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India: The Economic and Political Impact of the Green Revolution

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A Research Paper

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*NESA 85-10180
September 1985*

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India: The Economic and Political Impact of the Green Revolution

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A Research Paper

This paper was prepared by [redacted] Office
of Near Eastern and South Asian Analysis. It was
coordinated with the Directorate of Operations. [redacted]

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Comment and queries are welcome and may be
directed to the Chief, South Asia Division, NESAs [redacted]

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**India: The Economic and
Political Impact of the
Green Revolution** []

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Key Judgments*Information available
as of 19 August 1985
was used in this report.*

The Green Revolution in agriculture—the growth in production and crop yields through the adoption of high-yielding varieties, chemical fertilizers, and expanded irrigation—has been one of India's major success stories. Progress in agriculture, which employs about 70 percent of the Indian work force and accounts for nearly 40 percent of GDP, will play a more important role in overall Indian economic development than highly touted Indian plans to introduce new technology in industry. []

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Having virtually eliminated the threat of widespread famine, the Green Revolution will allow India to become a wheat exporter in 1985 for the first time since the mid-1970s. India probably will be an intermittent foodgrain exporter in the future. Accordingly, the United States will have diminished prospects for large wheat sales to India. Market opportunities for US agrobusiness firms, however, are likely to grow as overall agricultural performance improves. []

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The Green Revolution has brought in its wake some economic and political problems as well as benefits. Because the new production methods are expensive, farmers have pushed for higher commodity prices, more subsidies, and increased government investment in agriculture. The ability to maintain incentives for farmers and a high level of investment while keeping food costs and subsidies in line will be a major domestic policy challenge to Indian planners over the next few years. []

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On the political front, farmers have organized independent "unions" to make their voices heard, sometimes violently. There is also mounting evidence that the Green Revolution, by accelerating economic growth, has had a destabilizing effect on the Indian village community, which has increased the potential for social instability along caste and ethnic lines. The headstart gained by states such as Punjab has aggravated regional disparities and heightened conflict between the states and federal government over control of resources and economic policy. []

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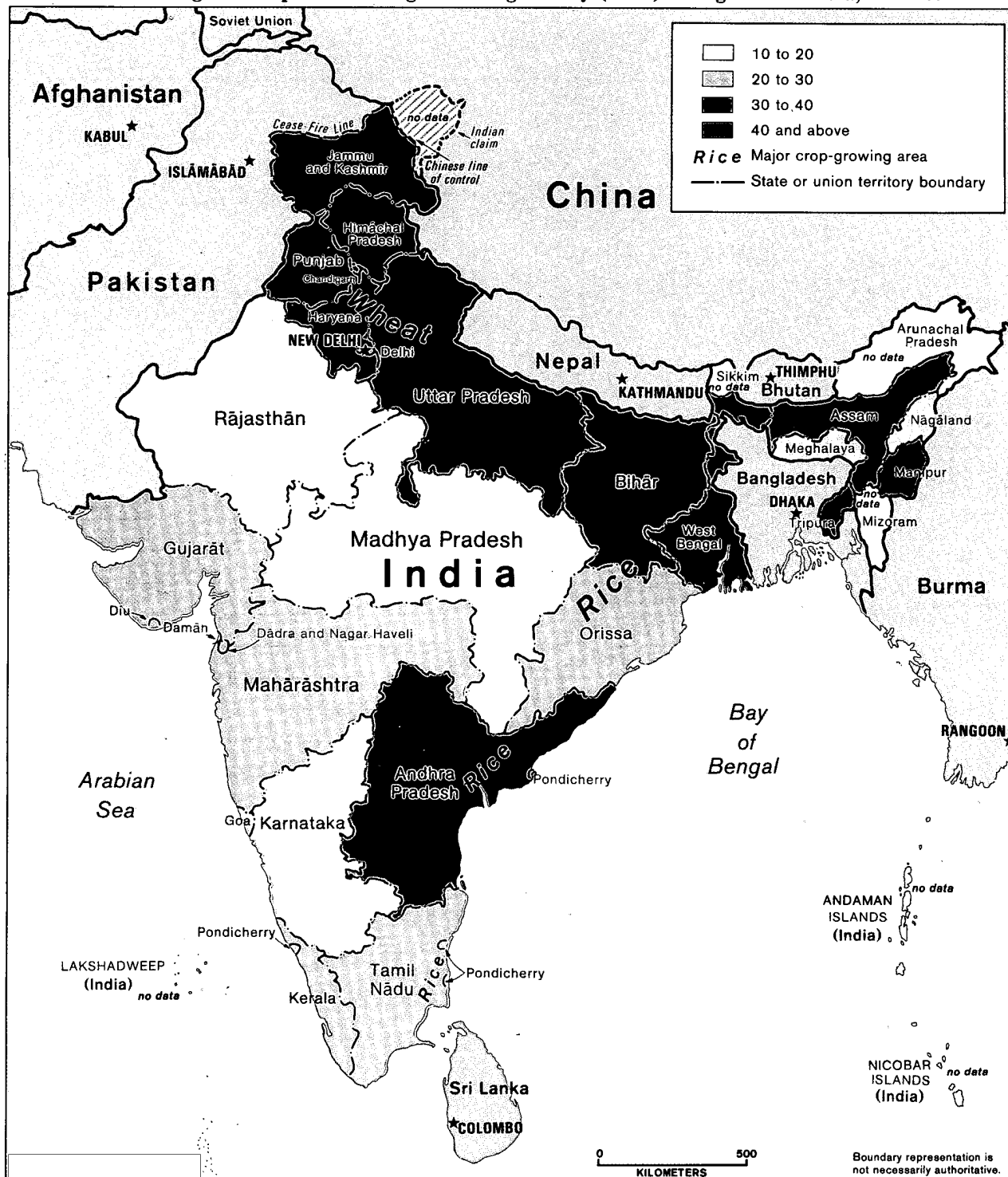
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Figure 1
Estimated Percentage of Crop Land in High-Yielding Variety (HYV) Foodgrains in India, 1982-83



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India: The Economic and Political Impact of the Green Revolution

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First introduced in the mid-1960s, the Green Revolution—the adoption of high-yielding seed varieties (HYVs), chemical fertilizers, and expanded irrigation—has begun to change the face of rural India. A country that once faced perpetual scarcity and cyclical famine has become largely self-sufficient in food production and has the potential of becoming at least an intermittent foodgrain exporter.

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Keys to Success

Over the past 20 years, a combination of government policies and private initiative on the part of India's numerous small farmers have contributed to the success of the Green Revolution.

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Expanded Irrigation. Timely and adequate supply of water is a prerequisite to the effective adoption of the new farm technologies. Public investment in irrigation, which tripled in real terms between 1965 and 1985, and the rapid increases in private investment in small-scale irrigation have led to a near doubling of gross irrigated area since the late 1960s.

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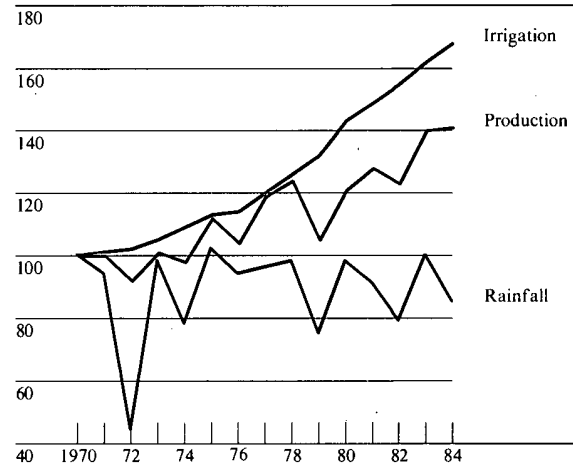
Subsidized Production Inputs and Agricultural Price Supports. Recent scholarly analyses of Indian agriculture indicate that production-oriented subsidies—such as concessionary credit, cheap fertilizers, and low electricity costs—have significantly spurred farm output and income growth. As the largest foodgrain trader, the government has set procurement prices that have helped contain grain price fluctuations and supported farm income. Steady and predictable prices as well as input subsidies have reduced the risk to cultivators and encouraged investment in the more costly new methods.

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Establishment of Production-Oriented Agricultural Research and Extension Services. Modeled in part after the US land grant colleges, India's state and national network of agricultural universities and research institutes, with initial US assistance, developed indigenous high-yielding crop strains well suited to the country's widely varying growing conditions. Although the marriage of farm and university was often

Monsoon Impact Lessens

Index: 1970=100



Although the erratic monsoon still plays a dominant role in Indian agriculture, the Green Revolution has gradually reduced its influence. Since the late 1960s, the share of foodgrain production contributed by the predominant Kharif, or monsoon, crop has progressively declined in comparison with the largely irrigated rabi (winter) crop, which makes greater use of high-yielding varieties.

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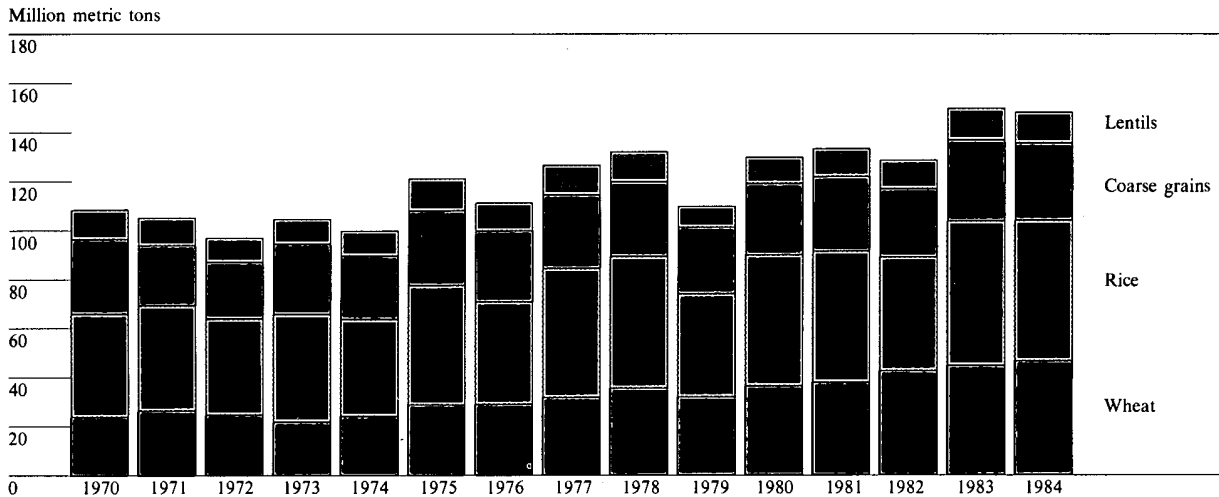
Future expansion in irrigation should accelerate the move toward new farm technologies and continue to reduce the influence of the monsoon on annual crop production. India still possesses a large irrigation potential—optimistically estimated by Indian officials at about 113 million hectares, or about 70 percent of cultivable land compared with nearly 30 percent in CY 1983. We expect progress in developing ground water resources in the eastern states and improving the efficiency of existing irrigation systems. But high development costs, lack of electrical power for irrigation pumps, a lowering water table, and the threat of increased soil salinization make realizing the full potential unlikely.

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Figure 2
India: Foodgrain Production, 1970-84^a



^a Data for crop years beginning in July of the stated year.

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strained by a lack of communication, we believe the steady stream of scientific advice, new crop strains, and expertise has been instrumental in sustaining the rapid expansion of the Green Revolution.

Private Initiative of India's Farmers. Because most agricultural land is divided among over 80 million holdings—97 percent are farms under 6 hectares—the participation of small farmers in adopting new varieties has been essential. Experts initially believed that most Indian cultivators were subsistence oriented, wedded to traditional farming methods, and not responsive to economic incentives. Recent experience suggests, however, that farmers have been sensitive to relative prices, respond to incentives, and often take the lead in adopting modern farm techniques.

Spread of the Green Revolution

Wheat Leads the Way. In India wheat has been the crop most successfully adapted to Green Revolution methods. New wheat varieties, first introduced in the mid-1960s, provided a technical breakthrough that

more than doubled wheat yields and helped foodgrain production grow from about 95 million metric tons for the crop year (CY) 1967 (July 1967/June 1968) to a record 151 million tons in CY 1983.

Because HYVs were first introduced for wheat, the initial economic impact of the Green Revolution favored the wheat-growing north. As wheat production rose, increased farm income in Punjab and Haryana made the two states among the richest in the country. With nearly all of its wheat and rice acreage now cultivated in HYVs, Punjab alone accounted for over 60 percent of the grain supplied to India's national food stocks in CY 1984.

In our view, future growth in wheat production is likely to come from the states of Madhya Pradesh, Uttar Pradesh, Maharashtra, and Gujarat because HYVs are easily adapted to growing conditions in these states, and the area remaining for expansion is

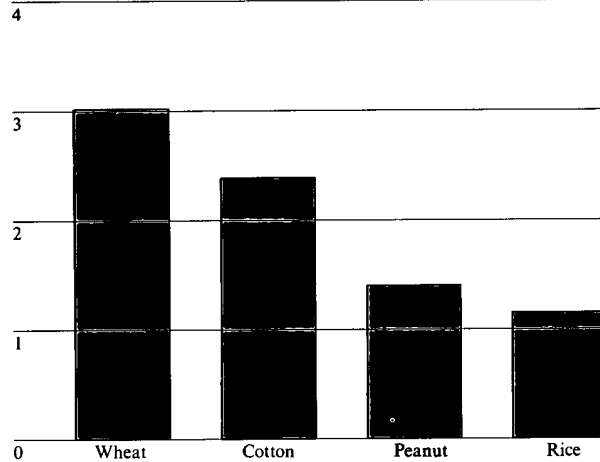
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Figure 3
India: Yield Growth Rates for
Major Crops, 1969-84^a

Average annual growth in output per hectare, (percent)



^a Data for crop years beginning in July of the stated year.

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Figure 4. HYV ricefield

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official Indian data suggest that the extension of high-yielding rice varieties has been brisk—a rate over twice as fast as southern India, the other major rice-growing region. With the government earmarking increased investment for agricultural development in the east, we judge that the rapid spread of HYV rice area is likely to continue.

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large. In the north, further HYV expansion is limited by the scarcity of land, and the growth in wheat yields is likely to slow.

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HYV Rice Area Expands. Rice, India's major food-grain, initially suffered from the lack of effective HYVs suitable to Indian consumer tastes and production conditions. Now, however, more areas are being cultivated with new rice strains than wheat.

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Because the eastern states have India's largest untapped irrigation potential—only 23 percent has been developed so far—we judge that this region is the most likely area for expanded rice production.¹ The region's agricultural growth has been plagued by erratic water control, highly fragmented landholdings, a poor transportation network, and limited access to credit and technical services. Despite these problems,

¹ The eastern states include Bihar, Orissa, West Bengal, Assam, Arunachal Pradesh, Mizoram, Tripura, Manipur, Nagaland, and Meghalaya.

New Directions in Other Crops. With wheat prices sagging under the weight of massive stocks, Indian farmers are likely to shift to more profitable crops. HYVs of commercial crops such as irrigated cotton and oilseeds have shown promise. Since the late 1960s, our analysis indicates that the expansion of cotton hybrids has boosted quality, increased average yields 43 percent, and, by CY 1984, accounted for over half of all cotton production. Since CY 1979, growth in new oilseed cultivation has been even more dramatic, with soybean production nearly tripled and sunflower seed output raised over elevenfold. According to press reports, over the past few years, West Bengal farmers have responded to higher oilseed prices by raising production 60 percent and cutting back on wheat cultivation.

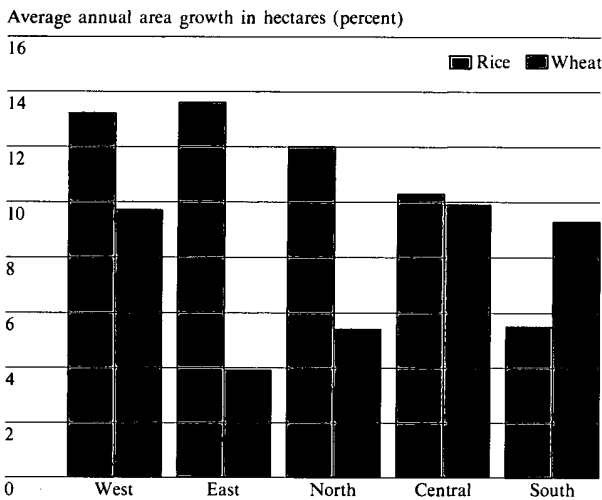
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Considerably less effort has been devoted to developing HYVs for India's rain-fed crops, which account for nearly 70 percent of cultivated land. The lack of

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Figure 5
India: Area Growth Rates of
High-Yielding Varieties by Region, 1972-83^a



^a Data for crop years beginning in July of the stated year.

^b West: Gujarat and Maharashtra
 East: Assam, Bihar, Manipur, Meghalaya, Nagaland, Sikkim, Orissa, Tripura, West Bengal
 North: Haryana, Himachal Pradesh, Punjab, Jammu and Kashmir
 Central: Madhya Pradesh, Rajasthan
 South: Andhra Pradesh, Tamil Nadu, Karnataka, Kerala

Land Reform: A Dead Issue

In the years after independence, most academic and official opinion in India agreed that the slow growth in agricultural production and persistent rural poverty resulted from poorly distributed land and unequal access to credit and product markets. To remedy the situation, almost all Indian states passed land reform legislation. But, with the exception of nationwide tenurial reforms in the early 1950s, most laws passed at the state level aimed at distributing land were never implemented because of administrative difficulties or political resistance on the part of farm interests.

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The rapid spread of the new HYVs brought into question the view that social and economic inequities were major impediments to agricultural growth. Although New Delhi and state governments will continue to push selected tenancy reform programs to assist laborers and small farmers, we judge that the emphasis in agricultural policy will move away from issues of distribution to increasing farm efficiency and productivity.

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Green Revolution has been most successful, such as Punjab and Haryana, per capita incomes are the highest in the country—on average, 25 percent more than those of key industrial states of Maharashtra and Gujarat. A recent analysis of Punjab shows that higher incomes have raised overall living standards and reduced the disparity in food consumption between large and small farmers.

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The Green Revolution probably has also accelerated the long-term trend—driven mostly by population pressure and increased fragmentation due to irrigation—toward smaller, more productive, and more equitably distributed landholdings. Between CY 1970 and CY 1976 average farm size declined 13 percent nationwide with large holdings declining most rapidly. One major reason is that most of those owning

effective improved varieties of protein-rich lentils and coarse cereals (millet and sorghum)—which accounted for nearly 30 percent of India's foodgrain production in CY 1984—as well as certain edible oil crops have resulted in stagnant yields for these products. We expect, however, that the use and development of new drought-resistant varieties over the last few years—combined with proposals to increase research, investment, and support prices to dry-land crops—could lead to a gradual improvement in coarse grain, lentil, and oilseed production.

Economic Impact

Strengthening the Small Farmer. In our view, the Green Revolution has strengthened the overall economic position of small and medium landholders and yielded a net benefit to the rural poor. Where the

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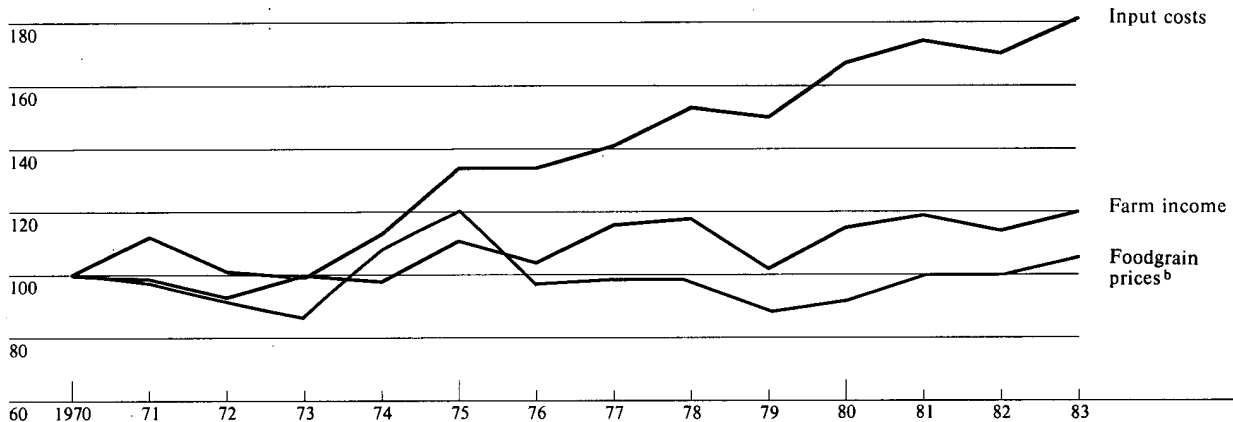
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Figure 6
India: Index of Real Farm Income,
Foodgrain Prices, and Input Costs, 1970-83^a

Index: 1970=100

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^a Data for crop years beginning in July of the stated year.
^b Wholesale foodgrain prices.

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[Redacted]

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irrigated land—a precondition for the adoption of HYVs—are small farmers with less than 4 hectares in holdings. [Redacted]

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The adoption of modern farm techniques has also raised the income of India's impoverished rural laborers, many of whom are landless. Both Western and Indian scholars had predicted that the Green Revolution would lead to greater exploitation of farm laborers, but recent academic studies show higher real wages—a 26-percent increase between 1966 and 1980 in Punjab—and a near doubling of employment opportunities. One study of rural labor in Punjab maintains that rising farm productivity contributed to higher real wages despite the depressant effect of increased immigration of Hindu labor from poorer neighboring states. [Redacted]

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Higher Costs. The Green Revolution has been successful in raising agricultural production and farm income, but it also has been expensive. The new farm technologies require increased use of costly inputs

such as chemical fertilizers, hybrid seeds, and pesticides, as well as diesel fuel and electricity to power irrigation pumps. [Redacted]

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[Redacted] since CY 1970 real input costs have increased nearly twice as fast as the growth in agricultural output. Also aggravating the problem of higher cultivation costs are inefficient farm practices that have caused unit production costs to rise even as yields improved. [Redacted]

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Even though most farmers have generally prospered as a result of the Green Revolution, over the past few years rising production costs have hit India's numerous and increasingly politically active small and middle landholders hardest. Studies show that small farmers' profit margins are slim, and escalating input costs tend to affect them more severely. Such cost increases combined with sluggish prices have led to nationwide farm protests. [Redacted]

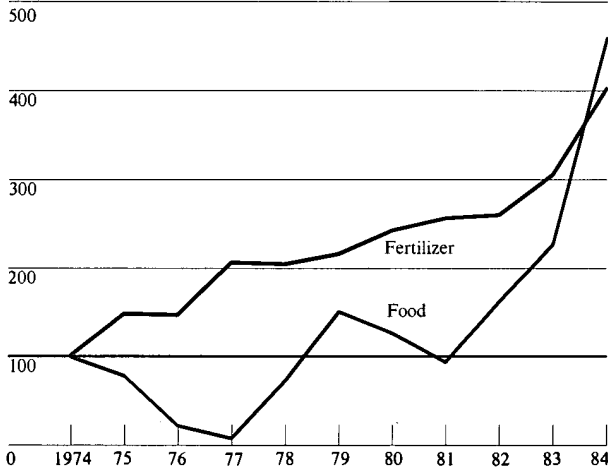
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Figure 7
India: Food and Fertilizer Subsidies,
1974-84^a

Index: 1974=100



^a Data for fiscal years beginning in April of the stated year.

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Growing Subsidies. Beginning in the 1960s, New Delhi initiated an extensive subsidy system to control production costs, stimulate production, and keep food prices in check. Over the past few years, higher farm production and food storage costs have become an increasing burden on Indian finances. The fiscal year 1985 (April 1985/March 1986) budget projects that food and fertilizer subsidies will soar to over \$2 billion, a sum nearly equal to the estimated overall budget deficit. At the state level—which is more vulnerable to rural political pressure—[redacted] subsidies to irrigation, rural power users, and farm credit institutions nearly doubled in real terms between FY 1974 and FY 1981. Nearly half of all concessionary short-term agricultural loans are overdue and, as such, threaten the integrity of India's extensive rural credit cooperative system. [redacted]

Although subsidies and price supports have encouraged farmers to adopt the more expensive Green Revolution technologies, we judge that they probably have induced production inefficiencies as well. [redacted]

[redacted] direct and indirect subsidies are likely to distort price signals, minimize true costs, exaggerate farm profits, and encourage misallocation of resources. Subsidies also negatively affect rural income distribution, since larger or more prosperous farmers who do not need assistance and use more services benefit disproportionately. In a poor country, subsidizing high-cost agriculture both increases public deficits and limits investment in new development projects. [redacted]

New Delhi, like the farmer-dominated state governments, is reluctant to antagonize cultivators. In 1984—an election year—the federal government added to the food subsidy burden by raising wheat and rice procurement prices more than 7 percent and allowing fertilizer subsidies to double. There are no plans for a rollback in the FY 1985 budget. New Delhi has also instituted politically motivated “loan fairs” to distribute cheap credit to farmers, many of whom are already in arrears to government-supported financial institutions. [redacted]

Political Impact

Local and Regional Instability. The Green Revolution has had a destabilizing effect on the village “community,” which is the bedrock of India's social, political, and economic system. In our view, rapid economic change has begun to loosen traditional social and economic ties in those villages where the Green Revolution has taken root. Because the new hybrid varieties are much more costly to cultivate and provide a larger marketable surplus, academic studies show that many low-caste small farmers have begun to abandon their old, high-caste-dominated village credit and market networks in favor of new government credit institutions and urban merchants and creditors. Similarly, farm laborers, who were once paid in grain and forced to accept low wages by higher caste overlords, have begun to bargain for better cash wages and more favorable terms. [redacted]

Weakened traditional social and economic ties have led to increased disputes over access to resources and sparked communal violence. For example, press reports over the past two years claim that massacres of

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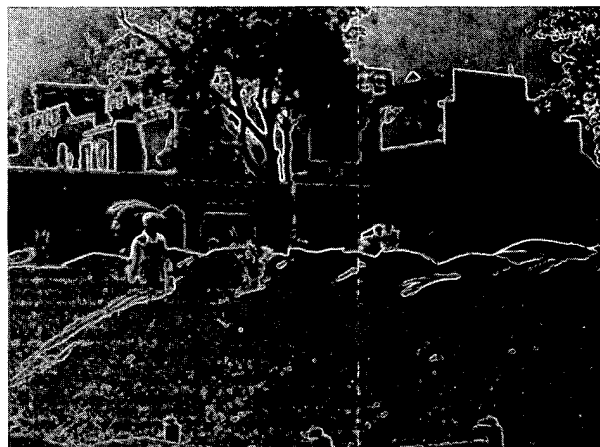
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Agricultural Prices and Food Surpluses

The rapid expansion of the Green Revolution has been assisted by a production-oriented agricultural price policy. In 1964 New Delhi established both the Agricultural Prices Commission (APC) and the Food Corporation of India (FCI) to implement its long-term policy goal of achieving food self-sufficiency. The APC administers farm commodity prices to provide incentives to producers, while FCI purchases foodgrains and maintains national stocks to ensure consumer price stability and adequate supplies.

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Punjab grain market

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To stimulate domestic production and maintain farm income, the APC has steadily raised real procurement prices since CY 1980. Higher procurement prices and depressed open-market prices enabled the government to increase its annual purchases of wheat and rice 50 percent since CY 1980. Bumper harvests and increased procurement have swollen public granaries but surplus foodgrains are costly to store and distribute—a factor that has led to over \$900 million in food subsidies in FY 1984.

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policy dilemma of lowering procurement prices and antagonizing farmers to assist consumers or raising politically volatile food prices to protect sagging farm income. As the Green Revolution spreads, we judge that maintaining a balance between adequate food-grain stocks, remunerative farm prices, and moderate subsidies will be a major domestic policy issue for New Delhi for the remainder of the decade.

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Food subsidies are designed to help the urban poor, but this year wheat farmers have benefited because official procurement prices were higher than those in the open market. The government now faces the

untouchable laborers in Uttar Pradesh by farmers and battles over land between high-caste and low-caste groups in Gujarat reflect growing rural tensions.

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The greater water demands of the Green Revolution have added another dimension to the longstanding struggle between Indian states—as well as among South Asian nations—for access to major water resources. Finding a lasting solution to the Punjab problem is likely to be complicated by long simmering water-sharing disputes with border states. Press reports indicate that two key southern opposition states, Andhra Pradesh and Karnataka, are now feuding over access to surplus irrigation water. Embassy reports indicate that India and Bangladesh probably will start new negotiations over Ganges River waters, although,

The uneven regional impact of the Green Revolution has also created political problems. One of the elements worsening the Punjab problem over the past few years was the perception by many Sikhs that their state was being exploited by the federal government. As a result, the Sikh Akali Dal Party was able to wage a successful campaign accusing New Delhi of transferring Punjab's wealth derived from the Green Revolution to poorer regions while the state was denied industrial investment and fair prices for its farm produce.

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**The Village Community
and Agrarian Change**

Village community organization pivots on a complex social, political, and economic interaction of caste, land, and labor. Most regions of India possess dominant castes—Vellalars in Tamil Nadu, Sikh Jats in Punjab, or Patels in Gujarat—who are, for the most part, the major landholders in their region. By virtue of their landed status, they often control local economic and political institutions. Marginal farmers and landless laborers, on the other hand, are usually from the more numerous low-caste groups and untouchables.

In the 1970s scholarly analyses of the Green Revolution focused on the perceived growing social and economic inequities that the shift in agricultural trends would bring. Many Indian and Western academics predicted that the Green Revolution would be detrimental to small farmers' economic interests and increase conflict between rich and poor in India's villages. Numerous academic studies now show that small farmers have not been unduly disadvantaged or denied access to commodity markets, credit, land, or farm inputs. Also, rural conflict, though undiminished, seems to be more the result of caste rather than class differences.

in our judgment, financial, political, and technical problems are likely to make an agreement difficult to achieve.

Farm Unions and Politics. One of the major outgrowths of the Green Revolution is the independent farm "union" movement. As cultivation costs rose and farm profits were squeezed, farmers in states most affected by the Green Revolution joined independent farm unions in increasing numbers. So far, unions function in eight of 22 states. Although press and academic reporting alleges that the movement is controlled by a few wealthy farmers, the bulk of union support comes from small and medium landholders who have been most affected by stagnant farm prices and higher input costs.

Farm unions direct their efforts at protecting farmers' interests by pressing for higher commodity prices and input subsidies. Since 1980 thousands of farmers have courted arrest, and over 100 have been killed in union-sponsored protests. The new farm "unions" are largely non-Marxist and profess a populist agrarian ideology. For the most part they have shied away from direct affiliation with political parties, preferring instead to establish their own rural power base and support candidates of their choice.

In the recent parliamentary and state elections, farm "unions" played an active role fielding candidates and disrupting the political campaigns of opponents. According to press reports, support for opposition candidates by members of the independent Shetkari Sanghathana farm union nearly defeated Congress Party candidates in Maharashtra. Similarly, we judge that the Karnataka Farmers' Association was instrumental in assisting the Janata to retain power in that state. The most powerful and best organized farm union, the Punjab BKU, could not participate because elections in Punjab had been postponed, but they will play an important role once voting is reinstated.

In our view, farm unions have been increasingly successful in wresting concessions from both state and national governments. Since 1980, press and US Embassy reporting indicates that union-inspired protests have resulted in higher procurement prices, lower electricity and irrigation rates, and the postponement of overdue loans in the states of Punjab, Karnataka, Maharashtra, Gujarat, and Tamil Nadu. Farm group pressure contributed to New Delhi's decision to adopt parity pricing. According to press reports, Rajiv Gandhi has recently acceded to a major farm union demand to restructure the Agricultural Prices Commission and to allow farm representatives to participate for the first time in setting national procurement and support prices.

Prospects for the Green Revolution

Economic Implications. We judge that extending the Green Revolution will be one of the major goals of Prime Minister Rajiv Gandhi's new administration.

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Major Farm Unions**Tamil Nadu Agriculture Association**

The TNAA, established in 1970 by the late C. N. Naidu, is one of the oldest independent farm unions in India. It claims over 1 million members, the majority of whom are rice farmers with small and middle-size holdings. The TNAA has been successful in organizing a series of demonstrations to lower electric power rates and reschedule overdue loans.

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Shetkari Sanghathana

Organized in 1980 by the mercurial, populist, and self-styled national farm leader Sharad Joshi, the Maharashtra-based union has successfully conducted a number of protests for higher farm prices, loan rescheduling, and increased agricultural wages. The union has an estimated 60,000 active members and considerable support among Maharashtra's farmers. Joshi has gained a national reputation as a farm organizer and hopes to develop close links between his and other farm unions to place the movement on a national footing.

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Karnataka Farmers' Association

The Karnataka Rajya Raittha Sangha, headed by H. S. Rudrappa and Professor M.D. Nanjundaswamy, is one of the largest and most influential of

five farm groups in Karnataka. In 1980 and 1981 the KFA was involved in violent protests over cotton and tobacco prices and was instrumental in bringing down the previous Congress Party administration in Karnataka state. Recently it led massive farm protests in the state, which tied up road and rail traffic and filled the jails with over 27,000 farmers. It supported "people's" candidates and the opposition Janata Party in the parliamentary election last March.

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Bharatiya Kisan Union

Reorganized in 1981, the powerful Punjab-based BKU is headed by All-India General Secretary Balbir Singh Rajewal. Currently one of the most effective unions in India, the BKU has strong support among a large number of Punjabi farmers, both Hindu and Sikh. Over the past few months it has led successful protests to gain concessions on electric power rates and loan repayment schedules. The BKU-inspired boycott of grain markets and threat to stop foodgrain shipments probably were a factor in New Delhi's decision to take military action in Punjab.

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Indian planners estimate that agriculture will have to grow at 4 percent per year—well above the 2-percent rate of population growth but near the average of the past five years—to sustain a projected GNP growth rate of 5 percent over the 1986-90 Five-Year Plan. Because crop yields are still relatively low, we believe that favorable weather, more efficient use of existing farm technologies, and improvements in rain-fed farming are likely to boost agricultural growth near the planners' targets.

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reduction in consumer prices through the public distribution system would be politically popular, speed up stock reduction, and help feed India's poor, but would also push up already high subsidy levels. Although increased exports are a possible outlet for food surpluses, New Delhi is more likely to extend the public distribution system and increase allocations to "food-for-work" programs to reduce temporary gluts.

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Food stocks are likely to grow, and Indian planners will have to cope with the problems posed by full granaries if agricultural growth comes close to the desired 4 percent per year. Food giveaways or a

We expect that wheat farmers, frustrated with sluggish prices and rising production costs, are likely to shift their land to more lucrative crops such as rice,

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Rajiv Gandhi's Comments on Agriculture and the Green Revolution

"We have seen that, by working on the foundations laid down by Jawaharlal Nehru, our farmers have trebled our foodgrain production. It is only this which has saved our independence. It is only due to this that we are now able to stand erect and face the world." [redacted]

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"Agriculture, which was stagnant at independence, is today strong and dynamic. There has been a steady increase in agricultural productivity resulting from a wider spread of scientific knowledge." [redacted]

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"American scientific and technological assistance played a crucial role in helping bring about the Green Revolution." [redacted]

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"We shall continue the emphasis on key areas such as agriculture, irrigation, and the development of infrastructure." [redacted]

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"The latest advances in biogenetics can help to further our efforts at agricultural development. Sophisticated techniques of weather forecasting can make an immense difference in agricultural production." [redacted]

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fruits, vegetables, oilseeds, and cotton. Over time, this process would help diversify production and spread the benefits of the Green Revolution. By the end of the decade, crop diversification could help cut the growing import bill for edible oils—estimated near \$1 billion in FY 1984. Over the next five years, this is likely to help offset a deterioration in the balance of payments aggravated by lower concessional aid, payments to the USSR for arms, and International Monetary Fund loan repayments. [redacted]

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The spread of the Green Revolution probably will help reduce India's massive employment problem and slow urban immigration. The new farm technologies have increased the demand for farm labor as well as provided job opportunities in agriculture-based industries in India's numerous small towns. With more and

Agricultural Exports

India's agricultural exports—about 13 percent of total exports in FY 1984—are likely to increase in importance as a result of the expansion of the new technologies. Burgeoning wheat surpluses have already encouraged New Delhi to market some of its surpluses overseas. For the first time since the mid-1970s, India plans to export nearly 1 million metric tons of wheat to the Soviet Union, Poland, Romania, and the World Food Program. [redacted]

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better paying jobs in rural areas, the urge to emigrate to India's overcrowded cities probably will slacken. [redacted]

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Political Implications. The new farm "unions," in our view, will make agriculture an increasingly political issue in the years ahead. We expect farmers will use the unions, rural cooperatives, and political parties to push for higher prices and subsidized credit at the state and national levels. To expand its farm constituency the Congress Party's platform is likely to include more emphasis on agricultural issues such as maintenance of production subsidies and higher farm support prices. Farm groups will also take a more active role in promoting their views on national agricultural policy and push for reduced imports and increased farm exports. [redacted]

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We judge that increased rural issue group participation will help generate new political leadership and widen the benefits of economic development. Because the new rural elites who are likely to emerge do not share the same political values and economic interests as those of the postindependence urban leadership, we judge that national issues probably will tend toward more populist, regional, or caste themes. As a result, Indian politics is likely to be further complicated by an urban-rural contest for power and influence. [redacted]

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In our view, improved agricultural performance is likely to strengthen New Delhi's resolve to proceed with efforts to reduce controls and establish a more

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open economy: A buoyant rural economy will provide a growing market and a source of raw materials for expanding domestic industries. More rapid agricultural growth will help reduce food imports, increase exports, and help ease impending foreign payments strains that threaten to slow the pace of Indian economic liberalization.

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Implications for the United States. The spread of the Green Revolution should continue to reduce the US role as a foodgrain exporter to India, except in periods of major droughts. Strong Indian agricultural performance is also likely to create market opportunities for US agribusinesses such as food processing, hybrid seed producers, pesticides, chemical fertilizers, and farm machinery, as well as provide a cushion for more expansionary economic policies. Because progress in oilseed production is likely to be slow, India will continue to be a potential market for US edible oil processors over the next few years.

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