

Inaugural Address at the 55th Annual Conference of the Indian Society of Agricultural Economics by Montek Singh Ahluwalia ¹

New Economic Policy And Agriculture : Some Reflections

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I consider it a great honour to be invited to deliver the inaugural lecture at the 55th Annual Conference of the Indian Society of Agricultural Economics. The Society has contributed enormously to the study of agricultural economics in India. It has stimulated the development of a literature on this subject which is impressive by any standards and has also been at the forefront of policy thinking on this subject. I feel particularly privileged to deliver this lecture in the town of Anand, which has become a symbol of successful dairying, and is an inspiration for all those involved in the challenging task of agricultural development and rural transformation.

It is particularly appropriate that one of the themes of this Conference is the new economic policy and agriculture. The last four years have seen very extensive public discussion on various aspects of the new economic policy, but most of this discussion has focused on aspects such as macro-economic stabilisation, industrial deregulation, foreign trade policy, tax policy, foreign investment policy, and financial sectoral reform. There has been less discussion than there should have been about the specific implications of the new economic policy for agriculture and this has generated an unfortunate impression in some quarters that agriculture is being ignored. This impression needs to be corrected. The stated objective of the new economic policy is to raise the rate of growth of the economy from around 5.5 per cent achieved over the past 15 years to 7 or 8 per cent per year. There can be no doubt that an acceleration in gross domestic product (GDP) growth of this magnitude cannot be achieved by focusing on industry alone. It also requires a significant improvement in agricultural growth from somewhere between 2 and 3 per cent in the past, to around 4 per cent per year. This in turn requires that the general framework of economic policy which inevitably impinges upon agriculture in several ways, as well as the policies specifically aimed at agriculture, work together to achieve faster agricultural growth. In this lecture I would like to deal with some of the key policy issues involved in achieving this objective and examine how they can be addressed within the framework and constraints of the new economic policy.

But first, it is useful to clarify what exactly we mean by the new economic policy since the term has been applied rather loosely to the totality of economic policy initiatives taken since 1991. It is worth recalling that 1991 was a year of deep crisis with high inflation and a collapse in the Balance of Payments. The policies introduced at the time had two components; there was an immediate crisis management component and there was also a longer term component, dealing with structural reforms. The crisis management or stabilisation part of the story need not concern us, precisely because it was remarkably successful and therefore of short duration. By the middle of 1993, i.e., in the short space of two years, the country was no longer in a Balance of Payments crisis, international confidence had been restored, inflation had abated, and the economy was well set to resume growth at a fairly robust rate as indeed the subsequent years have shown. The policies of structural reform however continued beyond the period of crisis management. It is these policies of economic reforms, and their implications for agricultural growth, which should be the focus of this Conference. The broad features of the economic reforms initiated after 1991 are not too different from the reforms being undertaken all over the developing world and even in the erstwhile communist countries. Beginning in the early 1980s, country after country had turned away from earlier development strategies which were characterised by a high degree of government intervention and control over private sector activity, a dominant role for State enterprises in many sectors, the pursuit of industrialisation behind high protective barriers and suspicion of foreign investment. The experience of individual countries always differs in de-

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tail but the following six elements are common to all reforming countries though the relative emphasis, detailed design and sequencing differ from country to country.

First, sound macro-economic management was universally seen as a pre-condition for the success of other policies and therefore as crucial for economic performance. This called for fiscal discipline in the sense of containing the fiscal deficit of the Government within reasonable limits.

- (i) Second, it was universally recognised that excessive government control over private sector activity did not achieve the objectives originally intended and typically led to inefficiency, loss of economic dynamism, and very often to corruption as well. This recognition led to widespread acceptance of large-scale liberalisation and deregulation of the domestic economy in search of greater efficiency.
- (ii) Third, the public sector in most countries had fallen short of original expectations. Huge volumes of resources invested in the public sector were not generating the return that had been expected and there was widespread recognition that scarce public resources could not continue to be invested in non-performing or low performing public sector enterprises. This led to a redefinition of the role of the public sector involving some withdrawal from the public sector in most countries. The extent of the withdrawal has varied from country to country, ranging from wholesale privatisation in some cases to more cautious programmes of disinvestment and part privatisation in others.
- (iii) Fourth, openness to trade and foreign investment flows was seen as conducive to efficiency, technological dynamism and international competitiveness. The old policy of industrialisation behind high protective walls was greatly diluted if not entirely abandoned and most countries turned to much more open trade regimes. Along with the opening up to trade there was an opening up towards foreign investment, with most developing countries actively seeking foreign investment to assist in the development process.
- (iv) Fifth, financial sector reform was seen as an essential underpinning of reform in the real economy. If economic reform is aimed at reallocating resources from inefficient to efficient users, this can only be achieved if the financial sector is efficient in raising and allocating resources at least cost.
- (v) Sixth, it was universally recognised that economic reforms may in the short run have some negative consequences on the poor especially if the reforms were accompanied by an initial phase of economic stabilisation. A well designed programme of economic reforms must therefore have a safety net component aimed at mitigating the impact on the poor, and ensuring that the poor also benefit from general economic growth.

Each of these aspects has been evident in the design of the new economic policy in India though there are differences in detailed design, implementation and sequencing when compared with other countries.

How do these policies impinge upon agriculture and do they enable us to evolve a satisfactory strategy for agriculture which can achieve the objective of 4 per cent growth? I propose to discuss six areas, which are highly relevant for accelerating agricultural development in future, and consider the implications of the new economic policy for each area. These six areas are:

- (a) Public investment vs. Subsidies in agriculture;
- (b) The impact of the new trade policies on agriculture;
- (c) Extending deregulation to agricultural activity;
- (d) The interface between the credit system and agriculture;
- (e) The role of agro-processing in stimulating agricultural development; and finally,
- (f) Technology development and research.

INVESTMENT VS. SUBSIDIES IN AGRICULTURE

There can be little doubt that the objective of accelerating agricultural growth to around 4 per cent per year will require, *inter alia*, a significant increase in investment in agriculture and related sectors. Such investment would obviously include investment in major, medium and minor irrigation, land improvement, water management and conservation systems and farm machinery. Casting the net more broadly, we need to ensure higher investment in rural electrification, improvements in rural roads and other rural economic infrastructure, and also investment in agricultural research. Some of this investment can undoubtedly take place in the private sector, but a great deal has to be in the public sector.

How has investment in agriculture behaved in recent years? As far as private investment in agriculture is concerned, the overall picture appears to be satisfactory with the national accounts showing a healthy growth of such investment. However, the evidence on public investment in agriculture is disturbing with the National Accounts data showing a steady decline in real public investment in agriculture since 1980. It is important to note that the declining trend did not begin in 1991 with the new economic policy. It began much earlier, but that does not in any way make it less of a problem. Hanumantha Rao (1995) has pointed out that there are definitional problems in the way we measure public investment, which perhaps exaggerate the decline. This is because the national accounts data for public investment in agriculture include irrigation, but they leave out a large part of other economic infrastructure like rural electrification, roads, etc., which have an impact on agricultural growth. However, I would hazard a guess that if a composite total could be constructed, it would at best only show that the decline in public investment in agriculture is less than it seems. The conclusion is inescapable that the declining trend in real public investment in agriculture needs to be reversed if we want to achieve the objectives of the new economic policy.

This raises the question of how the required increase in public investment in agriculture and related sectors is to be financed. The new economic policy is clearly not against public investment in agriculture, but it does require that higher levels of public investment must be achieved within macro-economic constraints of fiscal prudence. In other words, desirable increases in public investment in agriculture, or for that matter other sectors, cannot be financed simply by increasing the fiscal deficit. They have to be financed either by reducing other unproductive public investment in non-essential sectors from which the State should withdraw, or by increased public saving which would enable higher levels of public investment without adding to the fiscal deficit. Since much of the investment required for agriculture is in areas which are the responsibility of the states, the financing options have to be examined at the level of states' finances and budgetary constraints.

There is undoubtedly some scope for withdrawing resources from public sector investments in many areas which can now be left to the private sector. State Governments can go even further and disinvest from earlier investments in these areas, and use the proceeds of such disinvestment for investment in agriculture and related sectors. Very few State Governments have implemented this option to the fullest extent possible and it certainly deserves careful consideration. However, the major contribution towards sustained financing of higher levels of public investment in agriculture must come from improved public savings, generated by policies which achieve higher revenues and reduce current expenditures. It is beyond the scope of this lecture to go into the issue of how to improve public savings in general. The task is undoubtedly difficult but it is not impossible, provided some hard, perhaps even very hard, decisions on expenditure control and revenue mobilisation can be taken. For the present, I would like to focus on the more limited question of the scope for raising public investment in agriculture by shifting resources which are currently going into subsidies, both explicit and hidden. This is a very relevant issue because the decline in public investment in real terms after 1980, which has rightly been the subject of widespread concern, has been accompanied by a sharp increase in total subsidies in this period. When total resources are seriously constrained, it is important to strike the right balance between subsidies and public investment.

The scale of the problem is illustrated by Gulati and Sharma (1995) who have compared the size of total subsidies (Centre and State) with total Plan expenditure. They define total subsidies to include the explicit fertiliser subsidy, the hidden subsidy by way of irrigation losses, the implicit subsidy in the losses on power supplied to agriculture, and finally the implicit subsidy on bank credit to agriculture. Total Plan expenditure on agriculture includes not only agriculture but also irrigation and special area schemes. The comparison shows that whereas total subsidies amounted to only 51 per cent of total plan expenditure in 1980-81, they had increased to as much as 142 per cent in 1992-93 and I have no doubt that the percentage will be even higher if these figures are updated to 1995-96. A simple calculation will show that if subsidies had remained at 51 per cent of Plan expenditure through the period, then the same total expenditure on subsidies and Plan expenditure in 1992-93, would have enabled Plan expenditure to be as much as 80 per cent higher than it actually was as the cost of subsidies being 42 per cent lower. Plan expenditures are not the same thing as investment but this order of increase in the Plan would obviously have enabled much larger levels of public investment in agriculture. I hasten to recognise that there are obvious limitations to this type of simplistic counter-factual scenario. Resources saved by a lower volume of credit subsidy would not be directly transferable to higher public investment in agriculture. They would be reflected primarily in higher bank profits or in lower interest rates to other bank borrowers or higher interest paid on deposits, none of which would directly increase resources for public investment. But certainly lower fertiliser subsidies, reduced irrigation losses and reduced power losses would generate additional resources in the public sector which could be transformed into a higher capacity to invest in agriculture. The conclusion is therefore valid that public investment in agriculture could be increased very significantly if we could redirect resources currently being absorbed by subsidies to agriculture.

Would such a reallocation of resources from subsidies to investment be economically justifiable? For this we need to consider the efficiency of the present system of subsidies in achieving the objective of increasing production in agriculture and compare it with what can be achieved if the same resources were devoted to public investment. Let me say at the outset that there is definitely a role for input subsidies in agriculture but it is also true that carried beyond a point, these subsidies distort relative input prices, leading to considerable inefficiencies in input use. There is evidence that this is happening in Indian agriculture.

The massive subsidy implicit in the large irrigation losses being borne by the states has received a great deal of professional attention. The Vaidyanathan Committee on irrigation (Government of India, 1992) has estimated that water rates per hectare need to be raised by about six times only to cover maintenance cost. Such massive underpricing of water leads to wasteful use of water at the upper end of distribution systems encouraging a shift to water intensive crops. It encourages excessive irrigation causing salinity and waterlogging in many areas while depriving users at the tail end of minimum water requirements. An upward adjustment in water rates to reflect costs more accurately is highly desirable to encourage more economical use of water, quite apart from the considerable resource saving involved, which could go to increasing public investment (including much needed replacement investment) in irrigation. The scale of the adjustment proposed by the Vaidyanathan Committee may be difficult to achieve at one go, but it can surely be achieved over a period of time.

The case of subsidised supply of electricity to agriculture is similar. There is certainly a case for some cross-subsidisation from one sector to another, and it was in recognition of this that a minimum tariff of 50 paise per unit for agriculture was established as a target in 1992. Allowing for inflation, this target should now be about 75 paise per unit which would still be less than half the average cost of generation. Far from moving towards reasonable minimum power tariffs, however, many states have actually lowered power tariffs for agriculture, in some cases to levels below 10 paise per unit! What is worse, the charge for power is typically not based on metering the volume of electricity actually consumed, but is levied as a fixed charge, depending on the capacity of the pump. This has the consequence that whatever supply of power is available is available at zero marginal cost! Little wonder that farmers have an incentive to overdraw groundwater, which is leading to a lowering of the water table in many areas. Farmers also have no incentive to economise on electricity use through

installation of energy efficient pumps. It must also be acknowledged that farmers also have their own legitimate complaints since power is typically not available on a reliable basis and almost never at convenient times. We are obviously in a vicious circle. The financial unviability of State Electricity Boards, which is partly caused by low power tariffs, perpetuates a state where the supply of electricity is inadequate in terms of both quantity and quality. Farmers therefore get a low quality product in insufficient quantities, but what they get is underpriced! We have to ask ourselves whether agriculture would not be better off getting a larger and more assured supply of power but at a higher price.

The subsidy on fertilisers provides yet another example of distortion of input prices. The present system is one in which nitrogenous fertilisers are significantly underpriced, with a substantial subsidy on both domestic production and imports, while prices of phosphatic and potassic fertilisers are largely market determined with a much smaller subsidy element. The relative price of different fertilisers is therefore greatly tilted in favour of urea, and this has distorted the pattern of fertiliser use. The ratio of N:P:K is around 9:2:1 whereas on grounds of agronomic efficiency it should be 4:2:1. Excessive use of nitrogenous fertiliser besides involving a heavy cost in terms of subsidies, also causes pollution problems.

In all these examples, the logic of economic efficiency requires that these price distorting subsidies should be scaled down and input prices brought closer in line with real costs. This policy prescription of reducing subsidies by raising input prices is likely to be criticised as 'anti-agriculture' on the grounds that it amounts to a net withdrawal of resources from agriculture. However, I would like to emphasise that what is needed is not a withdrawal of resources from agriculture but only a reduction in inefficient input subsidies, with the resources thus released being used to increase public investment in agriculture. Such a reallocation would be economically efficient because it would reduce input price distortions, and it would also encourage agricultural growth because the resources saved would go into much needed public investment. The restructuring would also be distributionally more advantageous, because the present subsidies go disproportionately to relatively more prosperous agricultural areas, as well as to the more prosperous sections of the farming community, while the new investment could be so designed to spread the benefits more equitably.

Sceptics may still argue that the proposed reallocation of resources from subsidies to investment is not sufficiently pro-agriculture because it only redistributes resources within the agricultural sector, whereas what is really needed is a net transfer of resources into agriculture. This is an important issue which should be faced squarely. I would readily agree that given the income disparities which exist between our rural and urban areas, there is indeed a case for a net transfer of resources towards agriculture and the rural sector. However, the best instrument for achieving this transfer is not through subsidies but rather through the restructuring of trade policy, which is a key element in the new economic policy.

TRADE LIBERALISATION AND AGRICULTURE

The impact of trade liberalisation upon the agricultural sector has not been well understood in the public debate and needs to be considered in some detail. Public discussion on this subject has tended to be dominated by fears about the damaging impact of import liberalisation on the agricultural sector, and these fears were especially exaggerated because much of the discussion took place in the context of the debate about the Uruguay Round and World Trade Organisation (WTO), which had its own political colour. A dispassionate assessment would show that far from hurting agriculture, the process of trade liberalisation envisaged in the new economic policy has actually proved beneficial, with a significant intersectoral transfer of resources towards agriculture.

The potential beneficial effect of trade liberalisation on Indian agriculture was clearly outlined in Dr. Manmohan Singh's inaugural address delivered at the 54th Annual Conference of this Society in 1994 (Singh, 1995). At the risk of some repetition I would like to restate, and in some respects elaborate, the argument. The beneficial impact of trade liberalisation upon agriculture can be elaborated in terms of the familiar two-sector models of trade theory. A

policy of heavy protection of the industrial sector, such as we had earlier, operates to the disadvantage of the agricultural sector because industrial prices are raised relative to world prices, and as a result the profitability of investment in industry is raised relative to agriculture. This leads to a shift of resources from the unprotected sector (agriculture) to the protected sector (industry) and to that extent artificially boosts incomes from industry while depressing incomes from agriculture.¹

It is important to recognise that the extent to which trade policy favours industry rather than agriculture cannot be quantified simply by looking at existing trade restrictions. For example, both industrial and agricultural imports may be subject to import control and high tariffs but this does not mean that both the sectors are equally protected. This apparently even handed policy may still work in favour of industry because the apparent protection of agriculture may be redundant in the sense that agricultural products may not need the protection given. In fact, trade policy may work against agriculture because agricultural producers may suffer from export restrictions which keep domestic prices depressed by denying agricultural products access to world markets. Even without explicit export restrictions, agricultural exports suffer from the over-valuation of the exchange rate caused by levels of industrial protection.

The disincentive effect of exchange rate over-valuation on agricultural exports has not been adequately appreciated. A policy of heavy protection of industry leads to the exchange rate being maintained at an appreciated level, compared to the level that would prevail if industrial protection was lower. This over-valuation of the exchange rate obviously discourages exports in general, but this discouragement was especially strong for agricultural exports. Our export strategy recognised that high protection for domestic industry raised domestic industrial costs which hurt our export capability, and sought to offset these constraints by a system of export incentives aimed at industrial exports. There was a variety of schemes for duty free import of industrial components, duty drawbacks, and various other incentives designed to provide market support for new products all of which helped to offset some, though not all of the bias against industrial exports. However, agricultural exports were denied most of the incentives on the ground that agricultural exports did not use imported inputs, and therefore did not suffer any obvious disincentive. This approach not only ignored the fact that the policy of protection increased the cost of capital goods needed in agriculture and in agricultural processing and marketing, but it completely ignored the fact that the over-valuation of the exchange rate induced by protectionist policies was itself the most important disincentive.

Liberalisation of industrial imports helps agriculture by reducing the bias against agriculture in general arising from protection of industry, and the bias against agricultural exports in particular arising from over-valuation of the exchange rate. This argument obviously assumes that agricultural exports are freed from quantitative restrictions and can respond to export possibilities opened up by the more realistic exchange rate and this is indeed an important element of the new economic policy.

Restrictions on exports of agricultural products ranging from foodgrains to sugar and cotton were a common feature earlier. The new economic policy has taken a number of steps to liberalise exports of rice, certain qualities of wheat, and cotton. The process is not however complete. Many export restrictions remain, and even where exports are free, exporters are not entirely sure that restrictions may not be suddenly reimposed in the event of domestic price pressure. Nevertheless, the new policy has had a favourable effect on agricultural exports. There has been a remarkable resurgence of agricultural exports in the past few years, including not only traditional agricultural exports such as rice but also several new export items such as grapes from Maharashtra and flowers from Karnataka. The volumes are still small, but the potential is enormous. The increased profitability of these exports resulting from the improved exchange rate is crucial because successful export of agricultural products requires maintenance of quality which means high rejection rates, significant investments in refrigeration and refrigerated transport, and an ability to bear transport charges, all of which adds to the exporters' cost. Exporters can bear these costs and still make profits only because of the new exchange rate which is a direct result of the new economic policy.

The policy of liberalising agricultural exports is sometimes criticised on the grounds that it will create domestic scarcity and hurt domestic consumers. These criticisms in effect concede the point that liberalising agricultural exports will help agricultural producers, but argue against the policy on the grounds of consumer interests. Sometimes it is argued that liberalising agricultural exports will specially hurt the rural poor, who are net consumers of agricultural products. This argument deserves careful consideration. It is important to recognise that the agricultural exports stimulated by the new policies will typically be at the higher end of the value spectrum, i.e., basmati rice rather than coarse rice, durum wheat rather than ordinary wheat, alphonso mangoes rather than ordinary varieties, etc., and an increase in relative prices of these items will in general not affect poorer consumers. Critics will point out that prices of lower priced varieties are not completely insulated because of switching of land to the higher priced export varieties, but against this distributional consideration we must also weigh the higher direct employment created by larger exports, which will tighten rural labour markets and help the rural poor directly. More generally, higher rural incomes, even if they accrue initially to the better-off sections, will generate greater economic activity in the rural areas, most of which will help the rural poor indirectly. Consumer interests are important but they should be protected not by denying agricultural producers the higher incomes they can earn by accessing world markets, but through an appropriate mix of buffer stocking and easy access to imports when needed to counter temporary domestic scarcity, combined with a well targeted public distribution system (PDS) aimed at the weaker sections. This is precisely what the new economic policy aims at.

If liberalisation of agricultural exports helps producers, it can be argued symmetrically that liberalisation of agricultural imports will hurt producers and it is not surprising therefore that this is resisted by agricultural interests on grounds very similar to resistance to industrial liberalisation from industrial interests. It should be noted in this context that the new economic policy has not attempted any major liberalisation of agricultural imports. One of the important reasons for going slow on this front is perhaps well rooted in traditional economic theory. International trade in agriculture is at present heavily distorted because of large subsidies to agriculture in the developed countries. The prevalence of such subsidisation justifies imposition of anti-dumping duties on many of these commodities. Having said this we should also recognise that fears on account of liberalisation of agricultural imports are also exaggerated. Once again the shift to a realistic exchange rate makes a big difference. With the new exchange rate, most of our agricultural products are easily able to hold their own against imports, sometimes even without any duty protection, but especially so with modest rates of duty. In fact the permissible duty rates on agricultural imports that have been negotiated under the WTO agreement would allow all agricultural products, and most certainly foodgrains, to compete successfully against imports at today's exchange rate. Perhaps the best example of the exaggerated fears about liberalising import of agricultural products is provided by the case of edible oil. Prior to the new economic policy Indian oilseeds producers needed very heavy protection against imported palm oil, which was in the canalised list importable only by State Trading Corporation (STC). Today, with a more realistic exchange rate, palm oil is freely importable on Open General License (OGL) with a modest duty of 30 per cent and domestic producers do not feel threatened by excessive imports. Similarly, sugar imports, which were undertaken in 1994 in the face of a domestic shortfall in production, needed a Government subsidy even at zero duty.

To summarise, economic theory suggests that a shift from a policy of heavy protection to industry will improve the terms of trade for agriculture and generate a shift of resources towards agriculture. The experience of the past four years certainly bears out this expectation. The index of agricultural prices relative to industrial prices, as reported in the Economic Survey, shows an improvement of 4.6 per cent from 108 in 1990-91 to 113 in 1995-96. Other indices show similar improvements. It is difficult to quantify the resource transfer implied by this shift in the terms of trade, but it is certainly very significant. Spokesmen for the agricultural sector have often argued that the key to agricultural dynamism lies in an improvement in the terms of trade, but in the past they uncritically accepted policies of excessive protection for industry, over-valuation of the exchange rate and restrictions on agricultural exports, all of which worsen the terms of trade, and then tried to rectify the situation by arguing for

higher procurement prices and lower input prices both of which involved fiscal costs. This approach was inherently flawed because it first accepted systemic distortions and then sought to correct them by policies which could only be sustained if food and fertiliser subsidies could be increased indefinitely. The new economic policy with its emphasis on trade liberalisation and a realistic exchange rate provides a more sustainable basis for improving the terms of trade for agriculture and thus achieving a large transfer of resources to this sector. This transfer of resources, taking place in a framework of improved profitability in agriculture, will encourage private investment in agriculture. It also provides a context in which subsidies to agriculture can be rationalised to provide the much needed resources to increase public investment.

EXTENDING DEREGULATION TO AGRICULTURE

Another element of the new economic policy, which has worked well in the industrial sector, and is also relevant for the agricultural sector is the liberalisation of restrictions on domestic producers. Unlike the case with industry, where there were extensive licensing controls directly limiting production, agricultural producers do not suffer from direct restrictions on production. However, they do suffer from a number of restrictions on marketing and movement of goods which need to be re-examined

Central Government zoning restrictions, which used to exist earlier, were given up long ago but State Government restrictions on inter-state and in some cases even inter-district movement exist in many cases. These restrictions can only be justified in terms of a desire to 'bottle up' agricultural produce locally to keep local agricultural prices low, in order to help local consumers or to help local procurement efforts, which in effect means procuring at lower prices than would otherwise be necessary'. These restrictions are usually defended on the grounds that they are not aimed at producers but at 'unscrupulous traders'. The view of the commodity market implicit in this argument is one in which private traders are assumed to be able to force farmers to sell at distress prices, so that the impact of restrictions on trade falls only on the traders and not producers. While it is possible in theory to construct models of markets that behave in this way, I would venture to suggest that reality is somewhat different. In the first place, surplus farmers now include large numbers of farmers who have the slaying power to avoid distress sales, especially in non-perishable crops. Secondly, the structure of private trade is not always as monopolistic as is sometimes assumed. In any case, even if it is felt that there are farmers who are exploited by private trade, it does not follow that we should impose restrictions on trade and marketing. Farmer interests in this situation are best protected through the active presence of official agencies buying at declared support prices, combined with free entry for private trade to exploit all trading possibilities. The existence of an active private trade, competing with official procurement agencies, can only help the farmer to realise better prices.

This approach implies removal of all restrictions on movement of agricultural commodities. It also implies the need for a thorough review of the Essential Commodities Act, which is often used to impose restrictions on levels of stock held by traders. It would also call for a reconsideration of long established officially sanctioned institutional arrangements such as the Maharashtra Cotton Monopoly Procurement scheme.

Another area where domestic liberalisation may help agricultural production relates to the land market. Spokesmen of the larger agricultural producers sometimes argue that the requirements of economically efficient agriculture may require revision in the land ceiling to allow agricultural producers to invest surpluses in land and thus push for modernisation of agriculture through larger-sized farms. The new economic policy does not endorse this argument. Agriculture is not subject to economics of scale beyond a point, and the present land ceilings provide ample opportunity to have farm sizes which allow full exploitation of available technology. There is a problem of viability of farm size at the small farmer end, where rising population and continuing sub-division of farm holdings have led to the emergence of a large number of very small economically unviable land holdings. Economic efficiency requires that these holdings be cultivated as part of more viable farms but this can be

done within the existing land ceilings. This can be done either through outright purchase of land by farmers below the ceiling moving closer to the ceiling, or through easier lease and rental. Although sale of land is one way of achieving the consolidation of small unviable holdings into more viable farms, it is possible that this process may be limited because of strong attachments to land ownership. In such a situation it becomes necessary to permit easy leasing of land, with assurance of resumption. In short, it will be necessary to create an efficient market for leasing in and leasing out of land. Land laws governing leasing which are designed to protect the rights of the tenant may need redesign in a situation where the 'landlord' is actually the weaker party.

CREDIT FOR AGRICULTURE

Agricultural growth and modernisation need to be underpinned by an efficient credit system capable of providing an expanding flow of credit for both investment and working capital. Can the new economic policy, and the associated financial sector reforms, ensure an adequate flow of credit to agriculture? Fears are usually expressed on this account because it is felt that (a) financial sector reforms will lead to elimination or dilution of the directed credit requirements on nationalised banks with a consequent reduction of credit to agriculture and (b) that deregulation of interest rates will lead to higher interest rates on agricultural loans.

On the issue of directed lending I would like to clarify that fears of abandonment of directed lending are completely unwarranted. Although the Narasimham Committee (Reserve Bank of India, 1991) had recommended a sharp reduction in priority sector lending, this particular recommendation has not been accepted. It was consciously decided to continue the system of directed lending on the grounds that at the present stage of our development, a sudden shift from a system long characterised by directed credit requirements, to a pure market based allocation, may disrupt the flow to agriculture. It has therefore been decided to continue with the 40 per cent target for the priority sector, and the 18 per cent sub-target for agriculture. It is true that there have been shortfalls in the share of commercial bank credit flowing to agriculture in recent years, and this has been a matter of concern. From 1995-96 onwards, a new mechanism was introduced for crediting these shortfalls to a Rural Infrastructure Development Fund set up in National Bank for Agriculture and Rural Development (NABARD) and aimed at providing loans to State Governments to complete small and medium irrigation projects at an advanced stage of completion. The Government has also committed itself to strengthening the co-operative credit structure through substantial refinance made available by NABARD. The Government has also committed to restructuring and rehabilitating the Regional Rural Banks, which have thus far proved to be financially very weak, but which are a potentially important instrument for delivering credit to the rural areas.

On the issue of interest rates, the new economic policy docs imply some important changes. It accepts the proposition that subsidised interest rates should be adjusted gradually to bring them in line with the cost of raising funds. There is certainly some scope for a cross-subsidy for some segments of borrowers, and this is why small loans continue to be offered at concessional rates. But such cross-subsidy is consistent with viable banking only if the target group is kept small. If subsidised rates apply to too large a proportion of the portfolio, the viability of the banks is seriously impaired. The Regional Rural Banks, most of whose borrowing clients are eligible for subsidised interest rates, exemplify the consequence of proceeding too far down this path. Higher interest rates are not of course the only method for improving the viability of banks. Other measures such as reducing administrative costs, rationalising the branch network and rationalising manpower requirements are equally important, and all these opportunities must be fully exploited.

In addition to reasonable interest rates, the viability of credit institutions depends crucially upon recovery performance. No credit system can survive unless loans given are repaid. Unfortunately, our agricultural credit system suffers from a very poor recovery record. This is especially so in the case of co-operatives, but it is also a problem in the commercial banks. To some extent poor recovery has been encouraged by the unfortunate phenomenon of pe-

riodic general loan write-offs announced by Governments. Rescheduling or even write-offs of agricultural loans triggered in situations of identified crop failure are understandable, but generalised loan write-offs only perpetuate a culture of non-recovery among borrowers encouraging default in the hope of getting relief later. The result is a weak credit system, which cannot cycle resources into agriculture commensurate with need.

The solution clearly lies in charging interest rates much closer to market rates minimising administrative costs, and ensuring timely recovery. An upward adjustment of rates in the organised sector, credit combined with more effective recovery, would greatly increase the viability of the organised credit system and enable it to perform its basic function of mobilising resources and ensuring an increased flow of credit. At the margin, the supply of higher priced credit from the organised sector would actually displace much more costly credit obtained by the farmer from the informal sector. If these changes are implemented they could lead to a significant expansion in the flow of credit from the organised sector in which case the average cost of agricultural credit may actually improve. Several studies have shown that availability of credit is far more important than subsidisation of interest rates. It should be our objective to move as quickly as possible in this direction.

THE ROLE OF AGRO PROCESSING

Let me now turn to the role of agro-processing in the future development of the agricultural sector. As incomes rise, we can expect a decline in the relative importance of cereal production compared with items such as fruits and vegetables, milk and milk products, meat and poultry, etc. Rising demand for these products typically also leads to, and to some extent also depends upon, the growth of an agro-processing industry. A strong agro-processing sector in effect generates a positive feedback on agriculture, providing farmers with assured demand and good prices, and also encouraging absorption of improved agricultural technology producing varieties suitable for agro-processing.

The new economic policy emphasises the development of agro-processing as an instrument for agricultural and rural modernisation. A number of initiatives have already been taken, as part of the new economic policy, which will help the development of agro-processing. Lower import duty rates on capital goods and machinery help to cheapen capital costs for agro-processing. Lower duty rates on metals and plastics cheapen the cost of packaging which is also very important. Freer access to technology and foreign investment also encourages technological upgradation in both agricultural technology and food processing technology, all of which is needed.

There are a number of areas however where policy initiatives are needed. A good example is provided by the sugar industry. This is the most important agro-based food industry in the country, but it is at present also the most extensively controlled. New investment in the industry is subject to licensing; the price paid to the farmers is fixed by State Governments; production is subject to a levy whereby 40 per cent of the output is procured at an artificially low price; the so-called free-sale sugar is not really freely saleable by the mills, but is subject to release of free-sale quota by the Government; even molasses, which is a by-product, is subject to movement and price restrictions imposed by State Governments in some states. Such extensive control over the sugar industry is obviously out of line with the principles of the new economic policy and has produced an industry which displays many shortcomings in terms of high costs of production, obsolete plant, uneconomic scales of production. On the face of it, a phased removal of these controls would help develop a stronger, more efficient sugar industry, which in turn would be able to support sugarcane farmers more effectively.

Similar examples of excessive controls and regulations can be found in other agro-processing industries. A large part of the food processing industry, for example, is currently reserved for the small scale sector, e.g., biscuits, bread, ice-cream, rice, milk, oil processing (groundnut and rapeseed-mustard). It can be argued that these restrictions limit the growth capacity of the sector. They limit the ability to upgrade food processing technology which in

turn limits both the expansion of the domestic markets and especially the exploitation of export possibilities. In all these cases, the economic cost of restrictions imposed on the industry at the agro-processing stage is borne partly by the consumer, but partly also by the agricultural sector. A careful review of these restrictions is therefore necessary in the interest of agricultural development in future.

THE ROLE OF TECHNOLOGY

Finally, I would like to say a few words on the role of technology in agricultural development. The critical importance of technology was dramatically demonstrated in the 1970s by the Green Revolution which saw an impressive growth in yields following the introduction of new wheat and rice varieties. Without these breakthroughs we would not have been able even to maintain, let alone accelerate, the growth rates in agriculture which in turn implies that we would not have been able to achieve the 5.5 per cent growth in GDP which was achieved in the 1990s. The technology package associated with the Green Revolution had its limitations. It was scale neutral, but it was not neutral with respect to other inputs. For optimal results, the new seeds required assured irrigation and also heavy inputs of fertiliser as well as pesticides. This limited the applicability of the technology to areas of assured irrigation. The potential for further extending this technology package is not yet exhausted since there is scope for expanding irrigation further, and even more so for improving the quality of irrigation in many areas. However, accelerating agricultural growth to 4 per cent or so in future requires yield improvements over a much larger part of our cultivable area. We will have to extend yield increases to areas which are rainfed and cannot adopt agricultural practices based on plentiful water availability. Agricultural growth in these areas can be accelerated significantly only if we can develop technology packages suitable for these conditions.

The biotechnology revolution provides the possibility for developing such technologies. Genetic engineering opens up the prospect of developing new varieties which can flourish with less dependence on water and chemical inputs, and this could provide the basis for substantial increases in production in areas where at present progress has been limited. Reduced dependence upon chemical fertilisers and pesticides is also desirable because of environmental considerations, which are causing increasing concern.

Technology development for future agricultural growth is clearly an area in which both the public and the private sector research should be fully involved. Our infrastructure for agricultural research in the public sector is impressive in many respects, and it certainly played a crucial role in making the Green Revolution a reality by absorbing technology from abroad and adapting it to Indian conditions and requirements. More recently, however, the record on this front is less impressive. Dramatic technological breakthroughs cannot of course be guaranteed on any time schedule, but we must also recognise that the results achieved thus far in improvement of yields in water scarce conditions, is very limited. This is in part due to inadequacy of resources devoted to public sector research and we need to correct this by allocating larger resources to revitalising the agricultural research system. However, there is also a systemic problem. There is reason to believe that our agricultural research system, as indeed a large part of our public sector research infrastructure, has become over-bureaucratized. It does not contain adequate incentives nor provide the flexibility needed to attract and retain the best scientific talent and provide an environment in which creative research can flourish. And yet there is no alternative to substantial publicly funded research at least as far as foodgrain varieties are concerned. The deficiencies in the public research infrastructure therefore need to be corrected.

We must also recognise that the private corporate sector can also play a major role in upgrading agricultural technology, especially in horticulture. Our farmers have time and again demonstrated that better seeds once made available as part of a feasible technological package will be enthusiastically adopted and farmers are willing to pay a higher price for seeds with demonstrably improved productivity. Private sector research is also one of the critical positive feedbacks we can expect from a well developed food processing industry. It is well known that table varieties of horticultural products are not necessarily suitable as in-

puts into the food processing industry which typically requires different characteristics. These requirements obviously depend upon the nature of the final processed product being marketed and also the specific type of processing involved. The relevant agricultural technologies must therefore be developed by, or in close consultation with the ultimate manufacturer. The development and dissemination of these technologies require appropriate fiscal incentives for inhouse as well as contracted research, and several steps have been taken in these directions.

We have to recognise also that private sector research requires adequate intellectual property protection. The commitments on protection of intellectual property in agriculture undertaken in the WTO would help to achieve the required intellectual property regime when fully implemented. It is unfortunate that this issue has also generated a major public controversy because of continuing misperceptions of the nature of these commitments. In recent years, however, our own scientists and scientific organisations have increasingly argued in favour of stronger intellectual property protection as a pre-requisite for strengthening Indian research.

In concluding, I must state that the six areas I have chosen to focus on are not a comprehensive list of all the issues facing Indian agriculture in the context of the new economic policy. There are others which I am sure will surface in the discussions in the course of the Conference. My purpose was only to illustrate some of the important areas where the new economic policy interfaces with issues of agricultural strategy, and to indicate that workable solutions to these problems can be found within the framework of the new economic policy. As I said at the outset, the new economic policy will not succeed in its basic objective of accelerating and broadbasing the growth process unless these solutions are found and the agricultural sector is put on the path of sustained growth at around 4 per cent per year. There is every reason to believe that this can be done as part of the new economic policy.

NOTE

1. The bias against agriculture arising out of the change in relative profitability is different from the impact on agricultural consumers of higher relative prices of industrial products. Although agricultural consumers undoubtedly bear a burden because of higher industrial prices, this burden is not necessarily greater than the burden borne by industrial consumers. In fact if industrial (urban) consumers have a higher proportion of their consumption accounted for by industrial products, it can be argued that they bear a larger proportional burden as consumers. Thus both agricultural and industrial consumers bear a burden because of the price effects of industrial protection, but agricultural producers are clearly discriminated against versus industrial producers because of the differential effect on profitability.

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