ideal of public tax-supported education, decided that the Board should first devote itself to raising the income of rural tax payers (18).

"If farm incomes could be raised," he believed, "Southern farmers would gladly support better schools in more and more liberal fashion." (19).

But there was the rub: how does one raise the rural income of an entire region? To find an answer, the Board searched two years and then, almost by accident, found Seaman A. Knapp (20). Having found him, Gates acted promptly.

Inviting Knapp to Washington, Gates met him there to talk about how they might join forces. Knapp was famed as an eloquent man (21). Since Gates knew of the farm demonstration method as an anti-boll weevil measure, Knapp must have talked most of his ambition to devote it to general purpose farming. He did not fail to reinforce what the Board had already concluded about the dependence of better education on higher rural incomes:

"Schools," he once said later, "should follow as the sequence of greater earning capacity, and should not be planted by charity to become a tax on poverty." (22).

Gates did not fail to ask the key question: "Why cannot your demonstration work be extended to all the states of the South?"

"Because," replied Knapp, "federal money cannot be used except to fight an interstate evil like the boll weevil, for example." (23)

This was all Gates needed to know. Without much further ado, the two men devised a plan whereby the Board put up the money for the Department of Agriculture to expand the cooperative farm demonstration campaign into states which the weevil had not then invaded, with Knapp in charge of the work. The contract was signed in April, 1906.

Between 1906 and 1914 approximately a million dollars of Board money paid for the work in eight southern states (24). Unhampered by the restrictions on federal funds, this money went into demonstrations which not only inculcated more profitable farming methods but also sought to improve the quality of rural life. The demonstration agents, gradually increased in number until there was one for each county covered by the campaign, worked with the farmers. In addition, women trained in domestic science were appointed to teach the household arts to rural women and to organize canning clubs among the girls. Other special appointees, often schoolmen, stimulated the boys to form corn clubs and to undertake other youth activities (25). A group of Negro agents, at the insistence of the Board, were trained to work with farmers of their race (26).

Measured by any yardstick, the campaign was a success. In 1912, toward its end, no fewer than 106,000 farmers volunteered to try the Knapp method under the direction of 639 county agents, plus that of 155 special appointees for the work with women and youth. Demonstration farms dotted 636 of the 1,163 counties in the states concerned (27). Farm incomes went up. Corn yields on demonstration farms in Virginia averaged 41 bushels an acre against 23 on other farms. Cotton farmers in Georgia, using demonstration methods, averaged 1,303 pounds of seed cotton per acre against 732 for

those using customary methods (28). The very appearance of the southern landscape changed under the impact of Knapp's gospel of clean farming.

Seaman Knapp died in 1911, not living to see the final triumph of his idea. The success of his campaign "dissipated the constitutional scruples that . . . restricted governmental activities in this direction to the plague-infected states." (29). In 1914 Congress repealed the restriction. The same legislation (the Smith-Lever Act) established the Extension Service of the Department of Agriculture, in order, as one Congressman phrased it, "to put the Knapp demonstration plan into active operation in every county throughout the broad limits of this Union on a larger and broader scale." (30). Bradford Knapp, son of Seaman A. Knapp, became Chief of the Office of Extension Work in the South (31).

The Board, its mission accomplished when the government took over the operation and with Southern farm economy well on the way to substantial improvement, terminated the arrangement with the Department of Agriculture and turned back to its original objective(32). After that time it worked directly with educational agencies and educators for the improvement of education, with continued special reference to the South.

The term "technical assistance" had not entered the American vocabulary in Knapp's time, but looking back at his campaign one can see that it had most of the essential elements of an ideal technical assistance program for an under-developed area. The farmers of the South worked the soil at a primitive technological level, but they knew their precarious situation and wanted to improve their lot. They could do little themselves because they lacked

technically trained leadership and they lacked funds.

Knapp, northern born and trained, came in from the outside to supply the technical leadership almost single-handed. He did not attempt complicated techniques but started where the farmers were. His prescription for better farming was so simple he could train large groups of agents almost in a single lecture session (33). The funds came from a disinterested outside agency. The campaign was fast, relatively short, and hugely successful, closing with the happiest of all endings for a technical assistance program when the government, with complete local approval, took over and extended the entire operation.

Small wonder, then, that the Knapp campaign strongly impressed the thinking of a whole generation of agricultural educators about the method by which agricultural betterment can most quickly and efficiently be accomplished in an under-developed area.

More immediately germane to the history of the establishment of the Mexican agricultural program is the strong impression the cooperative farm demonstrations made on two Southerners who observed them at first hand and who later sought to initiate a similar campaign in Mexico.

The second improbable coincidence began in the state of North Carolina.

While the Knapp farm demonstrations were in full swing, Frederick T. Gates of the General Education Board encountered another major factor which adversely affected southern rural economy: the general debility of many Southerners which resulted from heavy infestations of hookworm. The disease caused by this intestinal parasite almost literally drains away the vitality of the sufferer, leaving him listless, underweight, and anaemic. The incidence of the disease in certain parts of the South, surveys showed, was appalling (34).

Hookworm disease was known and understood by medical science; a simple, safe cure was at hand. All that was lacking was the will, and the means, to convince Southerners of the importance of the disease and to stir them to action.

A man who had the will but not the means was a remarkable physician named Charles W. Stiles, who for years had been crusading practically single-handed against hookworm. Gates met Stiles, was convinced, and collaborated with him in launching another large-scale technical assistance program. Because public health lay outside the field of the General Education Board, Gates created a new agency to handle the hookworm work: the Rockefeller Sanitary Commission, which began operation in 1909 on a five-year campaign financed by a million dollar pledge from Rockefeller. Dr. Wickliffe Rose, a former professor of Philosophy, was its Director from the start (35).

The anti-hookworm crusade of Dr. Stiles encountered much popular

opposition in the South, and when the formation of the Sanitary Commission was announced, public furor increased. The South did not take kindly to the news that its citizens suffered from infection by a "germ of laziness," as the newspapers promptly labelled the parasite. How did it happen, indignant Southern editorial writers asked, that one Southerner licked five Yankees in the late War Between the States, if this were true? (36).

The first half of the coincidence was represented by Josephus Daniels, owner and editor of the News and Observer in Raleigh, North Carolina. At first Daniels joined in the clamor against the Stiles crusade. But being a reasonable and humane person, he found occasion to talk with Dr. Stiles personally. He came away from the interview with a different point of view.

"I got off on the wrong foot," Daniels explained later. His was one of the few Southern newspapers which editorially applauded John D. Rockefeller for financing the Sanitary Commission (37).

The second half of the coincidence was represented by a young county school superintendent in North Carolina named John A. Ferrell. Daniels and Ferrell had met in 1904 when Daniels aided the young man in some litigation aimed to improve the county school system. (38). Ferrell left the educational field, took a degree in medicine at the state university in 1907, and became one of the first staff members engaged by Wickliffe Rose for the Sanitary Commission in 1910 (39).

The association between the two men continued during the three years Ferrell lived in Raleigh as State Director for the anti-hookworm campaign. Daniels lent generous support to the work, at one time overriding the protests of the newspaper's business manager to run some free

advertising for a hookworm demonstration (40).

Daniels' connection with the farm demonstration campaign was even closer. As a trustee of the North Carolina College of Agriculture and Mechanic Arts (41) he would have known of the slight hassle between the college and the Knapp agent for the state, as a result of which the agent made his headquarters in Statesville rather than in Raleigh, and of the rapprochement between the two a few years later (42). The Board, in the later years of the campaign, insisted that the farm demonstration campaign be coordinated with the extension departments of the state agricultural colleges, a move which necessitated official action by the Trustees of the North Carolina College in 1909 and again in 1912 (43). The first Knapp demonstration in North Carolina was on a farm near Raleigh (44), and by 1912, demonstration farms flourished in 56 of the state's 100 counties (45); over 8,000 farmers were enrolled as demonstrators (46), 3,200 boys were in farm clubs (47) and nearly a thousand girls had joined canning and similar clubs (48). The editor of the leading North Carolina newspaper could hardly have been unaware of the movement even had he not been officially connected with the state agricultural college.

After 1913 the careers of the two men separated to follow widely divergent trajectories, which, curiously, converged again twenty years later in the country south of the Rio Grande.

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The Sanitary Commission, absorbed into The Rockefeller Foundation upon the establishment of this fund in 1913, became the nucleus of the International Health Board, with Wickliffe Rose as director and with much of the same staff, including Ferrell (49).

The hookworm campaign may justly be said to represent the archetype of a second kind of modern technical assistance program -- one built for the long pull, as contrasted with the one-shot type represented by the farm demonstration campaign. The two stand together in importance as influences on subsequent thinking about technical assistance. It is significant, as will later be apparent, that while the impetus for the establishment of the Mexican agricultural program came from men who thought in terms of the farm demonstration type of campaign, the form it actually assumed followed instead the organization and methods by which the International Health Board achieved its "truly wonderful record" (50).

In eleven under-developed Southern states the Sanitary Commission tried out and adopted a number of principles of operation. Several of these are of especial importance in their influence on the Mexican program. One was direct operation. Instead of giving money to another agency to do the work, as the General Education Board had done with the Department of Agriculture, the Commission created its own staff of doctors and technicians, assigning them to organize and operate the health education campaigns and treatment clinics required to combat the disease (51).

The second principle was to work through established agencies. In public health, this meant working through governmental agencies. Whenever it was necessary to create a new agency, every effort was to be made to have it given official recognition and to clothe it with official authority. In all eleven states, the campaigns were waged under cooperative arrangements with state departments of health and in close collaboration with local health officers (52).

The third principle, developed after the Commission became the International Health Board, was continuity of effort. Organizationally, continuity of effort meant the creation of a permanent staff recruited on a career basis. The Board thus had at its disposal a group of trained people who grew in technical proficiency and skill as their experience increased and who could be deployed over the globe to fight the battles of public health wherever the need was greatest (53).

A unique contribution of the International Health Board was the "shock troop" principle. The highly trained and experienced members of the staff were used to breach the enemy's lines; the holding campaign was left to locally-recruited "militia." Operationally, this meant a training program. The staff member, practically upon arrival at a new theatre of operation, chose the best aides he could find, and then, by means of local training classes, and scholarships and fellowships for formal study, developed their skills to the point where they could be entrusted with the entire campaign. Thus the staff member, having "worked himself out of a job," would then be available for assignment elsewhere (54).

A final principle, the first in Rose's list, is anonymity. In Rose's words,

"1. The Commission will seek to hide itself behind its work and to keep to the front the local agencies through which the work is being done." (55)

Would the principles of operation developed in a technical assistance program in the South of the United States hold good in other countries and against other diseases and deficiencies? The International Health Board, dedicated to an affirmative answer, first perfected its methods through pilot-scale operations in a few Caribbean and Central

American countries (56). Then over the next three decades it conducted the long series of brilliant campaigns against disease and ignorance which, literally encircling the globe, did so much to usher in the modern era of public health and preventive medicine.

The triumph of public health, tilting the birthrate-deathrate balance, in turn produced the era of "exploding populations." Ferrell's career with the International Health Board, spanning its history from inception to triumph, brought him, in the Twenties and Thirties, to the position of regional director for public health for Canada, the United States, and -- coincidentally -- for Mexico.

The career of Josephus Daniels followed a path which likewise ended in Mexico. As is well known, Daniels served with distinction as Secretary of the Navy through both terms of the administration of Woodrow Wilson. After this tour of duty he returned to Raleigh, so he thought, to spend his remaining years in his beloved state, building for himself and his family a big stone house on what was then the edge of the city. But fate ruled that the man who had been his Assistant Secretary of the Navy should become President of the United States. Franklin D. Roosevelt appointed his "Chief," as he called Daniels, to the ambassadorship to Mexico. Daniels was sixty-nine years old when he took residence in the spring of 1933. He and his wife lived in Mexico for nine happy and diplomatically^{important} years, doing much to heal old animosities between that country and the United States, and helping to lay the foundation upon which the friendship between the two countries now endures.

A brief digression is necessary now to introduce a collateral influence on the establishment of the Mexican program.

Because the charter of the General Education Board limited it to work in the United States, John D. Rockefeller, Jr., established an International Education Board in 1923 to promote similar types of activities in foreign countries. The director was the same Wickliffe Rose who had steered the Sanitary Commission and the International Health Board through their early days. Under his guidance the I.E.B. launched bold programs in the natural sciences, the humanities, and agriculture. Upon Rose's retirement in 1928, these programs were absorbed by The Rockefeller Foundation and the I.E.B. was discontinued as a separate entity (57).

The agricultural work of the I.E.B. was directed by Dr. Albert R. Mann, Dean of the New York State College of Agriculture of Cornell University, who took a two-year leave of absence for the purpose.

Dr. Mann, after traveling extensively through the agricultural regions of Europe west of Russia, decided on projects of three general sorts. One was farm demonstration; the first project actually undertaken was a plan for cooperation with Denmark in farm demonstration work, a movement which was soon extended to Norway, and -- geography notwithstanding -- to Hungary. Training represented a second objective: altogether, 233 young people in 31 nations were given fellowships in agriculture to prepare them for posts in teaching, research, and administration. The third was the strengthening of institutions. Notable among these were the College of Agriculture of the University of Sofia, the Department of Research in Animal Breeding at the University of Edinburgh, and co-ordinated laboratories of agriculture, botany, zoology, and physiology at Cambridge University.

The I.E.B. also supported an agricultural project in China which was later continued by The Rockefeller Foundation. Sponsored by Cornell University and operated by Nanking University, this venture included a central experiment station near Nanking and several cooperative substations in other areas where plant breeding, research in cereals, beans, and several other crops was conducted.

The Foundation used this project later as the starting point for a broad program of rural reconstruction in China. Projects in animal husbandry, veterinary medicine, and the control of insect pests expanded the scope of the work, all of them integrated with other related interests such as sanitation, preventive medicine, marketing, rural economics, rural administration, and community works. Throughout the program from the beginning, the awarding of training fellowships to add competent technicians to China's human resources was stressed. The Foundation put more than a million dollars into this ambitious plan before the engulfment of war forced its termination.

At the expiration of his two-year leave, Dr. Mann returned to Cornell, but ten years later, in 1936, he came back to New York to make a study of the status and problems of agricultural colleges in the South for the General Education Board. Continuing with the Board, he became its vice-president the next year, and was thus on hand in 1941 to lend his advice to the discussions concerning the proposed agricultural work in Mexico. After his retirement from the Board in 1946, he served the Foundation part-time as Deputy Director for Agriculture, until his sudden death in 1947 (58). There will be occasion later in this paper to refer to some of the specific suggestions he made in 1941.

The public health work of The Rockefeller Foundation in Mexico, which was under the supervision of John A. Ferrell, ~~from the beginning~~, had a long and successful history at the time Josephus Daniels arrived in that country as Ambassador, as it has had since.

When the Sanitary Commission became the International Health Board of the Foundation, as already mentioned, the methods of fighting disease developed in the South were perfected in pilot-scale trials. After the trial period the first large country in the Western Hemisphere in which the Board undertook a campaign was Brazil. The next was Mexico.

Beginning in Mexico in 1919, mobile units of the Board waged campaigns against yellow fever, malaria, hookworm, and smallpox, among others (59).

In 1923, to coordinate the work and to give continuity of contact with the various cooperating units of the Mexican federal and state governments, the Board established the post of Resident Representative, sending as first incumbent a young doctor named Andrew J. Warren. The two Resident Representatives who figure in the establishment of the agricultural program were Charles A. Bailey and George C. Payne, who headquartered in Mexico City from 1932 to 1940 and 1940 to 1946, respectively (60).

The Resident Representatives held official status as directors of an agency of the Ministry of Health called the Oficina Cooperativa de Especialización Sanitaria e Higiene Rural (Office of Sanitary Specialization and Rural Hygiene) (61). They spoke the language, they were personally acquainted with the leading officials, medical men, and educators of the

Republic. Governments rose and fell during those troubled decades in Mexican history, ministers and officials came and went, but through all the changes the Foundation's representative worked quietly and undisturbed, exerting a steady pressure toward better public health laws and administration, toward better training of public health officials and technicians, and toward better medical education.

In the 1920's and 1930's more than 600 Mexican health officers, public health nurses, and sanitary inspectors received one or more short intensive technical courses in Field Training Stations operated by the Foundation (62). Some 56 doctors, nurses, and sanitary engineers studied abroad on Foundation fellowships and 21 received travel grants for shorter periods (63). Hundreds of others, participating in cooperative health campaigns led by Foundation doctors, learned at first hand something of the ideas and standards of modern public health practices. The cost to the Foundation for all this work, from the beginning to 1942, was \$1,200,000 (63).

At a moment when diplomatic relations between the United States and Mexico were wrenched by the tense issues of the nationalization of oil and land, the Ministry of Health, in a large public ceremony, placed on the wall of its headquarters building in Mexico City a bronze plaque in honor of John Davidson Rockefeller for his contribution to the health of the Mexican people. Ambassador Daniels attended the dedicatory ceremonies, (65), which were held in September, 1937, just six months before the Mexican government expropriated the property of all foreign oil companies. The speech of dedication, given by a distinguished Mexican physician, was largely a recitation of the Foundation's work (66).

When Vice-President Henry A. Wallace suggested, several years later, that if agricultural work were undertaken in Mexico it should perhaps be operated through a subsidiary with a different name because the Mexicans might associate The Rockefeller Foundation with American oil companies, it is no wonder that John A. Ferrell was incensed. The name Rockefeller in Mexico meant Foundation, not oil, he commented with some heat (67).

Owing in no small measure to the encouragement and assistance of The Rockefeller Foundation, Mexican doctors and public health officials were able to give their country the benefits of a higher average level of public health and sanitation than obtained in any other country in the tropical zone. The death rate began to drop significantly by the end of the 1920's and has continued to decline. But the birth rate continued the highest in the Western Hemisphere. The resultant net gain in population is the highest, proportionately, in the world (68). If the estimate for 1958 proves correct, Mexico's population will have doubled in the 37 years since 1921 (Figure 1).

That the success of their efforts would have this effect on population was commonplace knowledge among public health workers long before the prophets of population doom began thundering. The annual report of the International Health Board for 1918, for instance, notes the effect of hookworm infection in depressing the birth rate and of its control over large areas in lifting it (69).

To leaders in public health it was obvious that the health of the people in countries like Mexico, in so far as it depended on nutrition, could not be maintained at an adequate level unless the food supply

were likewise increased in quantity and improved in quality. They realized further that in most countries it would be impossible to increase the food supply without making fundamental improvements in the agricultural system (70).

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To John A. Ferrell, then, it seemed perfectly logical to think of strengthening the work in public health in Mexico by providing better nutrition through an agricultural program to increase the quantity and quality of food. Three times he sought to persuade the Foundation to undertake work in agriculture in Mexico: first in 1933, next in 1935, and finally in 1936.

The 1933 effort was little more than an exploratory gesture. Ferrell, in Mexico in the Spring, called on the Minister of Agriculture, Sr. Francisco S. Elias. The Minister spoke of irrigation projects in the North, mentioned the department's four agricultural experiment stations, and "the urgent need for better agricultural practices and for elevating the economic standards of the people." He had no suggestions for Foundation cooperation, but

He liked the idea of fellowships for training Mexican personnel, and he favored close coordination of government activities in the fields of agriculture and health, including housing, nutrition, and sanitation (71).

Ferrell duly turned in his trip notes, and later a summarizing memorandum to his divisional director (72), but made no specific proposal for action.

Ambassador Daniels and his wife arrived in Mexico City to assume their post at the Embassy also in the Spring of 1933, six days before Ferrell's departure (73). Ferrell probably called to pay his respects, but there is no record of any conversation concerning agriculture or other matters.

It is an interesting coincidence, however, that thirty-four days after his arrival, even before he had completed the rounds of official calls and introductions, Daniels accepted an invitation from the Minister of Agriculture whom Ferrell had just seen, to visit the National School of Agriculture.

As I had long been a trustee of the Agricultural College in North Carolina, I was glad to go with Agricultural Minister Francisco S. Elias to visit the Chapingo School of Agriculture about twenty miles from Mexico City.

"The college boys," he wrote his sons, "were doing the same things that college boys do at the State College in Raleigh, and if they had been speaking the English language, you could hardly have told any difference. They are all dressed in khaki and are there to learn how to be farmers, or rather how to teach others to be farmers."

The most interesting thing they saw at the College, Daniels observes, were the Rivera murals in the chapel, thought to be "the best examples of his work to be found anywhere."

Of the College work itself, he noticed especially that in animal husbandry.

We spent a couple of hours there inspecting the barracks and going over the 480-acre farms and seeing the fine cattle. I have hardly ever seen finer bulls. They have a large herd of cows, which give enough milk for the students. . . . The plan is to send the best bulls and cows to the other agricultural school of the Republic, so as to improve the stock (74).

Two years later, in the Spring of 1935, Ferrell went to Mexico again, and this time he had several long visits with Daniels (75). From these talks grew a more formal effort to persuade the Foundation to extend its program in Mexico into agriculture, an effort in which Daniels participated actively.

Both to Daniels and to Ferrell, the Mexican scene was strongly

reminiscent of the South in the decades following Reconstruction. In both regions a predominantly rural population, living on worn-out land and farming by primitive methods, lacked the means to support an educational system or the technical services which would rescue them from the vicious circle of poverty and ignorance. In both a rapidly growing population strained the food-bearing capacity of the soil when farmed at the current technological level. The nondescript industries of the two regions could not redress the balance of the national income.

To the two men the same answer occurred: an adaptation of the Knapp demonstration method, which they had seen in operation, and by which the South had lifted itself by its own bootstraps, should be equally effective in Mexico (76).

The plan which Ferrell formulated depended largely on the demonstration method, supplemented by a training fellowship program. He envisioned a budget of from \$25,000 to \$100,000 a year, and anticipated that the plan could be developed according to the following steps:

- A. Acquainting officials with what has been done in the United States by furnishing them with reports, publications, and other material.
- B. Invite a small group of Mexicans to study work that has been done and which may be under way, presumably in the United States.
- C. Give a few scholarships and training grants to Mexicans to spend from six to nine months in the United States or elsewhere studying procedures.
- D. On returning home, the fellows would seek to develop programs adaptable to Mexican conditions, in a few areas selected for demonstration purposes, and attempt to carry them out.
- E. Cooperative budgets similar to those in health work should be drafted for periods of from two to five years (77).

Ferrell even went so far as to stop in Raleigh on his way home from Mexico to secure some samples of bulletins and pamphlets in agricultural and home economics extension, to send to Charles A. Bailey, the Foundation's representative in Mexico, for use in any further discussions which might occur with government officials (78).

Daniels' part in the 1935 effort consisted of writing a long letter to his good friend, Raymond B. Fosdick, a Trustee of The Rockefeller Foundation. That he gave a good deal of thought to the composition of this letter is attested by the holographic first draft stapled to the typewritten carbon copy still among his papers. These paragraphs give his main points:

PERSONAL

Mexico
March 5, 1935

My dear Mr. Fosdick:

A little while ago I had the pleasure of greeting here Dr. John A. Ferrell, Associate Director of The Rockefeller Foundation, International Health Division, and of having several talks with him regarding the co-operation of The Rockefeller Foundation with the Public Health Service of Mexico with regard to the possible expansion of cooperation in the health or other fields such as agriculture, education, social welfare, et. As you know I have long been greatly interested in these matters and was in at the beginning of the work in the South initiated by the Southern Educational Conference and enlarged and made much more efficient by the Rockefeller Foundation

With regard to Mexico and the possibility of its receiving and accepting increased assistance from the Rockefeller Foundation toward its economic, physical and intellectual development, I am greatly encouraged. Its problems are somewhat similar to those we had in the South for several decades following the Civil War, but more difficult because of a number of complicating factors which the South did not have. Their solution, even with wise leadership and liberal aid, will require many years. But some adaptation of the programs administered in the South by Buttrick, Rose, and others will, however, I think, make for real progress in Mexico if the task is entrusted to men who can cooperate along the lines followed by the men named. . . .

When I look over the Foundation Reports and see that Mexico, our near neighbor, has received less than a million dollars, whereas China

has had more than thirty five millions, and the European countries large amounts, I feel that the Foundation can wisely give larger aid to our nearest neighbor. If the aid to Mexico can be increased and I can help in any way, you may count on my hearty cooperation.

With my warm personal regards, and best wishes,

Faithfully yours,

Josephus Daniels (79)

Mr. Raymond B. Fosdick,
61 Broadway,
New York, New York.

As it happened, Ambassador and Mrs. Daniels came to New York for the Easter season (80) and in further aid to Ferrell's plan, gave a tea to which they invited several Foundation people. Unfortunately, Mr. Fosdick was out of the country, but Mr. D. H. Stevens, Director for Humanities, and his wife attended, to renew a pleasant acquaintance with the Daniels begun on visits to Mexico City (81). Dr. and Mrs. Ferrell were also there, and reported on the progress of the plan.

By the end of the summer it was apparent that the Foundation was not receptive to an enlargement of the Mexican work into the field of agriculture. The 1935 effort became a closed chapter when Ferrell wrote Daniels on November 6, 1935:

You spoke of the urgent need of aid in agriculture and in other directions which would tend to elevate the economic level of the people in rural communities. I am sorry I have not been able to find a way for securing aid in this direction. Your efforts will undoubtedly be more fruitful than mine, hence I trust you will continue them....(82).

The matter was briefly reopened a year later, in 1936, when Mr. Raymond B. Fosdick became President of The Rockefeller Foundation. At his request, Ferrell prepared a memorandum reviewing his plan. It follows the argument used before about the opportunity for a program similar to that

of the General Education Board in the South, and about the necessity for improving economic conditions in Mexico if public funds are to be adequate for the support of education, health, welfare, and other services. Instead of outlining a detailed plan, however, Ferrell contented himself with the following general suggestions:

Except for public health, I have not attempted to mature a project for Mexico. But I believe two or three qualified persons might be sent to study its agricultural problems and possibilities and then outline broadly a constructive program. Again, a small number of carefully selected Mexicans might be given fellowships for special training in other countries. When they return ready for duty, they might be given some financial aid through proper channels toward organizing and conducting activities. This general plan has operated satisfactorily in Mexico with our returned fellows in public health... The former Minister of Agriculture who served with President Calles assured me he would welcome such cooperation, and I believe the present government would do so (83).

Ferrell sent a copy of this memorandum to Daniels, enclosed with a letter introducing an officer of the Foundation who was on his way to Mexico City (84).

In his reply, Daniels extended the welcome of the Embassy to Ferrell's friend, and referring to the memorandum, added:

I was very much interested in the extracts which you sent me and I think your ideas are excellent. As you know, seeing that this is the nearest neighbor of the United States and that the people are trying resolutely with small funds and with a population largely rural and uneducated, to improve agricultural conditions and the public health, I have hoped that the Rockefeller Foundation would cooperate in a larger way with the authorities and the people here (85).

Following the visit, however, Daniels confided these sentiments to the privacy of his diary:

On Wednesday I had a call from Dr. R. A. Lambert of the Rockefeller Foundation

Ever since I have been here I have been trying to induce the

Rockefeller Foundation to take a larger part in the public health work of Mexico. ... They are spending more now and taking more interest, largely through the influence of Dr. John A. Ferrell of North Carolina, who is one of the high men in the Rockefeller Medical Foundation. ...

I did not tell him, nor did I tell any of the other Rockefeller people, what I really thought, to wit, that inasmuch as the Standard Oil Company had taken many millions, maybe many hundreds of millions, out of Mexico through their oil fields, they owed it to the country to make some return and that the best return they could make was to give generous help both in money and in officials in trying to improve the public health of Mexico (86).

Daniels remained an unreconstructed agrarian to the end of his days!

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A little over four years after Ferrell's last effort, through another improbable coincidence, Ferrell and Daniels were to set in motion the series of events which led directly to the inauguration of the program. This, however, belongs in the next chapter.

As a conclusion to this chapter, a question and an attempt at an answer may perhaps be permitted. Why did these early efforts fail?

Josephus Daniels and John A. Ferrell were ahead of their times in their interest in and concern for the welfare and friendship of the Mexican people in a period when Americans in general displayed mammoth indifference to everything Latin American. Most Americans, in those days before airplanes shrunk the world, knew little about the region below the Rio Grande, aside from a few picturesque facts about banana trees and coffee plants learned in their school geographies. This indifference was reciprocated from below the border, when it was not displaced by a feeling of a much more vehement nature. President

Roosevelt and Secretary of State Cordell Hull labored valiantly for the Good Neighbor policy, but below the diplomatic level what they were doing enjoyed little public understanding or support (87).

The indifference was strongly evident among the universities, foundations, scientists, and scholars who constituted the intellectual community in the United States. Their orientation was toward northwestern Europe. The orientation of the Latin-American intellectual community was toward southwestern Europe; between the two lay a vast gulf. In Latin America the practice of science in the modern sense hardly existed. The universities of the region, unaffected by the social revolutions around them, slumbered in the twilight of scholasticism (88).

The Rockefeller Foundation -- to illustrate the indifference toward Latin America -- in the 27 years from 1913 through 1940, made grants to Europe which totalled \$54,500,000. In the same period, grants to Latin America, outside the fields of public health and medical education, amounted to \$90,000 (89). The same disproportion was true in other foundations (except the Guggenheim Memorial) (90), in universities, and among scientists and scholars.

Daniels was well aware of the indifference and fought against it all the years he was in Mexico. His 1935 letter to Raymond B. Fosdick, already quoted, expresses his view about the neglect of Mexico. He stated the same idea forcibly on all appropriate and many other occasions (91).

John A. Ferrell understood it too but perhaps not to the same extent as Daniels. After all, he had spent his career in a welfare organization which devoted a large proportion of its efforts to Latin America. In the same period when all the rest of the Rockefeller

Foundation allotted \$90,000 to the region, the International Health Board and the Medical Sciences Division spent \$13,200,000 there (92).

The fact that Ferrell, like other leaders in the public health movement, sensed the relation between a people's nutrition and their health in countries with expanding populations has already been mentioned. This aspect of the situation, together with Daniels' and his sensitivity to the importance of Latin American friendship to the well-being of the United States, put them ahead of their times.

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More immediately relevant to the prospect of the adoption of their proposal was the fact that Daniels and Ferrell were caught in a crossfire between opposing and contrary philosophies of systematic philanthropy.

In the very early days of The Rockefeller Foundation, its executive head, Jerome D. Greene, analyzed the ways a philanthropic organization could work toward the improvement of the welfare of mankind.

The useful services of the Foundation in the future, ... are likely to be divisible into two main divisions, the discovery of new knowledge bearing on human welfare, and the dissemination of this knowledge by various educational methods. (93)

In accomplishing either of the objectives, the Foundation

will be called upon to decide from time to time whether it shall itself establish the agency for research and propaganda, or whether it shall make appropriations from its income to other institutions or organizations formed for similar purposes. (94)

The two objectives -- research versus dissemination -- and the two methods -- direct operation versus grant making -- can be combined into four different

types of programs: (1) research conducted by direct operation; (2) research by other agencies supported with grants in aid; (3) dissemination of research results by direct operation; (4) dissemination by other agencies supported by grants.

Each type of program can be illustrated by eminent and successful examples. The Rockefeller Institute for Medical Research and the Carnegie Institution in Washington are distinguished examples of the first type -- research directly conducted by the fund itself. These and a few others, however, are exceptions among the overwhelming majority of foundations which choose type two -- grant-making in support of research by others. Between World Wars I and II, type two became the dominant pattern of foundation operation, as it is still even a decade after World War II (95). Of the five divisions of The Rockefeller Foundation prior to the second war, four followed strictly the grant-making pattern. In this pattern, research is defined broadly enough to include not only the support of investigative projects as such but also the education and training of young scientists through fellowships and travel grants.

The grant-making pattern, whether applied to research proper or to the training of researchers, is possible and practical only in a particular kind of society and culture. The culture must be one in which science is a highly valued activity. The society must be one which has already made the major capital investments in scientific institutions like universities and research laboratories. The society must further contain a large middle class which, though primarily devoted to profitable pursuits, spins-off occasional young men and women willing to enter the

low-paid scientific professions in return for the social advancement conferred by a professional position. In such a setting, the impetus of relatively small grants, shrewdly placed, can often add astonishingly to the momentum of progress.

The vast majority of the world's peoples, however, live in cultures which do not meet these conditions. With low social mobility, their peoples do not seem to care whether they get ahead socially or not, and only a few young men and women seek education except as a means to larger personal incomes. The societies of these countries have not invested in the capital equipment for scientific work, either because they are too poor or because they are not interested. The people shrug off the values of the scientific method as irrelevant to the main business of life, however much they may admire the benefits of scientific gadgetry.

Programs of type four -- grant making to agencies engaged in the dissemination of knowledge -- are as strictly culture-linked as those of type two. In the United States, the General Education Board's grants for agricultural extension were made to agencies which already existed. The International Health Board, with relatively small effort, could catalyze the establishment of thousands of full-time county health units throughout the United States in less than two decades because all the other necessary factors were already there. In most of the world's countries, however, the educational and governmental agencies for the dissemination and application of knowledge do not exist, or if they do, are of such rudimentary form as to be hopeless for the task.

Programs of type three -- dissemination through direct operation -- thus seem left as the only ones practical in societies where science is

not strongly institutionalized and among cultures in which the values of science are not taken for granted. When The Rockefeller Foundation was established, it consisted of two operating arms -- the International Health Board and the China Medical Board -- both dedicated to type three programs. The tremendous success of the early work of both boards is weighty evidence of the efficacy of direct operation in the application of knowledge to the problems of regions with different values and institutions from those in the scientifically minded countries.

All four types of philanthropic programs have been tried and each can be credited with impressive successes. Dissemination and application through direct operation -- type three -- has, however, the strongest appeal to laymen in the United States, partly because of the simple idea on which it is based and partly because it is closely akin in spirit and method to the missionary efforts of the evangelical sects and orders. Josephus Daniels, a sincerely religious man, was so convinced of the rightness of the missionary method that he had little patience with the slower procedures of education and research. Even to send a Survey Commission to study agriculture in Mexico was a waste of time, he told H. M. Miller and George C. Payne:

... the Rockefeller Foundation ought to plunge into Mexico instead of attempting to study agriculture so carefully prior to a much later decision by officers and Trustees ... (96)

Earlier he told a Foundation officer, "One dollar spent in public health work is worth more to Mexico now than a dollar spent in the medical schools," though he did take thought to add, "both should be carried on." (97)

Dr. Payne's appreciation of the possible consequences in a country like Mexico of a campaign of the sort Daniels wanted prompted his cautionary note when Daniels and Ferrell reopened their efforts in 1941:

"I wish that I could share the enthusiasm of Mr. Daniels concerning a project related to health, education, and agriculture, for the proposal is one of great interest. The need for such coordination is so obvious that one is likely to be carried away by the desire for immediate results." (98)

Impatience for immediate results opens the direct application and dissemination method to its chief danger: outrunning the resources of knowledge on which the solution of practical problems must rely. The control of yellow fever is an example. Early research results seemed to show that if house-dwelling mosquitoes were controlled the disease would disappear. To apply this apparent knowledge the International Health Board enthusiastically launched a world-wide mosquito control campaign as World War I drew to a close. But after a while yellow fever reappeared even where domestic mosquitoes had been strictly curbed. A vast amount of new research had to be done before the riddle was solved and a more fully effective method of control devised.

Partly as a result of the yellow fever episode and partly because of a rising level of sophistication in the practice of public health, the International Health Board began to place more emphasis on the search for new knowledge and less on the application of what knowledge already existed to the solution of local health problems. The board established central research laboratories in New York in 1928, and in the 1930's the field work was gradually being transformed into research-related activities. (99)

John A. Ferrell could hardly have picked a less propitious time than the middle 1930's to urge his division to undertake a new direct-dissemination campaign in an unfamiliar field like agriculture.

As for the other divisions of the Foundation, three were strongly devoted to the support of scientific research through grants in aid. In the medical, natural, and social sciences, small staffs in the New York headquarters allocated generous funds for the aid of research projects in other organizations and for fellowship programs for the training of young scientists. The division of humanities, though not concerned with science, was likewise devoted to the grant-in-aid method of achieving its objectives. None of the four had any interest in or intention of establishing direct operations in the dissemination of knowledge in their own or other field. (100)

Philanthropic programs which depend on making grants to institutions and scientists lean on a reed as weak as that of the direct dissemination programs. They must be operated on the assumption that the societies which cherish science will be rational enough to remain at peace. When the scientifically advanced countries abandoned rationality and plunged into a second World War, philanthropic programs dedicated to the advancement of the frontiers of knowledge crumbled into a dusty heap. Raymond B. Fosdick described the debacle in these eloquent phrases:

In the shadows that are deepening over Europe the lights of learning are fading one by one. The conception of knowledge as an international responsibility has vanished. The free flow of ideas across boundary lines between laboratories and universities has dried up. Everywhere the exigencies of the war have erased the possibility of intellectual and cultural life as that term was understood a few years ago. (101)

In 1940 the grant-making divisions of the Foundation suddenly found themselves with nothing to do so long as the war should last.

By this one turn of events, the stony indifference which greeted the Daniels-Ferrell proposal in 1935 was transformed into an eager search for programs in less vulnerable parts of the world to replace those which war had shattered.

NOTES AND REFERENCES FOR CHAPTER I

1. The statement that the grant made by the General Education Board to the U. S. Department of Agriculture was the first made by any Rockefeller board is based on the modern definition of the word "grant." The Rockefeller Institute for Medical Research, established as an operating organization in 1901, did not acquire its own laboratory until October, 1904. In the interim it began operating by means of "grants given in aid of research." (Rockefeller Institute for Medical Research, "Descriptive Pamphlet," 1953, p. 13) These were usually small (\$2,400.00 seems to be one of the largest), and were akin to fees for commissioned research needed for the Institute's own projects. Most of them went, actually, to pay for work in the laboratories of members: to those of Dr. William H. Welch, at the Johns Hopkins, for instance. Mr. Edward Robinson, Assistant Treasurer and Treasurer of the Institute since 1932 is of the definite opinion that these early disbursements cannot be called "grants" in the sense in which that term is now used. (Personal conversation, September, 1955) (The information about the early grants was obtained from Miss Hazel Reed Olmsted, secretary to the Business Manager of the Institute, September, 1955.)

The grant made by the GEB to the USDA, on the other hand, meets all the requirements of a grant as the term is now used. The GEB, established in 1903, devoted its work in the first three years to a survey of educational and social conditions in the South. These were not financed by grants but were activities of the GEB members and staff.

2. See note No. 30.
3. The following account of the Cooperative Farm Demonstrations is taken chiefly from four sources:

The General Education Board; An Account of Its Activities, 1902 - 1914 (New York; The Board; 1915) Chapter 3, "Farm Demonstrations," pp. 18 - 70.

Alfred Charles True, A History of Agricultural Extension Work in the United States, 1785 - 1923; U.S. Department of Agriculture, Miscellaneous Publication No. 15. (Washington: Government Printing Office; 1928) 220 pages.

Rodney Cline, The Life and Work of Seaman A. Knapp. George Peabody College for Teachers Contributions to Education, No. 183. (Nashville, Tennessee: The College; 1936) 110 pages.

U. S. Department of Agriculture, "Extension Work in the South: Historical," pp. 13 - 18, in A Report Of the Receipts, Expenditures, and Results of Cooperative Extension Work in Agriculture and Home Economics during the Fiscal Year Ended June 30, 1915. (Washington: Government Printing Office; 1917).

The date and facts about the boll weevil invasion are given in a number of sources. See especially True, Agricultural Extension Work, p. 60.

4. The GEB, 1902 - 1914, P. 23; True, Agricultural Extension Work, p. 60.
5. Cline, Seaman A. Knapp, pp. 52, 53; True, Agricultural Extension Work, p. 59.
6. True, Agricultural Extension Work, p. 60; Cline, Seaman A. Knapp, p. 54.
7. True, Agricultural Extension Work, p. 60; Cline, Seaman A. Knapp, pp. 54 - 57.
8. True, Agricultural Extension Work, p. 61; Cline, Seaman A. Knapp, pp. 57 - 65.
9. Seaman A. Knapp, "Farm Cooperative Demonstration Work in its Relation to Rural Improvement." U.S. Department of Agriculture, Bureau of Plant Industry, Circular No. 21. (Washington: Government Printing Office; 1908), 20 pages. Also, Cline, Seaman A. Knapp, p. 92.
10. Cline, Seaman A. Knapp, pp. 34 - 35.
11. Cline, Seaman A. Knapp, pp. 44 - 49; True, Agricultural Extension Work, p. 59.
12. Cline, Seaman A. Knapp, pp. 21, 51, 83, 92.
13. True, Agricultural Extension Work, p. 64; GEB, 1902 - 1914, pp. 27 - 29; Cline, Seaman A. Knapp, p. 65.
14. True, Agricultural Extension Work, p. 59; GEB, 1902 - 1914, p. 27 ff.; Cline, Seaman A. Knapp, p. 80.
15. GEB, 1902 - 1914, p. 32; True, Agricultural Extension Work, pp. 60 - 61.
16. GEB, 1902 - 1914, pp. 23 - 24.
17. Dr. Wallace Buttrick was Secretary of the GEB from 1902 and for many years, while Frederick T. Gates did not become Chairman until 1907. Gates, nevertheless, as advisor to John D. Rockefeller, controlled major policies and the Secretary of the Board reported to him.

18. GEB, 1902 - 1914, pp. 21 - 22.
19. GEB, 1902 - 1914, p. 22.
20. GEB, 1902 - 1914, p. 23.
21. Cline, Seaman A. Knapp, p. 79.
22. GEB, 1902 - 1914, p. 42.
23. Wallace Buttrick, "Seaman Asahel Knapp." Proceedings of the Fourth Annual Convention of the Southern Commercial Congress, Nashville, Tennessee, April 9, 1912, Senate Document No. 537, 63rd Congress, 2d Session. (Washington: Government Printing Office, 1914), p. 8. Original not seen. Quoted in Cline, Seaman A. Knapp, p. 66 (including the direct quotations).
24. GEB, 1902 - 1914, pp. 46 - 49; True, Agricultural Extension Work, Table 2, p. 69.
25. GEB, 1902 - 1914, pp. 57 - 66; True, Agricultural Extension Work, pp. 65 - 68; Cline, Seaman A. Knapp, pp. 72 - 76.
26. GEB, 1902 - 1914, pp. 54 - 57; Cline, Seaman A. Knapp, p. 69. Also, W. B. Mercier, "Extension Work Among Negroes," 1920. U. S. Department of Agriculture, Department Circular No. 190. (Washington: Government Printing Office; 1921), pp. 3 - 5.
27. GEB, 1902 - 1914, pp. 37 - 40; True, Agricultural Extension Work, Table 3, p. 69.
28. GEB, 1902 - 1914, pp. 50 - 52; Cline, Seaman A. Knapp, pp. 76 - 79.
29. GEB, 1902 - 1914, p. 59.
30. Congressman Hughes, of Georgia. Senate-House Resolution 100, Report No. 1778, Union Calendar No. 434, 73rd Congress, 2d Session, May 10, 1934. Original not seen. Quoted, Cline, Seaman A. Knapp, p. 91.
31. True, Agricultural Extension Work, p. 70.
32. As a matter of strict historical accuracy, it must be added that after the close of the farm demonstration program in the South, the GEB continued small programs of the same sort in the states of Maine and New Hampshire for a few years, in cooperation, not with the Federal Government, but with the state colleges of agriculture. GEB, Report of the Secretary, 1914 - 1915.
33. One agent, at least, got the whole idea in a one-hour conversation with Knapp. (Cline, Seaman A. Knapp, p. 59.)

34. Raymond B. Fosdick, "The Control of Hookworm," Chapter 3 of The Story of The Rockefeller Foundation (New York: Harper & Bros., 1952), pp. 30 - 43.
35. Fosdick, The Story of The Rockefeller Foundation, p. 10.
36. Fosdick, The Story of The Rockefeller Foundation, P. 10.
37. Josephus Daniels, Editor in Politics. (Chapel Hill: The University of North Carolina Press; 1941), pp. 567 - 69.
38. "Your letter of March 24 inquires if I knew Mr. Daniels before I joined the Sanitary Commission in 1910. The answer is "yes". My acquaintance with Mr. Daniels began about 1904 while I was Superintendent of Schools of Sampson County. I conferred with him and Mr. J. Y. Joyner, State Superintendent of Public Instruction who later was a member of the Rockefeller Sanitary Commission, relative to litigation against special tax school districts in Sampson County, and other matters. I saw him frequently, and had his enthusiastic support while living in Raleigh 1910 to 1913 and serving as North Carolina State Director of the Rockefeller Sanitary Commission work." John A. Ferrell, letter to William C. Cobb, April 27, 1955.
39. The work in North Carolina was launched in March, 1910, under Dr. Ferrell's direction, the second state campaign to begin. Catherine Lewerth (Mrs. Lloyd Admirall), Source Book for a History of The Rockefeller Foundation (21 volumes) Vol. 1, p. 94-b. An unpublished manuscript in the Reference Service of The Rockefeller Foundation.
40. Interview with Dr. Ferrell, June 14 - 15, 1955.
41. Daniels refers to himself several times (see note No. 74) as a trustee of the state college. According to Who's Who in America he became a Trustee of the University of North Carolina prior to 1906; the state college was included in the state university system.
42. True, Agricultural Extension Work, pp. 41 - 42.
43. True, Agricultural Extension Work, pp. 41 - 42.
44. True, Agricultural Extension Work, p. 72.
45. GEB, 1902 - 1914, p. 37.
46. U.S.D.A., Cooperative Extension Work, 1915, Table XII, p. 29.
47. U.S.D.A., Cooperative Extension Work, 1915, Table XIV, p. 31.
48. U.S.D.A., Cooperative Extension Work, 1915, Table XV, p. 33. The number was 520 in 1912 and 1,200 in 1913.

49. Fosdick, The Story of The Rockefeller Foundation, p. 33.
50. Merle Curti and Kendall Birr, Prelude to Point Four: American Technical Missions Overseas, 1838 - 1938 (Madison: The University of Wisconsin Press; 1954), p. 189.
51. Fosdick, The Story of The Rockefeller Foundation, p. 32; p. 47.
52. Fosdick, The Story of The Rockefeller Foundation, p. 34.
53. Fosdick, The Story of The Rockefeller Foundation, pp. 34 - 35; p. 47. Also, Lewerth, Source Book, Vol. 1, pp. 93 - 94-a.
54. Fosdick, The Story of The Rockefeller Foundation, pp. 38 - 39.
55. Wickliffe Rose, "Principles of Administration of the Rockefeller Sanitary Commission: A Preliminary Outline." R.S.C. Minutes, 1909 - 10, Appendix, pp. 1 - 2. (R.F. Reference Service.)
56. Lewerth, Source Book, Vol. 1, pp. 166 - 67.
57. George W. Gray, Education on an International Scale: A History of The International Education Board, 1923 - 1938 (New York: Harcourt, Brace & Co., 1941). Also, Fosdick, The Story of The Rockefeller Foundation, pp. 182 - 184. This account follows that of Fosdick, even to the wording of some sentences.
58. "Albert Russell Mann, 1880 - 1947," a memorial: The General Education Board, Annual Report, 1946, pp. x - xiv (New York: The Board, 1947).
59. Memorandum, J. A. Ferrell to R. B. Fosdick, Jan. 27, 1941.
60. Memorandum, J. A. Ferrell to R. B. Fosdick, Jan. 27, 1941.
61. IH B1776, 12 - 28 - 1945.
62. Letter, Charles A. Bailey to J. A. Ferrell, July 7, 1940.
63. Information from Fellowship Section of RF Reference Service. The period is 1920 - 1942, inc.
64. J.A.F. to R.B.F., Jan. 27, 1941, Exhibit C. The period is 1913 to Sept. 28, 1942.
65. Josephus Daniels, Shirt Sleeve Diplomat (Chapel Hill: University of North Carolina Press; 1947), p. 277.
66. Dr. Alfonso Pruneda. The speech, in Spanish, is in the RF files.
67. JAF, Memorandum on conversation with Wallace, February 3, 1941. Dr. Pruneda (Reference 66) specifically speaks of the transformation of the association of the name Rockefeller from oil to philanthropy.

68. Nathan L. Whetten, Rural Mexico (Chicago: University of Chicago Press; 1948), p. 26. Whetten refers only to "highest in Latin America."
69. P. 65.
70. Interview with John A. Ferrell, June, 1955.
71. JAF, "Notes on Trip to Mexico, March 15 to April 21, 1933," pages 7 - 9. A copy of the section for April 1 is also included in the material JAF prepared for RBF, January 27, 1941, as Exhibit I.
72. Memorandum, JAF to Dr. F. F. Russell, September 28, 1933. The original of this memorandum cannot be located in the RF files. A copy is included as Exhibit I, JAF, Memorandum on Mexico for RBF, January 27, 1941.
73. Daniels reached Mexico City on April 15, 1933.
74. Josephus Daniels, Diary, May 18, 1933. (The Papers of Josephus Daniels; Manuscript Division, Library of Congress, Washington, D. C.) Box 6. Daniels kept an informal diary in the form of letters to his sons. Also, Shirt Sleeve Diplomat, pp. 130 - 32.
75. JAF, Notes on JAF's Mexican Trip, February 8, 1935 to March 8, 1935. The copy in the RF files is incomplete. A copy of the section, "Conference with Mr. Josephus Daniels, American Ambassador to Mexico," is Exhibit H, (pp. 3 - 5) to JAF, Memorandum on Mexico, For RBF, January 27, 1941. Still another copy, somewhat edited, was sent to Daniels with JAF's letter of March 7, 1935. (Daniels papers, Box 712.)
76. Same as Reference 75.
77. Page 5 of Reference 75.
78. JAF, letter to Daniels, March 7, 1935. (Daniels papers, Box 712.)
79. Daniels papers, Box 712.
80. Daniels, letter to Harry Emerson Fosdick, April 14, 1935. (Daniels papers, Box 712.)
81. David H. Stevens, letter to William C. Cobb, May 25, 1955.
82. JAF, letter to Daniels, November 6, 1935.
83. JAF, Memorandum to RBF, October 16, 1936.
84. JAF, letter to Daniels. (Daniels papers, Box 720.) Copy of the JAF memorandum to RBF, Oct. 16, 1936, attached to letter (Reference 82).
85. Daniels, letter to JAF, Nov. 11, 1936. (Daniels papers, Box 720.)

86. Daniels, Diary, Nov. 28, 1936. (Daniels papers, Box 9.)
87. John D. Hicks, The American Nation (Boston: Houghton Mifflin; 1949) p. 706.
88. This is a generalized statement, but one interesting incident to illustrate it is the following:
"Mr. Daniels stated that he spent two or three hours on one occasion with the Director of the University (of Mexico) trying to explain his ideas of what the University should be in the life of Mexico. He stated that he felt sure he had made no impression because the Director of the University apparently was not deeply interested in the rank and file of Mexicans, but was concerned with the upper stratum of society and what he called "higher education." (John A. Ferrell, Memorandum regarding Mexico and IHD health program, February 12, 1935.)
89. Statistics from the Comptroller of The Rockefeller Foundation.
90. This statement can hardly be documented exactly. But when H. M. Miller, Jr., of The Rockefeller Foundation, sought information among other foundations about science and agriculture in Latin America prior to going there in 1941, only Mr. Henry Moe of the Guggenheim Memorial could give him much help. (H. M. Miller, Jr., Diary, February 10, and February 18, 1941.)
91. For instance, when he gave an interview to the Associated Press staff writer on the occasion of returning to Raleigh for the Christmas holidays in 1940. (Raleigh, N. C., News and Observer, January 1, 1941.)
92. See Ref. 89.
93. Jerome D. Greene, "Principles and Policies of Giving" (Document of Record 12; October 22, 1913) RF Files. Also quoted, Catherine Lewerth, Source Material for a History of The Rockefeller Foundation; Vol. 7, pp. 1757-1758.
94. The same.
95. "The six largest foundations which report both expenditures and grants, made grants totalling \$83,510,287 or 93 per cent of their expenditures which totaled \$89,871,080." Wilmer Shields Rich, American Foundations and their Fields 7th Edition (New York: American Foundations Information Service; 1955), p. xxvi.
96. H. M. Miller, Jr., Diary, June 25, 1941.
97. Daniels, Diary, November 28, 1936. (Daniels papers, Box 9) (Same as Reference 86.)
98. George C. Payne, International Health Board resident representative in Mexico, letter to John A. Ferrell, January 24, 1941.

99. Based loosely on Andrew J. Warren, "Landmarks in the Conquest of Yellow Fever," Chapter 1 of George K. Strode, ed., Yellow Fever (New York; McGraw Hill; 1951) pp. 1-37; and also Raymond B. Fosdick, "The Challenge of Yellow Fever," Chapter V in The Story of The Rockefeller Foundation.
100. The Rockefeller Foundation's official description of itself is still as follows:
- "The Rockefeller Foundation is primarily a grant-making organization. Except to a limited extent -- presently in virology and agriculture -- it does not itself engage directly in research or operations." ("The Rockefeller Foundation: Purpose and Program"; 1956 edition, p. 4.)
101. Raymond B. Fosdick, "The President's Review for 1940," in The Rockefeller Foundation, Annual Report, 1940, p. 8.

THE ESTABLISHMENT OF THE MEXICAN
AGRICULTURAL PROGRAM (Annotated edition)

The inauguration of General Manuel Avila Camacho as President of the Republic of Mexico, on December 1, 1940, is an excellent point at which to begin the story of the establishment of the agricultural program of The Rockefeller Foundation.

The inauguration is one of the great watersheds in Mexican history, the divide where one era of the Revolution ended and a new one began. The Revolution, starting in 1910 with the overthrow of Porfirio Diaz, and progressing inexorably through three turbulent decades, had finally brought under the people's control the major centers of economic power. The land question had been settled once for all and the creation of the ejidos was well advanced. The railroads were nationalized. The subsoil resources were declared the property of the people and recovered from foreign oil companies. Education was brought under secular control.

It is easier to have a revolution than it is to build the institutions which assure the people its benefits. In the administration of President Camacho (1940-1946) the Mexican people began to face up to the fact that they must make their Revolution work. They set themselves determinedly to the task of reconstructing and strengthening their national economy both to carry their share of the united war effort and to consolidate their revolutionary gains. The inauguration marks the beginning of the "Institutional Revolution." (1)

Foremost among the great tasks of rebuilding stood that of increasing agricultural production. Practically every year since Diaz the

harvests were too small to supply the corn and wheat needed by the Mexican people. The "deficit" between the amount needed and that produced constituted a heavy drain on the physical well-being of the people and on the economic resources of the nation. The improvement of agriculture, the betterment of education, and the increase of the nation's industrial resources stood high among the aims of the Camacho administration, as they have in those of his successors.

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President Roosevelt's choice of Vice-President-elect Henry A. Wallace to represent the United States at the inauguration of President Camacho in December, 1940, was an especially happy one. Wallace and his wife, lengthening their visit to a full month, captured the fancy of the Mexican people by their enthusiasm and simpatía. The visit strengthened the bonds of good neighborliness between the two countries, which was the President's objective. (2)

Ambassador and Mrs. Josephus Daniels were hosts to Mr. and Mrs. Wallace at the Embassy. In his autobiography Daniels mentions two things especially for which the Mexicans liked Wallace. When the Vice-President addressed the Mexican Congress, he spoke in hastily learned Spanish, which the Mexicans regarded as a compliment (3) despite their mystification at the accent (4). The second was that to the Mexicans, Wallace represented modern scientific agriculture, both officially as a former Secretary of Agriculture and in his own person as a man closely identified with the popularization of hybrid corn in the United States.

Inside, I remember that the Embassy looked more like a county fair than a diplomatic establishment, because many Indian farmers had brought their corn to show it to Wallace, not as a visiting Vice-President, but as a world-recognized authority on the breeding of corn. During his whole visit he held a sort of corn clinic for all comers (5).

Wallace's visit quickened both official and popular interest among the Mexicans in the possibilities of scientific agriculture. The Ministry of Agriculture promptly started a corn breeding program and increased the budget of the section responsible for the experiment stations (6).

In the United States, the influence of the visit on the beginning of the Foundation's agricultural program follows a circuitous route.

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Ambassador and Mrs. Daniels left Mexico before the end of the Wallace's visit in order to spend Christmas with their children and grandchildren in Raleigh, North Carolina, and because Daniels had some official chores in connection with the third inauguration of President Roosevelt (7).

By another of the coincidences which mark this history, Dr. John A. Ferrell of The Rockefeller Foundation and long-time friend of the Daniels, went to Raleigh while the Daniels were there. His purpose was to attend a meeting of the North Carolina General Nutrition Committee. The meeting was on a Friday; Ferrell stayed in Raleigh over the week-end (8). On Sunday evening, January 12, 1941, Ferrell called at the Daniels home. Daniels and he had not seen each other since Ferrell's trip to Mexico in 1935 and their being in Raleigh at the same time was not planned in advance.(9).

Sitting in front of the immense fireplace in the living room, the two men renewed their acquaintance. Ferrell told Daniels some of the new developments in the search for a vaccine against influenza, and Daniels,

always the newspaperman, sensed a story. In all likelihood Daniels himself wrote the story which appeared early the next morning under a two-column head in Raleigh News and Observer, the Daniels paper (10). The two men also talked of their previous efforts to persuade The Rockefeller Foundation to expand its public health work in Mexico by including agricultural improvement. This was a subject close to Daniels' heart.

Daniels knew that he was not going to remain much longer in the Embassy in Mexico (11). He was eighty years old, Mrs. Daniels' health was not good, and both of them wanted to come home to their family and friends, though they loved and admired the Mexican people. As Ambassador, Daniels had done his share to help resolve the major issues of conflict between his country and Mexico. He sensed that the new Camacho administration would take a friendlier attitude toward the United States than had some of the preceding ones. In the few remaining months of his mission he wanted to push every possible project which would tie more closely the bonds of friendship between the two countries (12).

A special note of urgency therefore marked his words. Ferrell should come to Mexico within the next few weeks -- in February at the latest -- to see for himself the changed attitude of the new administration (13). He urged Ferrell to renew his efforts to secure aid for an agricultural improvement campaign. Ferrell should see Vice-President Wallace just as soon as he could (14); Wallace's enthusiasm for Mexico would surely be influential in Washington (15). Even if The Rockefeller Foundation could not be persuaded, there was Nelson Rockefeller, recently appointed Coordinator of Inter-American Affairs, with a reputed budget of \$100,000,000 for building Pan-American goodwill. Wallace might serve as an approach to Nelson Rockefeller;

the two were closely associated in the Inter-American project (16). Ferrell should talk to Fosdick again about Mexico (17).

How long the interview lasted or what else was discussed, the record does not show. But Ferrell returned to New York with rekindled interest in an agricultural project for Mexico and determined to follow Daniels' advice about seeing Wallace at the earliest opportunity.

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Ferrell got back to New York on the fifteenth of January, 1941 (18). At the common table in the officers' dining room that day or very soon thereafter, he recounted his visit with Daniels and spoke of his intention of seeing Vice-President Wallace (19). The president of the Foundation, Raymond B. Fosdick, who happened to be at the table, heard the comment, and at once said that if Ferrell conferred with Wallace on the subject of Mexico, he would like to attend the conference (20,21). He also suggested that Ferrell get together for him some background information about Mexico in general and about the Foundation's work there (22). Fosdick had become president in 1936 after serving the Foundation many years as a trustee; it was as trustee that his old friend, Daniels, had addressed him in 1935 urging the expansion of the work in Mexico to include agriculture (23).

Setting to work at once, Ferrell, in less than twelve days, prepared a substantial document consisting of a main section of ten pages and no fewer than 12 appendices totalling 33 pages (24). He delivered it on Monday the 27th. The covering memorandum which accompanied the report, also dated the 27th, is properly the first document in the first folder of record of the Mexican agricultural program in the files of the Foundation's reference service.

Two days later, on Wednesday the 29th, Fosdick telegraphed Vice-President Wallace asking for an appointment. The reply was prompt and favorable, suggesting the following Monday afternoon (25).

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On Monday, February 3, 1941, at three o'clock in the afternoon, Raymond B. Fosdick and John A. Ferrell met at the door of the office of Vice-President Wallace off the Senate Chamber in Washington (26), and went in for an interview which was to last scarcely more than an hour.

From this interview the establishment of the Mexican agricultural program takes its immediate rise. With it Fosdick begins his account of the program in The Story of The Rockefeller Foundation (27). His completer account, recorded at the time, deserves a place in the record.

With Dr. Ferrell I called on Vice-President Henry Wallace at his office in Washington to discuss with him a program for The Rockefeller Foundation in Mexico. Mr. Wallace felt that such a program should include both health and agriculture. Health by itself is not enough. With no improvement in agriculture, as the death rate declines, the inevitable result is a lowered standard of living. He thought that there was room for the extension of our health work and hoped particularly that it would include questions of water supply, i.e., sanitary engineering and nutrition.

On the subject of agriculture, he said that if the yield per acre in corn and beans could be increased, it would have a greater effect on the national life of Mexico than anything that could be done. He believed that this improved yield could readily be obtained by modern agricultural methods which are little understood in Mexico and that it would be possible by demonstrations to start a movement which in time would influence the whole of the country. He thought that there was perhaps a particular opportunity for improving agricultural methods in tropical Mexico although the upland plateau west of Mexico City furnished another excellent locality.... (28).

Two more short paragraphs deal with people who might be consulted for further information about agriculture in Mexico, and with the question referred to in the previous chapter, whether the name Rockefeller might be unfavorably associated in the Mexican mind with foreign oil companies, for which

reason an agricultural program might perhaps best be operated by a subsidiary of The Rockefeller Foundation with a different name, or avoid the oil-producing states.

Ferrell's notes on the interview record a number of the details of Wallace's remarks, including this one on nutrition:

Corn and beans, Wallace stated, are the principal food. Vegetables and milk added to the corn and beans, he recognizes, would constitute a very good diet, but he thinks beans and corn generally are the main reliance. These foods, he thinks, should be enriched with vitamins.

"As for the Rockefeller name," Ferrell adds,

it is identified throughout Mexico, as elsewhere, with the Foundation. For a quarter of a century the Foundation and its representatives have carried aid, goodwill, and money to Mexico. ... Accordingly, I should not anticipate any serious difficulty in broadening the RF program to include constructive measures such as are usually sponsored by the Department of Agriculture.

Concerning the suggestion that an agricultural program, if begun, should avoid the Mexican states which produce oil, Ferrell says:

Although the cooperative health work has been carried on in the state of Vera Cruz, an oil-producing state, and that state would, I believe, welcome renewal of assistance either for health or agriculture, it is probable that the plateau region would offer many advantages as an area for demonstration (29).

More important than what was actually said among the three men was the effect of the authority with which Wallace spoke and the impact of his enthusiasm. Fosdick's acute insight cut through the details and irrelevancies of the conversation to the central idea: that modern scientific methods applied to increasing the production of the basic food crops would greatly benefit the welfare of the Mexican people.

In Raymond B. Fosdick's perceptive appreciation of the importance of this central idea and in the enthusiasm and vigor with which he moved to build a program to implement it, the agricultural program of The Rockefeller

Foundation had its birth. "Raymond B. Fosdick deserves all the credit ..."
Dr. Warren Weaver was to say a few years later in reviewing the founding of
the work (30).

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Returning to New York the next day after the talk with Wallace
(31), Fosdick started immediately to mobilize the Foundation. His first
step was to talk informally with the directors of the various divisions,
going to their offices, as was his wont, instead of asking them to his, and
often talking from a seat on the corner of the desk. Dr. Warren Weaver, then
director of the Division of Natural Sciences, remembers the conversation
vividly:

I have a clear memory of Mr. Fosdick coming to my office and tell-
ing me of Mr. Wallace's comments about the shocking character of Mexi-
can corn, and their great need for improvement of their basic food
crops. As I recall it, Mr. Fosdick asked me if I thought there was
anything we could do about such a situation. I told him that I did not
have the faintest idea as to whether there was anything we could do;
but that I would know how we could get a clear and dependable answer
to his question. Indeed, the whole experience of The Rockefeller Foun-
dation emphasizes the fact that we can not possibly ourselves have ex-
act and dependable information on many subjects, but we have developed
the contacts and the techniques through which we can get such infor-
mation. The way to find out whether or not The Rockefeller Foundation
could possibly do anything about Mexican corn was to get a few ex-
tremely competent and experienced scientists and quietly send them to
Mexico to study the situation (32).

In this very early stage, the influence of an earlier Rockefel-
ler board experience in agriculture had its effect. Dr. A. R. Mann, for-
mer dean of the School of Agriculture of Cornell University and also for-
mer director of the agricultural work of the International Education Board,
was vice-president of the General Education Board, housed in the same suite
of offices with the Foundation. Mann supplemented what he told Fosdick
orally by writing a memorandum (33) in which he makes two important

observations. "The development of a competent scientific basis for changes in agriculture is a long-time procedure," is advice offered to counteract a feeling prevalent in the Foundation at the time, that the work in Mexico could be a temporary stop-gap for the period when Europe was closed by war to Foundation activity (34).

The second, "Efforts to improve the agricultural economy must be indigenous and arise out of native abilities, native plants and animal stocks, and the cultural characteristics of the people," presages the later recommendations of the Survey Commission. This comment reflects Mann's international experience and deep understanding of the problems of agricultural improvement. It may have been evoked by the implication of Wallace's remarks to Fosdick, that a few demonstrations of good agriculture could start Mexico on the road to increased production.

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Only one person outside the Foundation was consulted at this time. Dr. Carl Sauer, the geographer and friend of Dr. J. H. Willits, Director of the Division of Social Sciences, was then in Mexico on a field trip. He was one of the very few American scholars who had first-hand knowledge of Latin America. In answer to an inquiry from Willits, he wrote a long letter full of much excellent sense (35). He too, like Mann and the members of the Survey Commission, knew that the improvement of Mexican agriculture must start with Mexican resources: the excellent potentialities of the people and the wealth of genes of locally adapted plants. He was very suspicious that in their missionary zeal certain types of American agricultural experts might seek to impose methods and varieties from other regions or try to alter drastically and suddenly the patterns of Mexican life.

The possibilities of disastrous destruction of local genes are great unless the right people take hold of such work. Mexican agriculture cannot be pointed toward standardization on a few commercial types without upsetting native economy and culture hopelessly. ... Unless the Americans understand that, they had better keep out of this country entirely. This thing must be approached from an appreciation of the native economy as basically sound.

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To begin formal mobilization of the Foundation, Fosdick called a general staff meeting for February 18th, attended by representatives of all the divisions (36). The object of the meeting, Fosdick said in his opening remarks, was to consider the possibilities of an extended program in Mexico. Also, since no fewer than four officers were leaving in the next few days for trips in Latin America, the meeting might help to coordinate their efforts (37).

At the staff meeting two decisions were reached which were to be of great importance later on. The first concerned the question raised by Fosdick, "How such a program in agriculture, if undertaken by the Foundation, would head up? in Natural Science?" Dr. Frank B. Hanson, representing the Division of Natural Sciences in the absence of Dr. Weaver, replied that the contacts of the Division in this country, for example in chemistry, were often in schools of agriculture, and that therefore the new work might well head up in that Division, though of course its budget would have to be revised accordingly (38). This decision, at a stage in the Foundation's history when the administrative demarcation between divisions was quite sharp, was to prove fortunate in the light of the Survey Commission's recommendations concerning the emphasis the program should give to basic scientific research.

The second decision was to appoint a committee to investigate and report on the possibilities of an agricultural program in Mexico with the aim of producing suggestions definite enough for the Trustees to discuss at their meeting the following April. To the committee Fosdick appointed A. R. Mann of the General Education Board, and Frank B. Hanson and Harry M. Miller, Jr., of the Division of Natural Sciences (39). The general feeling of the meeting was that the chief task of the committee would be to select a small group of agricultural scientists to make a reconnaissance trip to Mexico. "The commission technique is a time-honored device employed by the Foundation to explore possibilities," was the way Fosdick phrased the reliance of the Foundation on the advice of experts (40). The same point of view is expressed in the comment of Weaver quoted earlier (41).

Fosdick, like the quarterback of a superb team, had called the play in confidence that his associates could carry the ball. From this point forward the play developed through three stages: finding the right experts for the survey commission; the trip of the commission and its recommendations; and the appointment of a man to go to Mexico to start the actual work. The first two parts of the plan moved briskly ahead in the remaining months of 1941; the sudden beginning of the war and the dislocations which followed were to delay the third for several months.

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Before taking up the narrative of the events which followed the staff conference, a digression is necessary. Why should a casual remark in 1941 from a Vice-President who had been in Mexico once, set in motion the initiation of an important program, when a few years previously an earnest plea from an ambassador who had been in Mexico for years failed of effect?

Obviously, even in so short a period, the times had changed. In the background, looming over the lesser interests and problems of American individuals and organizations, stood the threat to hemispheric security posed by the success of fascism. The indifference which characterized the American attitude toward Latin America up to the middle of the 1930's suddenly gave way to deep anxiety at the close of the decade when the outbreak of war in Europe in 1939 awakened Americans to the extent and success of Nazi penetration into many Pan-American countries (42). A number of countries were practically "owned" by the Nazis, whose influence was especially strong in the universities and among the intellectuals and ruling classes (43). In Mexico, a small group of Nazis, entirely unrepresentative of Mexico's allegiance to democracy, staged a riot in front of the American Embassy when Vice-President Wallace arrived (44). Under the leadership of President Cardenas and President Camacho, Mexico steered a course toward the side of the Free World and was to enter the war with the forces of democracy in 1942 (45). All the Pan-American countries, with one exception, were to do likewise. But in the winter of 1940-1941 neither the American government nor people could be sure of the outcome. With a haste that a historian at the time described as "feverish," (46) Americans, through official and private channels, rushed to make amends in a matter of weeks for years of indifference (47).

In the microcosm of the Foundation, the reflection of the general shift in national attitude was sharpened by considerations specific to its own world-wide interests.

By the end of 1940, Europe was closed to all activities save those directly related to the war. The Foundation had joined other agencies in a

brand-from-the-burning rescue of a few European scholars fleeing in front of advancing armies (48). The Paris office was closed. The Division of Natural Sciences recalled its European representative and reassigned him to Latin America (49). Though few would have agreed with Josephus Daniels that "Europe was finished" (50), it was no longer open to the grant-making type of program to which most of the divisions of the Foundation were committed.

In China, where the war began in 1936, the Foundation's work was similarly drawing to an end. To China the Foundation had devoted the largest amount of money given in any foreign country -- \$26,000,000. "Now in its fourth year of war," Fosdick said in his President's Review for 1940, "China is a heartening example of a country which is undefeated because it will ^{not} acknowledge defeat" (53). Nevertheless, all eight universities to which grants were being made for a rural reconstruction program had literally picked themselves up and moved for hundreds, some of them for thousands of miles ahead of advancing Japanese armies (54). Though nearly a decade was to elapse before finis was written to the Foundation's China story, the portent of the end was clear.

"As the Foundation is driven out of Europe, and perhaps out of Asia," said Fosdick early in 1941, "its greatest opportunity is going to be in Central and South America" (55). Under the gentle insistence of Mr. John D. Rockefeller, Jr., the Chairman of the Board of Trustees (56), the president and the directors of the four grant-making divisions were busy getting acquainted with Latin America and on the alert for suggestions of opportunities in the region. Representatives of three of the four had booked passage for extensive trips in Latin America and the director of the fourth was investigating the situation through a scholar acquainted with the area (57).

The International Health Division, however, with its direct-operation type of work, was in a far different boat as war approached.

Put four fingers on a global map of the world, two on either side of the equator, and turn the globe a complete revolution: the fingers will not touch a country or important island where the International Health Division has not worked. Throughout the Tropical Zone, in India and the islands of the Southern Pacific, through most of South and Central America, and in the great regions between the Mediterranean and the Amazon, field staff members had tracked and fought yellow fever and malaria, helped build water and sanitation systems, and helped train doctors, health workers, and nurses.

The Division's staff of 70 doctors, sanitary engineers, nurses, and other professional people constituted the largest and almost the only group of experts on tropical diseases in the United States. The ranks of the staff were to be depleted at the call of the armed services, the Red Cross, and other agencies (58) which suddenly found themselves responsible for protecting the health of servicemen in exotic places most of them had never even heard of before. At the opening of 1941, however, the Division was stepping up the tempo of its work in Latin America by opening a new program in Brazil (59) and was helping in an advisory capacity the numerous agencies which overnight had become intensely interested in the Pan-American countries.

"The war has brought disaster to many fields of learning," Fosdick observed in reviewing the wartime work of the International Health Division, "but in this particular area of public health it seems to be providing a stimulant to advance" (60). Not until the Foundation launched its direct-operation program in agriculture was it to find another pattern of philanthropy which would be similarly disaster-proof.

The committee charged with the responsibility for selecting the experts to survey agriculture in Mexico began its work by formulating a plan which seems to owe much to the experience and wisdom of A. R. Mann.

The first question to be decided was what agricultural specialties should be represented on the survey commission.

"Experience has shown," Mann advised, "that the greatest practical contributions to agriculture come through the fields of genetics and plant breeding, plant protection, soil science, livestock management, and general farm management." The committee decided to seek experts in the first three of these specialties.

Mann also suggested the phases of the agricultural situation in Mexico which the survey commission should explore: the country's major agricultural needs, problems, and opportunities; the personnel available in the fields of agriculture; and the character and competence of existing institutional resources such as government departments and educational institutions" (61).

The happy results of the committee's work also owe an important debt to the indefatigable efforts of Harry M. Miller, Jr., during the spring and early summer. Between the end of January and the first week of July he visited 47 different institutions and agencies, interviewed 167 people at length and wrote reports of the interviews; and travelled 26,700 miles (62). In the United States he talked with people who could give him information about the natural sciences in Latin America in general and about agriculture in Mexico in particular.

Miller went to Mexico twice during this period. On the first visit, 19 days in length, he made an astonishingly thorough survey of the agricultural

situation, talking with people in the Ministry of Agriculture, with teachers at Chapingo, with several at experiment stations, and with a number of scientists and officials in the American colony. His diary and report on this survey, a marvel of compact information, became an invaluable resource for the members of the Survey Commission in their travels during the summer.

The first direct contact between The Rockefeller Foundation and many of the leaders of Mexican agriculture was through Harry M. Miller in the spring of 1941. Among those he met and talked with were Ing. Marte Gomez R., Minister of Agriculture; Ing. Alfonso Gonzalez Gallardo, Sub-Secretary of Agriculture; Ing. Lierda, Official Mayor of the Ministry; Ing. Edmundo Morillo Safa, head of the Dirección General de Agricultura; Ing. Dario Arrieta L., of the section on nurseries; Ing. Edmundo Taboada, of the section on experimental farms; and Ing. Eduardo Limon, director of the experiment station at León.

Miller's second visit to Mexico, a brief call of seven days just prior to the arrival of the Survey Commission in July, announced their coming to the proper officials in the Mexican government and among the American colony. On both visits, incidentally, Dr. Payne took Miller to call on the venerable Ambassador Daniels, then preparing for his leavetaking of Mexico.

Following this trip, Miller devoted himself entirely to his assigned task in the natural sciences of Latin America, except for one brief period when he aided in negotiating the agreement with the government which established the agricultural program officially in 1943.

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The committee's search for a soil scientist was simplified by the fact that the College of Agriculture at Cornell University had recently

canvassed the country for the best younger soil scientist to head its Department of Agronomy and had found him in the person of Richard Bradfield (63). Mann, for many years the dean of the College of Agriculture and provost of Cornell University, could thus recommend Bradfield both on the basis of personal acquaintance and professional reputation (64). His recommendation was enthusiastically endorsed by Dr. William I. Myers, who became dean in 1941 and who was also a Trustee of The Rockefeller Foundation. When Hanson and Miller interviewed Bradfield they were just as much impressed as were the two men who had known him longer (65).

Richard Bradfield, a native of Ohio with a doctorate from Ohio State University, had done additional advanced study in Europe on a Guggenheim fellowship. He came to agronomy through chemistry, his basic scientific contribution being the demonstration that the chemical stability of soils -- their resistance to sudden changes in acidity or alkalinity -- rests on the fact that soil colloids behave like weak acids, acting as a buffering agent. To the general problem of agricultural improvement Bradfield brought not only competence in soil technology but also a broad knowledge of how crops are managed and an informed point of view toward the social and economic setting in which the agronomist must operate.

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Frank B. Hanson, a zoologist by training, was the committee member who found the geneticist and plant breeder for the Survey Commission. Hanson had known in a general way that Paul C. Mangelsdorf was highly regarded as an expert in corn, with a reputation as a geneticist such that Harvard had chosen him to succeed to the chair of Dr. E. M. East, one of

the towering pioneer figures in the development of hybrid corn, but he knew little else about him.

For further information, Hanson went -- among other places -- to the cradle of hybrid corn, the Connecticut Agricultural Experiment Station. Here Dr. D. F. Jones, the man who devised the double-crossing process which makes hybrid corn seed economically feasible, confirmed his favorable impression. Mangelsdorf had worked at the Connecticut station for six years and Jones knew him well.

Not until he talked with Mangelsdorf, however, did Hanson discover his particular interest in Latin American corn, his large collection of indigenous corn varieties, and his plans to use Harvard's tropical station in Cuba -- the Atkins Gardens, of which he was director -- as a center for further study of the origin of corn (66).

Mangelsdorf's preeminence as a scientist is identified with his basic work on the origin of corn as well as upon his practical work in corn breeding. The origin of corn, like that of many important food plants, is shrouded in the mists of prehistory and may never be truly known. At some time in the remote past the Indians of Central or South America domesticated some wild plant which through countless generations of development has become modern corn, and most botanists had assumed that the wild plant was, or was like teosinte, a weed which looks amazingly like corn. But few actual facts were known or precise theories formulated until 1939, when Mangelsdorf, then at the Texas Agricultural and Mechanical College, published a monograph on the subject written in collaboration with Dr. R. G. Reeves. The monograph was the first of a series of publications by Mangelsdorf which contributed importantly to the subject and which have stimulated a substantial amount of

new research by other workers. The outcome of the investigations is far from clear even after fifteen years, but the "beneficial effects of [the Mangelsdorf-Reeves] theory, in having stimulated fundamental research on the corn plant," is generally recognized (67).

When Hanson returned to Cambridge a few days after his first visit for the purpose of making a formal proposal to Mangelsdorf to join the Survey Commission, Mangelsdorf accepted with enthusiasm.

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Harry M. Miller found E. C. Stakman for the Commission. The story of how he did so involves another of the curious coincidences which intimately link the present agricultural program with its historical forebears.

Years before, when the agricultural program of the short-lived International Education Board was active, one of the young scientists selected for a fellowship was a Welshman named Sydney Dickinson, then teaching at the University of Wales. A plant pathologist, Dickinson chose for his place of study the University of Minnesota where he could work under E. C. Stakman, whose reputation even then extended to Europe.

Returning from his fellowship year (1931-32), Dickinson soon moved to the school of agriculture of Cambridge University. Here Miller met him a number of times in the course of his work as European representative of the Foundation. Each time that he did so, Miller recounts, Dickinson sang the praises of Stakman, saying that if the Foundation ever needed a plant pathologist, Stakman was the man to get. In those days plant pathology seemed remote from anything the Foundation was interested in, but the name stuck in his mind (68).

In the curious course of events, when the Foundation did need the top plant pathologist, Miller was on the committee to choose him. After his own investigations amply confirmed Dickinson's high opinion (69), Miller made his way straight to Minneapolis, where he found Stakman not only interested but enthusiastic at the prospect of aiding in the proposed program (70).

When Elvin C. Stakman was selected as one of "the 100 most important people in the world today" (71), the choice rested both on his scientific achievement and on his record in practical agriculture. But the award of the Emil Christian Hansen gold medal was for his demonstration that the fungus which causes black stem rust disease in wheat consists of hundreds of subspecies or "races" which look alike but behave differently on different varieties of wheat. Also a factor was his development of the complex techniques by which the races can be identified. His work was the key which unlocked the riddle of how to breed wheat varieties which can resist stem rust: the genetic resistance must be tailored to particular races of the rust, for general resistance does not seem possible. These studies and the accompanying genetic research on the way the various races of fungus evolve, established him as perhaps the foremost plant pathologist of the age.

If epidemics of stem rust are caused by specific rust races, then it is obviously important to know what races are prevalent in a given season and what others are beginning to increase as threats for future seasons. This is the simple idea behind the rust surveys of the U. S. Department of Agriculture, in which Stakman was a leading figure. In 1917 he made his first trip to Mexico on the rust survey and he returned periodically to that country through all the intervening years, teaching himself a fluent Spanish in the meantime.

Stakman cooperated with geneticists and others at the University of Minnesota to breed the Newthatch variety of wheat which for many years was an important mainstay for commercial wheat growers because of its resistance to the then-prevalent races of rust (72). Few scientists in the United States could match Stakman's outstanding contributions both to the basic and to the applied phases of their fields.

Stakman was born and educated in Minnesota and spent all his teaching and research career at the state's College of Agriculture. His state and his University commanded his first allegiance but linked closely to this loyalty was his love and admiration for the peoples of Latin America. "My primary interest, other than certain long-time researches," he once wrote Hanson, "is in the improvement of Latin-American agriculture and inter-American relations" (73). When Harry Miller came to see him about joining the Survey Commission, he did not hesitate, although he had to cancel some plans already made for the summer.

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The Survey Commission met in New York on June 5th to get acquainted -- none of the three had met the others -- and to plan the mechanics of the trip (74). Dr. George C. Payne, the International Health Division's resident representative in Mexico, came up for the meeting, since he was to take charge of local arrangements. He reported, incidentally, that a suite at the Hotel Geneve in Mexico City, consisting of sitting room, bedroom, and bath, cost 30 pesos -- about \$3.75 at the then rate of exchange (75).

The officers of the Foundation assumed that Payne would also have the responsibility of providing local transportation, but at this point the

Foundation began to get its education in the down-to-earth practicality of professional agricultural scientists. If they were going to see the agriculture of Mexico, the commission members said, they would have to get off main roads and into the farming areas, they would want to stop wherever and as often as there was something to see; and to go where the problems were. This meant having their own car, and to get it without greater cost to the Foundation than regular fares, two of the members volunteered to drive the vehicle all the way to Mexico.

The very next day Frank Hanson located a GMC suburban carryall (76), -- a "lovely fire-engine red" in color (77) -- no mean feat in those times of scarcity. A little later Richard Bradfield came down from Ithaca to pick it up so that he could break it in before beginning the long trip (78). The dealer, in the meantime, repainted it to a standard green. When the carryall was resold at the end of the summer, its net cost to the Foundation was \$400, hardly more than a single round-trip airplane ticket from New York to Mexico (79).

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On July 1st the green carryall rolled out of Ithaca on the first leg of its long trip, with Bradfield, Mangelsdorf, and numerous pieces of baggage and equipment aboard (80). Also aboard was young Richard E. Shultes, his doctoral diploma still damp from the June commencement at Harvard, where he had taken his degree in economic botany. Fluent in Spanish and experienced in Mexico from many months of field work there, Shultes had been added to the Commission as translator at the suggestion of Mangelsdorf. Also he had an appointment in the fall for work in Colombia as a National Research Council Fellow, and the long lift south was an advantage to him (81).

Optimistically, the group expected to reach Laredo, Texas, in five days (82). But the carryall, a cross between a panel truck and a station wagon, was built for ruggedness and commodiousness rather than comfort or speed, and it was the seventh of July when they finally arrived at the border (83). Here Dr. Payne met them after a two-day drive from the capital, helped them with the formalities of crossing the border, and set them on their way, travelling with them nearly all the first week (84).

The trip of the Survey Commission, between the seventh of July and the last day of August, can be divided into six stages, the first being the twelve days in which Bradfield, Mangelsdorf, and Shultes inspected the agricultural districts of the Northern Mesa. As the map (Figure 2) shows, they made 37 inspection stops; already the carryall was earning its keep (85).

Highlight of the first stage was the official welcome to Mexico by Ing. Morilla Saba, Director of the Dirección General de Agricultura of the Ministry of Agriculture, who drove to Ciudad Victoria to meet the party (86). As his guests, the three scientists took part in the inauguration ceremonies of a new ejido -- collective farm.

On the nineteenth the carryall reached Mexico City and the next morning Stakman arrived by air (87). From his many visits to Mexico, he was well acquainted with the northern states, and it had been arranged at the meeting in June that the others would have an orientation period before he joined them (88).

A week in the capital was enough for the official visits to the Ministry of Agriculture, to the Embassy, and for talks with the other governmental agencies (89) which were connected with agriculture, such as the Commission for Water Resources which had charge of the construction of dams and irrigation networks.

The third stage was a trip through the Bajío, the "breadbasket of Mexico," perhaps the most important single agricultural region of the Republic. This trip took them through the states of Mexico, Michoacán, and Jalisco. The carryall was fine on paved roads but to get into some of the villages, usually shown on the map as side trips, they resorted to trucks, a surrey, and several times to horse or muleback.

Returning to Mexico City, the Commission took off almost at once for the Northern Bajío, a fertile region north of the capital, travelling through the states of Hidalgo, Querétaro, and Guanajuato. Doubling back through Mexico City, they made the fifth stage a thorough inspection of the semitropical regions in the state of Puebla and in western Veracruz.

For the final leg of the survey, they took the train from Tehuacan to Oaxaca, looked at a school and some farms near that town, and then flew to Tapachula, in the state of Chiapas, a small town in southwestern Mexico practically on the border of Guatemala.

At Tapachula the four scientists presented themselves at the airport for the return flight with what they thought were firm reservations, only to find that a local bigwig had prevailed on the station agent to "bump" them off the plane in his favor. With no other plane for two days, they had no option but to wait. The only hotel, a noisesome inn with discouraged plumbing, taxed the patience of even the most rugged members of the group. But they put the time to use by planning their report. The first day they discussed recommendations and reached agreement on the essentials. The second day they blocked out the outline and assigned the various sections among themselves for writing.

The enforced stop-over finished, the Commission flew back to Mexico City and in one week, working in Dr. Payne's offices, completed the first

draft of the report. On the last day of August Shultes left for Colombia and Bradfield and Mangelsdorf started home. A few days later, after editing the manuscript, Stakman departed (90). The staff of the IHD office, working overtime, typed six copies of the report and Payne sent them, in two packages mailed on successive days, to Stakman. Stakman sent copies for final checking to Bradfield and Mangelsdorf, collated their emendations, and got the whole thing into the mail for New York just six weeks after the party left Mexico (91). Each copy of the report weighs 56 ounces, contains 62 single-spaced typewritten pages and an appendix of 143 photographs taken, developed, and printed by Mangelsdorf. The Commission traveled more than 5,000 miles in Mexico, made 114 stops in villages, farms, and schools, and saw conditions in 16 states.

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In New York, in the meantime, eagerness to learn what the Commission would recommend mounted daily. Before September was over Hanson could wait no longer and wired Payne for news (92). In Washington, Wallace was likewise interested (93). The copies reached Hanson on October 14 (94) and were circulated rapidly. This was to be an instance in which anticipation was not disappointed. Fosdick, the directors, the committee members, Dean Myers at Cornell, were all deeply and favorably impressed.

Fosdick personally carried a copy to Washington to show to Wallace, lunching with him in the Vice-Presidential office.

I gave him the report at the beginning of the luncheon and it is literally true that he hardly took his face out of the book for the rest of the hour. He kept saying, "perfectly swell!" He was immensely pleased with it and wanted some of his people in the department to read it (95).

The three-page recommendation section of the report, presented entire and unchanged to the Board of Trustees, was adopted by them at their meeting in early December as the guideline for an action program in Mexico. The Trustees authorized the officers to prepare for later presentation a concrete proposal for putting the recommendations into effect (96). The next job was to find the right man to go to Mexico to start the work.

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Vice-President Wallace's reaction on reading the report of the Survey Commission over the luncheon table was to question its principal recommendation. The Commission had said:

The plan presented assumes that most rapid progress can be made by starting from the top and working downward emphasis added (97).

As Wallace instantly realized, the Commission was saying, in effect, that research must precede extension. So stated, the recommendation is a truism with which no scientist would differ. Wallace in fact commented, according to Fosdick, "While he agreed with this, he hoped that it did not mean that no demonstration work would be done" (98).

Two philosophies of agricultural improvement collided head-on in the Commission's statement and Wallace's comment. The philosophy of dissemination -- "extension" in agricultural terminology -- which Wallace reflected rests on the assumption that of course the expert knowledge already exists which, applied to the solution of agricultural problems, can swiftly help farmers increase their production and improve their methods and management.

On this assumption Seaman A. Knapp based his impressively successful campaign in the South and on it likewise was built the massive record of achievement of the county-agent extension system of the U. S. Department of

Agriculture. This easy assumption glosses over the fact that Knapp inherited the fruits of a half-century of agricultural researches, and that the county agents were part of a strong college of agriculture and experiment station system (99).

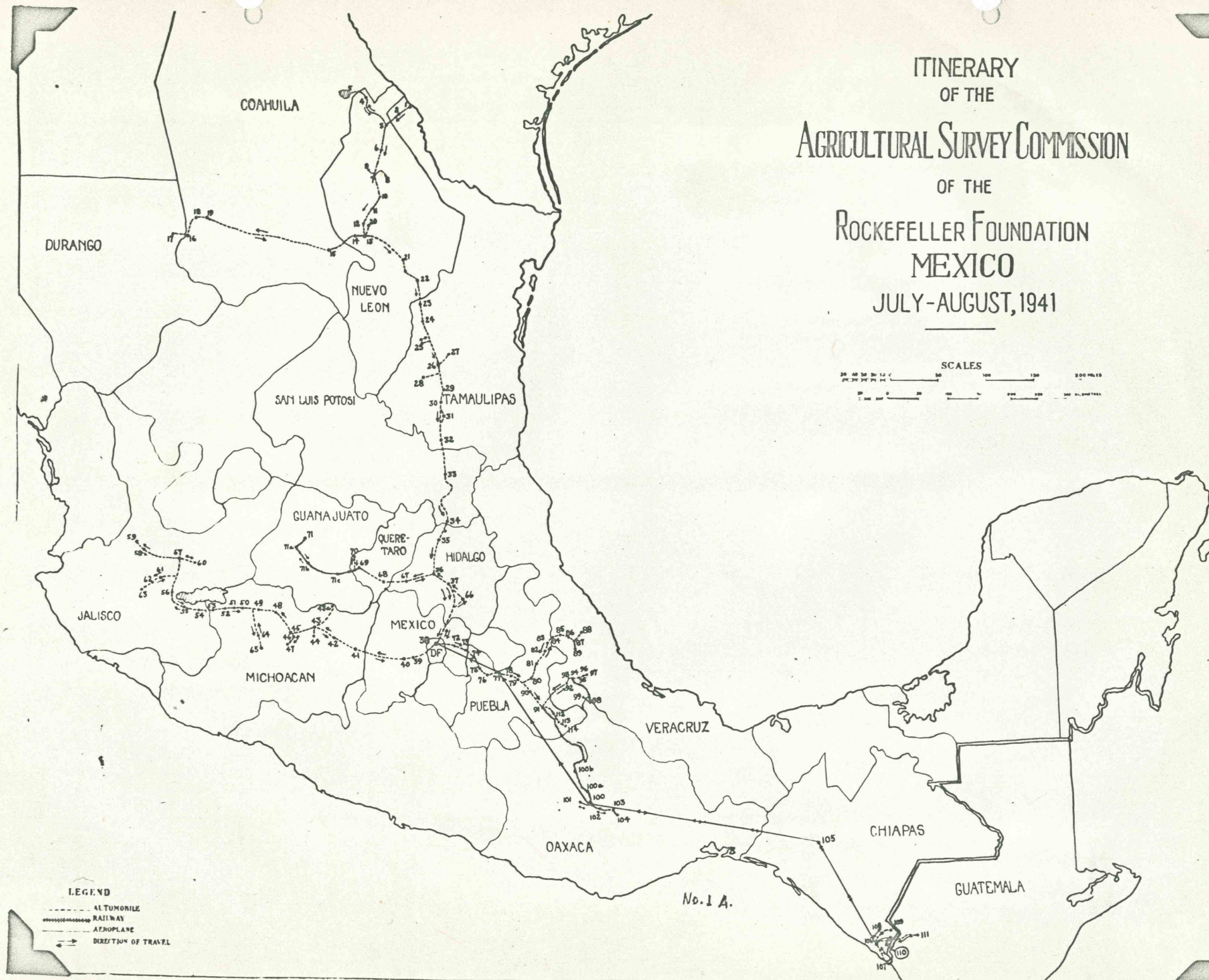
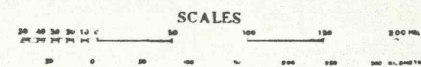
What the Commission said was that in Mexico no comparable body of reliable information existed and that it must be sought through research conducted in Mexico before extension could begin. They said further that extension must also wait until enough experts had been trained to carry the research results effectively to the farmers:

It is the conviction of the Survey Commission that the primary need is to acquire a body of facts and principles relating to Mexican agriculture and to educate men and women who are willing and able to disseminate it effectively through teaching and demonstration.

The research "at the top," the Commission said, should be conducted by a team of scientists maintained by the Foundation in formal cooperation with the Ministry of Agriculture, with headquarters in or near Mexico City, each member of which would conduct specific experimental and demonstrational projects and be on call for advisory help in the Ministry, the schools of agriculture, and the experiment stations. The work of the team, added the Commission, should be intimately associated with that of the Mexican office of the International Health Division.

The research of the scientists should be closely linked with a "special type of fellowship for outstanding investigators and teachers." The training plan, the Commission explains, "does not contemplate fellowships in the usual sense [emphasis in original] but rather provision for study and experience for special and definite purposes in connection with the work in which the man is engaged in Mexico and to which he is expected to return. ... In fact, it would be best ... to make it clear that the

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OF THE
ROCKEFELLER FOUNDATION
MEXICO
JULY-AUGUST, 1941



fellow is not expected to study at educational institutions in the traditional way."

Finally, the Commission recommended, the plan should include the use of grants in aid to encourage the progress and development of the good men and the good researches in the schools of agriculture and elsewhere in Mexico.

Although the proposed plan "may seem to be weighted rather heavily on the scientific side," the Commission concludes, "it seems the most feasible and practical under Mexican conditions. Extension downward to reach the Mexican farmer and potential farmer directly could well follow, but it should await a more thorough study by the proposed team than the Survey Commission has been able to make."

Thus the Commission threw down the gage to the tradition which dominated American thinking about technical assistance for forty years. Certainly Josephus Daniels and John A. Ferrell (100) envisioned a dissemination campaign of the Seaman A. Knapp type. Vice-President Wallace was thinking in extension terms when he talked about agricultural improvement to the Mexicans while in Mexico and to Fosdick and Ferrell when they saw him soon after (101). Every agricultural mission which ventured from the United States up to that time expected to carry the light to the benighted (102). Even in non-Western countries the idea that extension was the broad road to agricultural improvement was firmly fixed in the popular mind. When the end of World War II permitted, so many of these countries sent people to the United States for training in extension methods that the Department of Agriculture had to open a special section to take care of them (103).

In 1941 the limitations of the extension method were apparent only to a few experts sophisticated by international experience -- men like Carl

Sauer, the geographer, A. R. Mann, and the members of the Survey Commission. They saw that the process of technical assistance in nonscience-centered countries is not simple. Beyond the fact that the basic research has not been done lie other reasons intimately woven into the daily life and culture of the people.

The dissemination or extension method can succeed only when what the extension agent says appeals to a strong motive in those who listen. In public health the appeal is to the universal desire to escape the sufferings of disease.

In agricultural extension the appeal is to the desire for greater profits. This works well in countries where middle-class motivations have long predominated. But what does the extension agent say to the subsistence farmer who is satisfied to grow merely enough corn to feed himself and his family? How does he introduce new tillage methods when the farmer plants and reaps according to age-old rituals in unison with all the other farmers in the village? Nineteen years before enthusiastic Point IV workers stubbed their toes on realities like these (104), the members of the Survey Commission saw that subtler methods were required than an all-out American-type extension campaign.

The Survey Commission, in recommending that The Rockefeller Foundation operate directly in agricultural research, established a new pattern of technical assistance. The previous chapter, it may be remembered, ended with a discussion of the four kinds of programs possible on the basis of the analysis made by Jerome D. Greene. It was further pointed out that the use of grants to encourage either research or dissemination by other agencies was not possible in nonscience-centered cultures because the agencies do not

exist. Hence dissemination by direct operation, in the classic pattern of the International Health Division, seemed the most practical method of technical assistance among these cultures. The scheme of this analysis is diagrammed in Figure 3.

There is one further combination of the elements of the Greene analysis which had not hitherto been tried -- direct operation in research in the setting of a nonscience-centered culture (Figure 4). Perhaps the picture of The Rockefeller Institute or the Carnegie Institution located in an Indian village or a Mexican pueblo was too bizarre to be thought of, as indeed it is if taken literally.

The pattern which the Survey Commission proposed was that a highly trained research team be set down in the middle of the region where the assistance is needed, with the mission of conducting research on locally important problems to find solutions which are adapted to both the physical and the cultural requirements of the local environment. In agricultural terms this meant, the Commission specified, researches which would lead

to the improvement of soil management and tillage practices; the introduction, selection, or breeding of better adapted, higher yielding and higher quality crop varieties; more rational and effective control of plant diseases and insect pests; and the introduction or development of better breeds of domestic animals and poultry, as well as better feeding methods and disease control.

To this research program the Commission proposed to link a special kind of training program and the use of grants in aid for the development of local institutions. The training program was of a type long before developed by the International Health Division and the idea of the developmental grant was likewise borrowed from that organization. This was their first use outside the field of public health, however.

Such is the basic architecture of the Mexican agricultural program as proposed by the Survey Commission. That so untried and risky a scheme succeeded was due to several factors. For one, the Foundation, a private organization, was both willing and wealthy enough to undertake the long-term commitment necessary for the project to mature at its own rate. Second, the officers of the Foundation were wise enough to ask the members of the Survey Commission to continue as an Advisory Committee to guide the development of the policies they had recommended. And finally, the officers were lucky enough to find a director for the new program who had a genius for the patient, flexible, and yet firm day-to-day leadership which alone could make the project work. The story of how these things happened and how the new pattern was established is the theme of the next chapter.

NOTES AND REFERENCES FOR CHAPTER II

1. "Above argument is the fact that in Mexico the resurgent Revolution became institutionalized under the firm hand of President Avila Camacho." (Howard S. Cline, The United States and Mexico (Cambridge: Harvard University Press; 1953) p. 305.
The change of the name of the dominant party from Partido Revolucionaria Mexicano (PRM) to Partido Revolucionaria Institucional (PRI) took place in 1946, prior to the election of President Miguel Aleman Valdes, so that technically the period of the Institutional Revolution dates from this rather than the administration of President Camacho. The two chapters which Cline devotes to the Camacho administration justify his conclusion, however. See Cline, The United States and Mexico, Chapters 13-14, pp. 261-305.
2. "Henry Wallace has made the finest impression and won all hearts here. It was an inspiration to designate him as the envoy of our country to the inauguration. His coming and his wise utterances have greatly strengthened your Good Neighbor policy and done honor to our country." (Josephus Daniels, telegram to President Franklin D. Roosevelt, December 2, 1940.)
3. Josephus Daniels, Shirt Sleeve Diplomat (Chapel Hill: University of North Carolina Press; 1947) p. 349.
4. Interview with Dr. George C. Payne, May 13, 1953.
5. Daniels, Shirt Sleeve Diplomat, p. 348.
6. "Agricultural Conditions and Problems in Mexico;" Report of the Survey Commission of The Rockefeller Foundation; 1941. (RF files.) p. 13-14. Also, E. C. Stakman, "Report on Agricultural Activities in Mexico; February 3 to May 20, 1943;" p. 4. (RF files.)
7. Josephus Daniels, interview by AP staff writer; Raleigh (N.C.) News and Observer, January 1, 1941. The "official chore" was to address a dinner for the College of Electors on January 19, 1941.
8. "Health Official Outlines / Steps Fighting Influenza./ Death Rate Comparable to/1918 not Expected Now;/Tells of New Vaccine." News and Observer, January 13, 1941.
9. There is no written record of any arrangements. Dr. Ferrell's memory is that there was no prior arrangement for seeing Ambassador Daniels on the occasion of his trip to Raleigh. (Interview with Dr. John A. Ferrell, June, 1955.)

10. This is an inference based on the following evidence: The News and Observer, a morning paper, would ordinarily close forms about 10:00 p.m. The reference in the story, "Dr. John A. Ferrell said here last night," means that the interview was early enough in the evening to allow the story to be written and sent or phoned in. If Dr. Ferrell's memory is correct that he went to the Daniels home in the evening rather than the afternoon, either Daniels wrote the story himself or there was a reporter there who did so. Of course there are other possible explanations; the "late last night" could have been added to bring a previous interview up to date. But the possibility that Daniels wrote it himself is an intriguing one.
11. "Then he plans to come home before a great while to return to his chosen profession." (News and Observer, January 1, 1941.) Also: "I smiled but I had already made up my mind to go home," May 31, 1941 (Daniels, Shirt Sleeve Diplomat, p. 509.)
12. "Probably in anticipation of ending his service as Ambassador to Mexico, which occurred in 1942 1941 he evidenced greater anxiety than previously with regard to securing aid for Mexico in the fields of health and agriculture, along lines the General Education Board had supported in the South." (John A. Ferrell, letter to William C. Cobb, April 27, 1955.)
13. "He (Daniels) urges further that I come to Mexico in February and meet a number of the new officials. Please let me know by air mail what you think of his suggestions ..." (John A. Ferrell, letter to Dr. George C. Payne, January 21, 1941.)
14. "Mr. Daniels has urged that I talk with Vice President Wallace who, as you know, has spent several weeks in Mexico studying problems there, and who previously has been extensively involved in the study of agricultural and economic problems in our country." (John A. Ferrell, letter to Dr. George C. Payne, January 21, 1941.)
Also: "When I saw Mr. Daniels in Raleigh on January 12, he urged that I confer with you and Mr. Wallace and visit Mexico early in February." (John A. Ferrell, memorandum to Raymond B. Fosdick, "Rockefeller Foundation Aid to Mexico in Agricultural and Possibly in Educational Fields," January 27, 1941; RF files.) This is the covering memorandum for the longer report referred to below, Reference 24.
15. This statement is an inference.
16. "He (Daniels) urged that, if the Rockefeller Foundation, the General Education Board, or other Rockefeller agencies could not or would not participate in the Mexican program, that an effort be made to interest the Institute of Inter-American Affairs - Mr. Nelson Rockefeller, or Vice President Wallace - in providing aid." (John A. Ferrell, letter to William C. Cobb, April 27, 1955.)

that there were only three things in Mexico that the Foundation should support: health, nutrition and agriculture. I sent the suggestions to my acid-minded friend, Carl Sauer of the University of California who is very familiar with Mexico and who is now in Guadalajara. You may be interested to read his comments. JHW."

This memorandum covered a copy of Sauer's letter of February 10, 1941, written from Colima, Mexico (Reference 35). Willits' letter requesting the opinion must have been written soon after the middle of January, for Sauer to have received it before February 10 in Colima. No copy of Willits' letter to Sauer can be found.

The time element in this exchange of letters, and hence the date when Willits might have seen Wallace, is further restricted by the evidence of the following memorandum:

"JHW to AB, TBK, ME, RBF, SHW. January 18, 1941.

"In New Orleans I had a long talk with Carl Sauer of the University of California and President of the Association of American Geographers. I discussed with him:

- "1. The proposal from the University of California for an Institute of Latin American Affairs which he had previously submitted to the Foundation (in 1938);
- "2. The question of what the Foundation's program should include in the field of Latin America;
- "3. The persons whose work in the field was most solid and worth backing."

The rest of the memorandum lists the people mentioned, the comments by Sauer. There is no mention of Sauer's reply to question number 2.

This memorandum does not settle the date on which Willits saw Sauer. The date of the memorandum, January 18, 1941, may be that of its writing, in which case the interview itself might have been much earlier. Willits, however, could hardly have seen Wallace before the latter's return from Mexico on January 8 or 9. Therefore it seems probable that Willits saw Sauer on January 18th and stopped in Washington on his way back from New Orleans, at which time he talked with Wallace. If this is the correct sequence, then Willits' stop in Washington was brief, and his report of his conversation to Fosdick was made about the same time or later than Ferrell's report of his talk with Daniels, for the inference of Reference 19 is that January 21 is about the latest date on which Ferrell could have reported.

The writer interviewed Dr. Willits on this point on April 21, 1954. The notes made then are as follows:

"I asked Dr. Willits about this. His memory is that he saw Wallace early in 1941, about some matter he does not recall, and that he also asked Wallace, who was just back from Mexico, if there was something the RF might do in Mexico. Wallace, he remembers, replied that Mexican basic foods -- corn, beans, and wheat -- could be improved and that anything done to improve them would be greatly to the benefit of the country.

17. "When I saw Mr. Daniels in Raleigh on January 12, he urged that I confer with you and Mr. Wallace ... " (This sentence, also quoted in Reference 14, is from John A. Ferrell's memorandum to Raymond B. Fosdick, "Rockefeller Foundation Aid to Mexico in Agricultural and Possibly in Educational Fields," January 27, 1941; RF files.)
Also: "When he (Ferrell) was here last I suggested to him that in view of the close relations between the United States and Mexico ... the Rockefeller Foundation could not spend its money better than in giving assistance to Mexico in promoting public health. ... and that I hoped he would talk to Mr. Rockefeller or to Mr. Fosdick and urge them to help promote sanitation and good water supply in Mexico. He said he had talked to Mr. Fosdick about it and had made a report to him which was very illuminating and interesting. ..." (Daniels, Diary, April 7, 1941; Daniels Papers, Box 7.) This reference is not clear. "When he was here last," taken literally, would mean the 1935 visit of Ferrell to Mexico. Or does "I hoped he would talk to Mr. Rockefeller or to Mr. Fosdick" refer to the January 12, 1941 conversation in Raleigh, of which Ferrell almost certainly spoke but which Daniels, then 80 years old, did not recall?
18. "JAF returned from visits to Baltimore, Washington and North Carolina." (Andrew J. Warren, Acting Director of the International Health Division during Dr. W. A. Sawyer's absence in Europe, Diary, January 15, 1941.)
19. An inference is possible that this did not occur until the 21st of January. On that date, Ferrell wrote Dr. George F. Payne a letter already quoted (References 13 and 14) in which Ferrell says, "Mr. Daniels has urged that I talk with Vice President Wallace ..." If Ferrell already knew of Fosdick's interest in the project and of his desire to go with him to see Wallace, would it not have been natural for him to mention this fact to Payne, a member of the RF field staff? However, it could not have been much after the 21st if Ferrell was to complete his memorandum on Mexico by January 27.
20. "You (Fosdick) spoke of going with me to see Mr. Wallace." (John A. Ferrell, memorandum to R. B. Fosdick, January 27, 1941.)
21. The possibility should be noted that a suggestion to Fosdick that he should see Wallace came also from another source.
In his introductory remarks at the Staff Conference of February 18, 1941, Fosdick stated, "J. H. Willits talked recently with Vice President Wallace." This comment is embodied in remarks concerning the origin of the idea, including the talk with Wallace from which he and Ferrell had recently returned.
The only written record of J. H. Willits' conversation with Wallace is this memorandum:
"JHW to AG. (Initialled in longhand also to RAL and HMM.) February 14, 1941.
"About a month ago when I was talking with Vice-President Wallace just after his return from Mexico he made the observation

"Willits told this to Fosdick, who was very much interested, and who soon went to Washington to see Wallace himself, with Ferrell, with the result recounted in Fosdick's Story. He did not dictate a memorandum of his talk with Wallace, giving Fosdick an account of it orally."

There is no need to postulate that Ferrell's suggestion that Fosdick see Wallace was the only one the latter received. Wallace's trip received good coverage in the press -- the New York Times followed it in some detail -- and the idea of talking with Wallace may well have occurred also to Fosdick independently. The evidence available seems to this writer to substantiate the conclusion that it was Daniels' suggestion to Ferrell, and Ferrell's to Fosdick, that provided the main impetus which resulted in the interview in Wallace's office on February 3.

22. "I am submitting herewith the memorandum you requested that I prepare regarding new kinds of aid which The Rockefeller Foundation might be willing to offer to Mexico along lines advocated by Ambassador Daniels and others, possibly by Vice President Wallace, and by myself." (John A. Ferrell, memorandum to R. B. Fosdick, January 27, 1941.)
23. See Chapter 1, pages 26-27.
24. "Memorandum From JAF to RBF: Aid to Mexico: Continued Support of Public Health Services; Aid also toward Measures in the Field of Agriculture; Possibly Special Activities in the Field of Education." January 27, 1941. (RF files.)
25. Raymond B. Fosdick, night message to the Honorable Henry A. Wallace, Vice-President of the United States, Washington, D. C.; January 29, 1941 (RF files);
And, Mary Huss, Personal Secretary to the Vice President; collect telegram to Raymond B. Fosdick; January 30, 1941 (RF files).
26. Interview with Dr. John A. Ferrell, June, 1955.
27. Raymond B. Fosdick, The Story of The Rockefeller Foundation (New York: Harper & Bros.; 1952) pp. 184-185.
28. Raymond B. Fosdick, memorandum, dated February 3, 1941. (RF files.)
29. John A. Ferrell: "Memorandum of Wallace Conference" and "Comments on Conference with Wallace," both dated February 3, 1941; and "Further Comments on the Conference with Wallace," February 10, 1941. (RF files.) The quotations are from the second memorandum.
30. Warren Weaver, memorandum to William C. Cobb, April 7, 1954. (RF files.)
31. "RBF. Had a very satisfactory conference with Vice-President Wallace yesterday and he is now writing a memorandum about it." Andrew

- J. Warren, Diary, February 4, 1941. (RF files.) Warren notes that while in Washington, Fosdick also called on Dr. Warren Draper, Acting Surgeon-General of the U.S.P.H.S., and visited the State Department to discuss the RF program in Unoccupied France.
32. Same as Reference 30.
33. A. R. Mann, memorandum to H. M. Miller, February 10, 1941; and "Approach to a Possible Natural Science Program in Mexico with Special Reference to Agriculture," a memorandum also addressed to H. M. Miller, dated February 20, 1941. (RF files.) The quotations are from the second memorandum.
34. When H. M. Miller, Jr., was transferred from Europe to Latin America as representative of the Division of Natural Sciences, he recalls, "Warren Weaver asked me if I would be interested in shifting territories from Europe to Latin America, as an interim assignment during the war. Weaver suggested that the assignment would be for about five years, and that if in that time I spent as little as \$10,000 or as much as \$50,000, the time would be considered well invested." This was probably in December, 1940; certainly it was before the end of the year 1940. Miller accepted with enthusiasm and has been concentrating on Latin America ever since. (Interview with H. M. Miller, Jr., April 24, 1953.)
- The same feeling was evident at the Staff Conference of February 18, 1941. J. H. Willits, for instance, asked, "What is likely to be the interest of the U. S. A. in Mexico after peace comes in Europe?" To this Fosdick replied that the answer is impossible to guess, but that the Foundation's ability to maintain a program is significant. Hanson also asked what seems to be a planted question: "Whether a three- or five-year program on the practical side in agriculture would go very far?" This was answered by A. R. Mann, who said definitely that the program would have to be longer than that -- would not take a vast amount of money but would take time. (Minutes, Staff Conference, February 18, 1941.)
35. Professor Carl Sauer, letter to J. H. Willits, February 10, 1941, written from Colima, Mexico. (RF files.)
36. The meeting was attended by Raymond B. Fosdick, President; Thomas B. Appleget, Vice-President; D. H. Stevens and John Marshall, Humanities; Andrew J. Warren and John A. Ferrell, International Health Division; J. H. Willits, Social Sciences; Robert A. Lambert, Medical Sciences; and F. B. Hanson and H. M. Miller, Natural Sciences. Warren Weaver did not attend because he was en route from Palo Alto, California, to Madison, Wisconsin. (Minutes, Staff Conference, Tuesday, February 18, 1941. (RF files.)
37. Lambert of Medical Sciences, Miller of Natural Sciences, and Stevens of Humanities were leaving shortly, the first two to Mexico and the

third for a general tour of South America. Ferrell of I.H.D. was also getting ready for the trip to Mexico which Daniels had suggested.

38. Minutes, Staff Conference, Tuesday, February 18, 1941. (RF files.)
39. The Minutes of the Staff Conference (Feb. 18, 1941) give the names only of A. R. Mann and F. B. Hanson, but Harry M. Miller, Jr., from the first worked so intimately and actively with them that the omission of his name must be an oversight.
40. Minutes, Agricultural Commission, June 5, 1941. (RF files.)
41. See Reference 30.
42. John D. Hicks, The American Nation (Boston: Houghton Mifflin; 1949), p. 704.
43. Harry M. Miller, Jr., encountered reports of this political situation in Latin America from the very early stages of his investigation of the state of the natural sciences in that area. See for example his report on his conversation with Dr. C. M. Tucker, head of the Department of Botany at the University of Missouri (Diary, January 30, 1941), and with Dr. T. Dobzansky, geneticist at Columbia University (Diary, February 24, 1941).
44. Daniels, Shirt Sleeve Diplomat, p. 347.
45. Cline, The United States and Mexico, p. 261, p. 265, and elsewhere.
46. Dana G. Munro, chairman of the Department of History at Princeton University, former chief of the Division of Latin American Affairs in the State Department, and former Minister to Haiti. Munro spoke to Harry M. Miller, Jr., about "the large number of good-will tours resulting from the present more or less feverish interest in Latin America," and some of the problems this situation raised for the Foundation's plans. (Miller, Diary, May 21, 1941. RF files.)
47. The sudden flood of good-will tours, which Josephus Daniels observed from his vantage point in the Embassy in Mexico City, moved him to make this note in this diary for August 9, 1941:
"Almost every day now we have a call from some scientist, or agriculturalist, or statesman, or professor, or athlete, or musician, or artist who is making a good-will tour through the Pan-American countries with special reference to their [sic] life work." (Daniels papers, Box 7)
48. Fosdick, Story of The Rockefeller Foundation, p. 276ff.
49. Harry M. Miller, Jr. The reassignment to Latin America took place in December, 1940. (Interview with H. M. Miller, April 24, 1954.)

50. Miller, Diary, June 25, 1941.
51. Fosdick, Story of The Rockefeller Foundation, p. 80ff.
52. Fosdick, President's Review for 1940, in Annual Report, 1940, p. 62.
53. Fosdick, President's Review for 1940, in Annual Report, 1940, pp. 62-64.
54. Fosdick, President's Review for 1938, in Annual Report, 1938, pp. 66-70.
55. Minutes, Staff Conference, Tuesday, February 18, 1941, p. 1. (RF files.)
56. "RBF. Requested a list of I.H.D. personnel in Central and South America and specific territory served by each. He also requested a rough estimate of I.H.D. expenditures in those areas for 1940. Mr. Rockefeller, Jr., had again raised the question of expanding the Foundation's program in Latin America." (Emphasis added.) Andrew J. Warren, acting director of I.H.D. during Dr. W. A. Sawyer's absence in Europe, Diary, March 5, 1941. (RF files.)
57. The first three named in Reference 37. The Director of the fourth, the Division of Social Sciences, Dr. J. H. Willits, investigated through the geographer, Dr. Carl Sauer, of the University of California, who had extensive acquaintance with the region. Dr. Willits met Sauer for a long conference in New Orleans in January, 1941, and also corresponded with him. See References 21 and 35.
58. Fosdick, President's Review for 1942, in Annual Report, 1942, pp. 12-14.
59. The I.H.D. had worked in Brazil since 1916, but chiefly in relation to specific diseases. The new program was in general public health, in connection with which the Rio de Janeiro office was reopened. Fosdick referred to the reopened office in his remarks to the Staff Meeting of February 18, 1941. (Minutes, p. 1; RF files.)
60. Fosdick, President's Review for 1942, in Annual Report, 1942, p. 14.
61. This and the previous quotation are taken from A. R. Mann, memorandum to H. M. Miller, Jr., February 20, 1941. See Reference 33.
62. Miller, Diary, January 27 to July 14, 1941. The analysis of the diary on which these figures are based was made by Mrs. Barbara Tunison of the Office of Publications; the travel distances were compiled by the Fellowship and Reference Service.
63. Much of the information about Dr. Bradfield was obtained in an interview with Dr. R. F. Chandler, Jr., on December 8, 1955. Dr. Chandler, who is now an officer of The Rockefeller Foundation, was a member of the Department of Agronomy of the College of Agriculture

- of Cornell University from 1935 to 1945. Also consulted: American Men of Science, Vol. II, Biological Sciences (New York: R. R. Bowker; 1955).
64. A. R. Mann was a teacher and dean of the College of Agriculture at Cornell from 1908 to 1931, and Provost from 1931 to 1936, when he joined the General Education Board.
65. Hanson and Miller saw Dr. Myers on April 8, 1941. Miller makes special note of Myers' enthusiasm about Bradfield in a letter to Hanson dated April 10, 1941. The two men also met Bradfield on the 8th.
66. Hanson called on Dr. Mangelsdorf in Cambridge on April 10, 1941, having left Miller at Ithaca to finish the interviews at Cornell. He called on Dr. D. F. Jones at New Haven on April 11. On April 15, Hanson returned to Cambridge to make a formal proposal to Dr. Mangelsdorf about joining the Survey Commission.
67. The quotation and the statements on which the foregoing summary is based are from L. F. Randolph, "Cytogenetic Aspects of the Origin and Evolutionary History of Corn," in, George F. Sprague (Ed.) Corn and Corn Improvement (New York: Academic Press; 1955) pp. 34-35.
68. The facts about Dickinson's fellowship are in The Rockefeller Foundation Fellowship Directory (New York: the Foundation; 1951). The story of how he recommended Stakman was told to the writer by Dr. Miller in an interview on April 24, 1953.
69. Dr. C. M. Tucker, head of the Department of Botany at the University of Missouri, told Miller on January 30, 1941, that "Professor Stakman of Minnesota would be an excellent advisor on Latin America." (Miller, Diary, January 30, 1941.) Another commendation Miller heard was from Dr. C. E. F. Guterman, professor of plant pathology at Cornell, who said, "E. C. Stakman, at Minnesota, is easily the first in tropical plant pathology." (Miller, Diary, April 8-9, 1941.)
70. Miller flew direct to Minneapolis and called on Dr. Stakman in his office on April 15. That evening he sent Hanson the following night letter:
- "Stakman keenly interested Latin American cooperation and Mexican agriculture. Has just returned from three weeks collecting trip in Mexico. Acceptance Commission membership depends only on arrangements with Dean and Department Agriculture. August and September ideal months but could have some time in late July. Because trips over period years to Mexico he could follow others who would be seeing some basic things already familiar to him."
71. Donald Robinson, The 100 Most Important People in the World Today (Boston: Little Brown; 1952; also: New York: Pocket Books, 1952) pp. 269-272 in the Pocket Books edition.

72. The facts in the foregoing are based on an interview with Dr. E. C. Stakman in his office in St. Paul in June, 1953, and on the reading of some of his less technical articles. The opinions rest on interviews with several people, chiefly Dr. J. G. Harrar, Dr. R. F. Chandler, Jr., Dr. Norman E. Borlaug, and Dr. John W. Gibler, all of The Rockefeller Foundation.
73. E. C. Stakman, letter to Frank B. Hanson, December 30, 1942 (RF files).
74. This and the next paragraph are based on the Minutes of the Agricultural Commission, June 5, 1941 (RF files).
75. George C. Payne, letter to H. M. Miller, Jr., May 28, 1941.
76. Frank B. Hanson, Diary, Friday, June 6, 1941.
77. Miller, letter to Richard Bradfield, June 12, 1941.
78. Hanson, Diary, June 24, 1941.
79. The carryall cost \$1,000 (Hanson, Diary, June 6, 1941) and was sold by the Natural Sciences Division to the International Health Division for Dr. Payne's use in Mexico for \$600 (Telegram, Wm. A. McIntosh to Payne, August 21, 1941). In 1941 the round-trip fare from New York to Mexico City was \$
80. Actually, Mangelsdorf and Shultes met Bradfield in Syracuse. (Mangelsdorf, telegram to Hanson, June 26, 1941.)
81. Hanson, Diary, April 15, 1941. Shultes' appointment was approved by the officers of the division and Mangelsdorf and Shultes were notified by a letter from Hanson dated April 29, 1941.
82. Mangelsdorf, telegram to Hanson, June 26, 1941.
83. George C. Payne, telegram to John A. Ferrell, July 7, 1941.
84. Payne, letter to Miller, July 16, 1941.
85. This and other details of the trip are based on the Report of the Survey Commission (see Reference 97) and on interviews with the members of the Commission in the spring of 1953.
86. Payne, letter to Ferrell, July 21, 1941.
87. The same.
88. See Reference 70.
89. Same as Reference 86.
90. Payne, letter to McIntosh, August 25, 1941, and letter to Hanson, August 26, 1941.

91. E. C. Stakman, letter to Hanson, September 19, 1941; and Payne, letter to Hanson, September 23, 1941.
92. Hanson, telegram to Payne, September 18, 1941.
93. "In Washington. October 20, 1941. W (Wallace) asked WAS (Sawyer, Director of the International Health Division) whether the report of the RF agricultural commission had been received. WAS had not yet seen it. W. referred to his previous talk with RBF (Fosdick) and JAF (Ferrell), and WAS told him of the plan to send Dr. Robinson to Mexico to make a nutrition study." (Diary of W. A. Sawyer, RF files.)
94. Hanson, telegram to E. C. Stakman, October 14, 1941.
95. Fosdick, memorandum to Weaver, October 31, 1941.
96. Minutes of The Rockefeller Foundation, 1941, p. 41385. The "Recommendations" were reproduced in the Docket for the December, 1941, meeting of the Trustees, pp. 15-22.
97. "Agricultural Conditions and Problems in Mexico"; Report of the Survey Commission of The Rockefeller Foundation, 1941. (RF files.) The "Recommendations," two and a half singled-spaced pages, are placed at the front of the Report. All references in this section to the Survey Commission's recommendations are to this portion of the document.
98. Same as Reference 95. Wallace uses the word "demonstration" here as synonymous with "extension." The Commission's use of the word gives it a different meaning, i.e., an experiment planted to secure research data is a "demonstration" of scientific method, but it is not an "extension demonstration."
99. E. deS. Brunner and E. H. P. Yang, Rural America and the Extension Service (New York: Columbia University Press; 1945) pp. 171-2; 173.
100. See Chapter 1, p. 34. However, when the Survey Commission recommended that the agricultural program in Mexico should consist of high-level research work, Ferrell was in complete accord. "His own mind might not work in the research direction, but once the recommendation was made he understood and appreciated the reasons for it and its good sense." (Dr. George C. Payne, in interview by the writer, February 6, 1955.)
101. "He [Wallace] believed that this improved yield could readily be obtained by modern agricultural methods which are little understood in Mexico and that it would be possible by demonstrations to start a movement which in time would influence the whole of the country." (From Fosdick, Memorandum, February 3, 1941, already quoted; see Reference 28.)

102. Generalized from the accounts of various agricultural missions as related in Merle Curti and Kendall Birr, Prelude to Point Four: American Technical Missions Overseas, 1838-1938 (Madison; University of Wisconsin Press; 1954).
103. Brunner and Yang, Rural America and the Extension Service, p. 171.
104. Brunner and Yang, Rural America and the Extension Service, pp. 173-74.
Also, Curti and Birr, Prelude to Point Four, p. 216.