Book Reviews

The Analysis of Response in Crop and Livestock Production

By John L. Dillon. Pergamon Press, New York. 135 pages. 1968. $4.50.

THIS IS A SMALL, concise handbook on the theory of agricultural response; a primer on the production function. The title is slightly misleading, because Dillon's presentation stresses "theory" more than "analysis." Graduate students or advanced undergraduate students studying production economics should find this book very useful. It fits neatly between the introductory texts for undergraduates and the more advanced mathematical treatment of production response in microeconomic theory texts. Prerequisites to this book are elementary calculus and an introduction to production economics.

The author uses a formal mathematical presentation well augmented with empirical examples from agriculture. He divides his book into four chapters. The first three cover the theory of production response. Chapter 1 deals with the physical relationships between inputs and outputs. In the second chapter he adds prices and works through the calculus of simple profit equations. He includes least-cost production of a given level of output, and maximization of profits from a given level of expenditure on inputs. Chapter 3 adds the time dimension. Conventional concepts of maximization over time are presented. He also discusses complications caused by a production process that includes a time sequence of input injections and a time sequence of output harvests. Figures showing response curves and surfaces, isoquants, iso-profit lines, expansion paths, etc., are liberally sprinkled throughout these three chapters. The book is concluded with a very brief chapter on methods and problems of estimating physical production functions. Dillon presents several analysis-of-variance models with possibly the briefest discussion to be found anywhere in the literature. Problems associated with statistical estimation are also discussed. But this chapter serves the author's purpose of introducing the student to production response research.

The highlight of Dillon's book is his liberal reference to supporting literature. He refers to about 150 textbooks and research publications pertaining to production response. At the end of each chapter there is a section that describes where to find more information on each of the major subjects in the chapter. This should be especially useful for the student audience.

Jerry A. Sharples

Agribusiness Coordination: A Systems Approach to the Wheat, Soybean, and Florida Orange Economies

By Ray A. Goldberg. Harvard Business School, Boston. 256 pages. 1968. $12.

AGRIBUSINESS AS DEFINED by the Harvard Business School includes farm supply industries, farming, and the many food and fiber processing and distribution industries. Employment in the farm supply sector was 8 percent of total U.S. employment in 1947 and again in 1966. Processing and distribution accounted for 16 percent during the same 2 years. But farm employment dropped from 17 to 7 percent of the total work force employed.

In this context, Goldberg sketches recent trends in U.S. agribusiness, and launches into his main theme and its illustration in three commodity fields. The central concept is that managers, private and public, must be fully aware of the total commodity system in which they participate if they are to develop effective strategies and policies.

The commodity analyses are in terms of dynamics (developments), structure, and behavioral and performance patterns. The method is essentially descriptive, abundantly illustrated with tables and charts. The examination of all phases of marketing of the three farm products selected is thorough and detailed, even to the point of tedium. Almost neglected, on the other hand, are the other two sectors of agribusiness.

The book is informative. The subjects are well researched. Much information is given on the marketing and distribution systems for wheat and wheat products, soybeans and soybean products, and Florida oranges and frozen concentrated orange juice. Such comprehensive and detailed information can be drawn upon by advanced students of marketing and probably by many

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The book is informative. The subjects are well researched. Much information is given on the marketing and distribution systems for wheat and wheat products, soybeans and soybean products, and Florida oranges and frozen concentrated orange juice. Such comprehensive and detailed information can be drawn upon by advanced students of marketing and probably by many in the affected industries themselves, as stated by the author as his central theme.

A major drawback, however, is the high "fog index"—too many long sentences, dependent clauses, dangling phrases, and long words. Many examples of this kind of error in communication might be given. One, chosen from the summary, will do. "Although managers of firms in any kind of industry structure must be aware of their total industry environment, the peculiar characteristics of agricultural industries with unpredictable and seasonal supplies, the expanding interrelationships in the vertical structure from farm supplier through ultimate distributor, the need for a strong infrastructure, the increasing significance of world markets, and the existence and importance of complex coordinating machinery make a systems approach much more critical in the development of strategies for firms in agricultural industries than for firms in other types of industrial structures."

Robert M. Walsh

Perspectives in Developmental Change

By Art Gallaher, Jr. University of Kentucky Press, Lexington. 263 pages. 1968. $8.50.

THE TECHNOLOGICAL REVOLUTION, a 20th century phenomenon, has thrust the concept of developmental change into a major area for study. There are several forces creating problems of developmental nature, namely (1) the disintegration of colonial empires, which has left newly emerging nations with more economic and social problems than they had as dependencies, (2) the difficulties attending the development process which are widely advertised through forums like the United Nations and its specialized agencies, and (3) the fact that developed nations have made development aid an integral part of their foreign policy.

The problems are not solely restricted to economic change; they include improvement in other social dimensions. In this book several eminent social scientists examine essential problems associated with developmental change utilizing the theoretical know-how and empirical data of various disciplines.

Morris E. Opler contends that the concept of developmental change is fundamentally grounded in theories about the nature of man. Human behavior is not determined by impersonal forces; man is free to design his own future. Leonard W. Doob holds that developmental change is aimed at modifying the behavior of people. Development is not purely institutional; planning developmental change should be approached through psychology. Education is one of the most important ingredients in the development process. It is therefore, Solon T. Kimball states, the obligation of social scientists to clarify education. This can be done by having the social scientist and educator sharing responsibilities on development projects, an association which was lacking in the past.

Bert R. Hoselitz and H. W. Hargreaves are concerned with the problems of investment planning and decision-making in particularly difficult development situations. Policymakers should not restrict themselves to making purely economic decisions but must also choose between conflicting political goals. Fred W. Riggs argues against a linear process of development that proceeds from one institutional system to another. Changes are not simply additions of desirable goods, but are rearrangements of previously existing systems. Edward H. Spicer states that developmental change is directed towards achieving a new form of cultural integration. However, to understand his concept of developmental change requires knowledge of the functional process which unites input to output goals.

Developmental change is essential to the future of both urban and nonurban societies. Wilbert E. Moore urges that change is an integral part of the behavior of societies and no society can ever believe that it has arrived at an ideal development situation. Edward Weidner asserts that change must be the product of multidiscipline efforts.

The group is in overall accord that developmental change is made through planned and purposive actions; involving all social scientists, not only economists. Implicit in the planning is knowing the exact extent to which developed nations of the world are willing to commit themselves to help less fortunate nations.

Jack Ben-Rubin

European Economic Integration and the United States

By Lawrence B. Krause. The Brookings Institution, Washington, D.C. 265 pages. 1968. $6.75.

EUROPEAN ECONOMIC INTEGRATION has been a popular subject among social scientists and journalists during the last decade. Lawrence Krause's book is one of the most significant yet written on this topic—at least from the point of view of Americans. His book is the first to provide a thorough appraisal of the economic consequences for the United States of the formation of the European Economic Community (EEC), the European Free Trade Area (EFTA), and their web—primarily that of the EEC—of preferential arrangements with a variety of third countries. He also examines the political underpinnings of the two trade blocs as well as the bases for official U.S. attitudes toward them.

This book is not only valuable for its economic analysis. The four chapters on the origins and development of European integration, agriculture, internal issues, and foreign relations document very succinctly the political movement leading toward integration. Yet, the main merit of the book lies in the analysis of the impact of integration on economic growth, trade in manufactured goods, trade in farm products, and foreign investment. In each case, Krause attempts to quantify this impact. However, he warns "those who would take the numerical estimates in this study too seriously."

The estimates of the trade impact allow for the effects of the EEC and the EFTA upon income growth via stimulation of business investment and trade. Krause estimates (by methods developed by Edward Denison) that the annual income increments induced by integration vary among EEC countries from 0.18 percent in Germany to 0.22 percent in Italy. Among EFTA countries, the increments to gross domestic product (GDP) range from 0.03 percent in Norway to 0.25 percent in Denmark. Overall, he concludes that the EEC has had a "somewhat greater" effect on the GDP of its members than EFTA has had on its members. He also concludes that, as expected, integration has stimulated trade among members of both blocs—profoundly in the case of the EEC.

Krause estimates the loss of trade in manufactured goods caused by creation of EEC and EFTA at $238 million (1958 prices) annually for the United States. This amount represents the difference between actual sales to the two trade blocs during the respective transition periods and the estimated sales without integration. The loss of EEC exports is estimated at $161 million, while the EFTA loss is $77 million. There would be secondary effects; for example, the United States would suffer repercussions from a $250 million trade loss by other nonmember countries.

Most journal readers will undoubtedly be most interested in the chapter simply entitled "Agriculture." This chapter is heavily weighted toward the EEC because of the EEC emphasis on agriculture. The analysis of this chapter is approached as follows: a review of European agriculture before integration to allow a judgment of its possible development without the EEC, an examination of EEC policies to determine their consequences for agriculture, and an estimate of the consequences of integration on the EEC and on nonmember farm trade.

The author first puts the agricultural protectionism of the EEC into historical perspective by pointing out that "it has a long tradition on the continent," and reviewing the rationale behind it. Protectionism, domestic price policies, improved technology, and other factors allowed the six EEC countries to increase self-sufficiency; output grew by 65 percent from 1948 to 1958, while consumption of farm products grew by only 40 percent.

Krause hypothesizes, however, that without a unified market for farm commodities, "rather powerful constraints" (the need to stabilize prices, the need to move workers from farm to factory, and fiscal demands) would have required a more rational approach to agriculture by each country. He points out that the principles of agricultural policy contained in the Rome Treaty (raising farm productivity, raising farm incomes, stabilizing markets, and ensuring reasonable consumer prices) may be contradictory. That is, while higher incomes could result from increased productivity, requiring "a drastic disregard of structural problems," the alternative of higher producer prices would "disregard the consumer interest." The Mansholt Plan was an attempt to resolve this contradiction by having one long-term program to improve the economic structure of agriculture and another to deal with more immediate problems of the market. Krause observes that this idea, if approved, would not have completely resolved the conflict of interests since the desired structural changes could easily have been frustrated by price policies which hindered rather than stimulated resource mobility. Nevertheless, the structural program was relegated to a remotely secondary position and the plan was never tried intact. Thus, the Common Agricultural Policy (CAP) relied almost exclusively on high price policies, backed up by a system of variable levies which is "recognized by Europeans as highly protectionist. . ."

To evaluate the effect of the EEC, Krause estimates the stimulative impact of integration upon farm prices and output to 1965. The estimated average farm price increase varied from 8 percent in the Netherlands to 14 percent in France, and the resulting increase in output ranged from 0.8 percent in the Netherlands to 2.8 percent in France. In contrast, consumption of farm products was increased by amounts from 0.16 percent in Germany to 0.50 percent in Italy by the effects of integration. Agricultural import replacement by EEC production in 1963-64, valued at world prices, is placed at $340 million. The annual loss of export sales of the

United States is estimated at $150-200 million for 1965—about half of the nonmember country impact. Further trade diversion stemming from the CAP through stimulation of grain output is estimated to reach $200 million by 1970, $65 million being the U.S. loss in grain sales (the latter based on projections by others).

Noting that EFTA has no direct influence on farm policies of its member governments and is limited in its influence on farm trade, Krause concludes that EFTA "does not appear to have affected the agricultural trade of the United States." While U.S. exports of cotton, tobacco, and feed grains have declined, they have not been displaced by EFTA producers, Krause notes.

Examining some other implications of integration, the author states that abandonment of the CAP would be very important from a balance-of-payments viewpoint. A potential half-billion-dollar increase in imports per year by an area with a balance-of-payments surplus would be highly significant in the context of current imbalances. The stimulation of agriculture in high-cost areas also results in (1) the displacement of exports (and production) of low-cost areas and (2) a misallocation of such countries' resources through distortion of the international pricing mechanism. Both of these considerations, according to Krause, strengthen the case for condemning the CAP. Krause's work appeared only shortly before EEC inhabitants, including many farmers, began to increasingly condemn the CAP because of its mushrooming cost and burgeoning farm surpluses. Some reassessment is underway in the EEC; the United States will anxiously await news of any change of direction.

In the final chapter, the author analyzes the current issue of British membership in the EEC, the roles of the EEC and the EFTA in the Kennedy Round, and some noneconomic aspects of integration.

This book is a "must" for analysts, scholars, and policymakers interested in the effects of European economic integration. The analysis is very thorough and helps to fill a serious breach in our knowledge of economic integration.

Robert Shepherd

African Agricultural Production Development Policy in Kenya, 1952-1965

By Hans Ruthenberg. Springer Verlag, New York. 164 pages. 1966. $7.

COST-BENEFIT ANALYSIS is a controversial technique of economic diagnosis and prognosis and has piqued economists and policy administrators involved in economic development.

This study is basically a cost-benefit analysis of resource investment in Kenya from 1952 to 1965.

Professor Ruthenberg attempts to evaluate Kenya's experience in allocating and using public sector funds for a wide range of specific projects for the promotion of African farming.

A cost-benefit analysis is performed on the following development projects in Kenya: (1) Agricultural administration and extension; (2) small-holder tea plantations; (3) grazing schemes; (4) land settlement in new areas; (5) resettlement in former European areas; and (6) large African farms in the former European-held areas.

What are the precise costs of a particular project? What benefits are to be received from the investment in available resources? What priority is to be given to the allocation of resources to the particular problem at hand? What are the alternative uses of resource inputs? These are questions that are germane in order to make realistic appraisals of development projects in Africa. Providing the answers—or a basis for the answers—is one of the author's goals.

Professor Ruthenberg's major contributions in this study are the presentation of a systematic methodology useful in tackling cost-benefit analysis problems, and the ability to conceptualize the socioeconomic problems facing Kenya and present them in a precise sequential manner.

The author makes it abundantly clear that tribal rigidities, cultural constraints, and the lack of economic incentives among the Africans exacerbate the problems of economic growth in Kenya and are major deterrents to the economic development of countries in Africa south of the Sahara.

The scope for increasing the acreage of cultivated land in Kenya is limited; however, significant possibilities exist for irrigation development. Professor Ruthenberg states:

> Kenya has reached a stage in development where large irrigation schemes are urgently needed:
>
> - There is a growing land shortage and little unused land that can profitably be farmed intensively without irrigation.
> - There is a growing internal market for the produce of irrigation farming.
> - There are more and more farmers' sons who cannot be absorbed elsewhere, who have a background of arable farming and realize the necessity of putting great efforts into their performance as irrigation settlers.

- Irrigation development and farming has a rather high employment content.
- Kenya is highly vulnerable to the vagrancies of unreliable rainfall. Food production in particular is strongly influenced by the variation in weather. Irrigation development would bring some stability into the farming industry and could substantially lower the costs of famine relief in dry years.
- The task of irrigation development could largely be transferred to private enterprises, and the additional burden on Government departments could thus be kept low. The staff demands of irrigation farming are low compared with extension: in irrigation farming the subordinate staff receive clearcut orders which have to be executed and it is far easier to obtain suitable staff for such a purpose than for extension.

> . . . Future irrigation development in Kenya is likely to be more expensive than in many other parts of the world. There are undoubtedly numerous possivilities for small local schemes which do not offer sufficient scope for the organization of a proper scheme and for the employment of a highly qualified manager. These possibilities could be developed cheaply if the peasants concerned would be prepared (1) to do unpaid communal work in order to establish the necessary works, (2) to submit themselves to strict water control, (3) to farm the area properly and (4) to pay a water rate sufficient to repay the initial investment. All this has been customary in East Asia but it is certainly not likely–at least within the present setting–to occur in Kenya.

Concerning the future economic development of Kenya, Professor Ruthenberg states:

> Finally it should be pointed out that sustained economic growth in Kenya–more than in most other African countries–is highly dependent on the free movement of goods and labor within a market which should preferably be even greater than the East African Common Market. Free traffic in goods is required for the expansion of industry, which in turn provides local buying power for smallholder produce. The pressing population problems could be eased if Kenya's rural surplus population could and would develop the habit of moving into expansion areas in Tanzania, Uganda and, in particular, in the Republic of the Congo, where ample land is available.

This study is of great value to international economists, agricultural economists, government policy administrators, and academicians working in the field of agricultural development.

It is hoped that these cost-benefit guidelines to economic development and agricultural policy that have been formulated by the author will not go unheeded, but will be put into action.

Never in the course of modern times has history required that so much change be compressed into so short a period of time. The transition from traditional agriculture to commercial agriculture must be made in a hurry, telescoping the transition that required centuries in the past into years and months for the future.

Carey B. Singleton, Jr.

Israel and the Developing Countries: New Approaches to Cooperation

By Leopold Laufer. Twentieth Century Fund, New York. 298 pages. $2.50.

DIGGING INTO THE MOUNTAIN of material written in the last decade on Israel's aid to emerging nations, Leopold Laufer has come up with a workable survey of this unusual situation. Israeli aid is unique, not only because it comes from a developing nation but also, as Laufer says, "Of all the emerging countries engaged in mutual assistance activities, Israel has the largest and the most varied program."

The Israeli aid program to other countries began in 1954, only 6 years after Israeli independence, when Burma sent a military mission to Israel. Soon afterward government-to-government relations began with Ghana. One of the results was the successful establishment of the Ghana Black Star Shipping Line as a joint venture. At the same time, Israel helped reorganize Ghana's trade unions and initiated many technical assistance programs. This was the beginning. From then on, working with the host governments, Israel set up many needed programs and projects so that today a foreign aid program has evolved for some 80 other emerging nations throughout Africa, Asia, and Latin America.

Israeli aid falls into a few general categories: Direct technical assistance, joint ventures, training programs in Israel, academic and vocational programs, each of these having its own aspects and serving a very definite need of the developing countries. Laufer has done an admirable job in classifying each program and presenting its many acets. The technical assistance program centers largely on sending Israeli experts to host countries. The program began with 40 technicians in 1958 and involved some 640 people by 1966. Israeli experts in foreign lands serve a dual purpose. First, they plan and carry out projects; this is the immediate goal. Secondly and perhaps more important for the future, they teach the local population to take charge of projects once the Israelis leave.

Israeli technicians work in many fields and are usually chosen because of their specialties. Thus in 1958, Israel began work in Ghana to help develop cooperative farming and resettlement projects, water control, cooperative banking, and electrical facilities. In Liberia, Israeli ophthalmologists opened an eye clinic which in the first 18 months served more than 12,000 patients. Israeli workers are popular and much sought after because as Laufer says, "... Israeli experts are generally hard-working, devoted to their jobs and intent on transmitting their knowledge to the people in the host countries." As with all aid, demand exceeds supply and the shortcomings of this direct technical aid have prompted Israel to establish a program of bringing foreign personnel into Israel for special training in both technical and academic courses. Frequently, on-the-job training is provided in various state and municipal departments in Israel. Special programs and even institutions, such as the Afro-Asian Institute to train leaders in trade unionism and cooperation, have been established to expedite training.

Israeli aid to foreign countries is minuscule compared with that of the industrial powers, in some years involving the relatively small outlay of $10 million in contrast to the more than $2 billion expended annually by the United States for such purposes.

Why have other emerging nations sought Israeli aid? Many countries see themselves as Israel was 20 years ago. Their problems are similar and they know that Israel has solved them or is solving many of them. Because of Israel's own size, her projects are naturally small and are thus readily adaptable to the needs of other developing nations. Laufer senses that industrial powers are of[ten] unaware of the problems of emerging nations and find it difficult to realize the process of development.

Frequently, as in Africa, countries prefer Israeli help over aid from larger powers, particularly former colonial masters. While young nations have second thoughts about accepting aid from the industrial powers, they see little difficulty in accepting Israeli aid. Primary here is the veiw that cooperation with Israel is expedient in accomplishing intended goals without compromising political positions.

For Israel, support in the international arena, especially at the United Nations vis-a-vis Arab votes, is the yardstick by which success is measured. Often, recipients of Israeli aid have voted with Israel or abstained on questions dealing with the Middle East conflict. But the author notes that following the armed conflict of June 1967 many nations receiving Israeli aid were vociferous in their denunciation of Israel.

Laufer's theme is that although Israeli aid is financially small, it is highly effective. He stresses that size need not be the criterion for effective aid but a willing attitude among those giving aid and those receiving it is absolutely essential.

Laufer devotes a chapter to aid provided by other developing countries such as Nigeria, Ethiopia, Turkey, and the Ivory Coast. These countries, having been th[e] recipients of aid, now provide aid to other nations. Here, perhaps, is the goal of every aid program–a pool of the common knowledge and experience of all developing nations, to create a more effective program and delete waste and mutual mistakes. Toward this end Laufer makes some valuable suggestions.

Michael E. Kurtzig

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