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Re-Visiting Agricultural Policies In the Light of Globalisation Experience: The Indian Context

Edited by

Dinesh Marothia, Will Martin, A. Janaiah and C.L. Dadhich



INDIAN SOCIETY OF AGRICULTURAL ECONOMICS
MUMBAI

**RE-VISITING AGRICULTURAL POLICIES IN THE LIGHT OF
GLOBALISATION EXPERIENCE: THE INDIAN CONTEXT**

**Edited by
Dinesh Marothia, Will Martin, A. Janaiah and C.L. Dadhich**



INDIAN SOCIETY OF AGRICULTURAL ECONOMICS
in collaboration with
National Institute of Agricultural Extension Management (MANAGE)
Professor Jayashankar Telangana State Agricultural University (PJ TSAU)
Acharya N.G. Ranga Agricultural University (ANGRAU)

Supported by
International Association of Agricultural Economists (IAAE)

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C.L. Dadhich, from being Ph.D. from J.N. Vyas University of Jodhpur he is Honorary Secretary of Indian Society of Agricultural Economics since 2006. During his tenure the Indian Society of Agricultural Economics (ISAE) recorded all round growth and made rapid strides particularly in terms of expansion of membership base and resource base. Dr. Dadhich worked as Director of Rural Economics, Reserve Bank of India. Before taking over as Director of Rural Economics, Reserve Bank of India, he taught in capacity of senior faculty member (rural economics in general and designing of agricultural projects in particular) at College of Agricultural Banking, Pune for about a decade. He is the author of books titled “Overdues in Farm Co-operative Credit” (1977) and “Management Through Folk Wisdom”. He has also contributed a number of papers and articles in national and international Journals of repute. Dr. Dadhich received Best Citizen of India Award in 2013 for his contribution to the Indian community. Dr Dadhich is associated with number of social, cultural, educational and research organisations in India and abroad. He is patron member of Dadhich Samaj, Mumbai. Dr. Dadhich is an Expert Director on the Board of Directors of a prominent Producer Company.

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FOREWORD

The International Association of Agricultural Economists (IAAE) is a worldwide association of agricultural economists and others interested in agricultural issues. Major missions of IAAE are to advance knowledge of agricultural economics and to facilitate communication and information exchanges among agricultural economists all over the world. In order to achieve these missions, the IAAE convenes triennial international conferences and inter-conference symposia. Venues of recent International Conferences of Agricultural Economists have included Durban in South Africa in 2003, Beijing in China in 2009, and Iguazu Falls in Brazil in 2012, among developing countries. In the history of IAAE, India has been regarded as a critically important nation because of its size, diversity, and potential. But, of the 29 International Conferences of Agricultural Economists held since 1929, only one has been held in India—the tenth conference, held in Mysore in 1958.

For several years, it has been clear to core members of IAAE that it is time to begin thinking of the second International Conference in India. For this purpose, IAAE wished to strengthen the relationship with agricultural economists and agricultural economics organisations in India. Through intensive communications between leading Indian agricultural economists and core members of IAAE, including myself, we planned IAAE-ISAE (Indian Society of Agricultural Economics) Inter-Conference Symposium held at MANAGE, Hyderabad in October 2014. It was extremely well attended, productive, and, after all, highly successful, as presentations and discussions were extremely lively. This is evident in the excellent papers collected in this special publication of the *Indian Society of Agricultural Economics*. There is no doubt that diverse key issues are covered in this issue.

At the same time it is clear to me that there is a need for clearer policy implications to improve food security and livelihood of farmers in India. It is also clear that some key issues are missing, such as the future of small farms and land market reforms in this populous country. We must clearly recognise that how Indian agriculture performs affect not only the fate of farmers and consumers in India but also welfare of billions of people across the globe.

I firmly believe that this inter-conference symposium represents a landmark for strengthening the collaborative relationship between the Indian agricultural economics societies and IAAE. It is wholeheartedly hoped that this will lead to a truly productive International Conference of Agricultural Economists in New Delhi, India in 2021.

November 11, 2016

Keijiro Otsuka
Former President of
International Association of Agricultural Economists
and
Professor of
Graduate School of Economics, Kobe University

PREFACE

Indian Society of Agricultural Economics in collaboration with National Institute of Agricultural Extension Management (MANAGE), Professor Jayashankar Telangana State Agricultural University (PJTSAU) and Acharya N.G. Ranga Agricultural University (ANGRAU) and supported by International Association of Agricultural Economists organised an Inter-Conference Symposium on Re-visiting Agricultural Policies in the Light of Globalisation Experience: The Indian Context at MANAGE, Hyderabad from October 12-13, 2014. The symposium was co-sponsored by National Bank for Agriculture and Rural Development (NABARD), Indian Council of Agricultural Research (ICAR), Reserve Bank of India (RBI) and International Rice Research Institute (IRRI). The symposium was organised under the supervision of a Programme Committee consisting of Dr. C. Ramasamy, the then President of Indian Society of Agricultural Economics, Prof. Keiji Otsuka, Past President, International Association of Agricultural Economists, Prof. A. Janaiah, PJTSAU, Dr. V.P. Sharma, MANAGE and Dr. C.L. Dadhich, Hon. Secretary and Treasurer of Indian Society of Agricultural Economics. Around one hundred participants from inter-related disciplines participated. As many as seventy six papers were selected for presentation and discussion in the Symposium on the recommendation of referees viz., Prof. Vasant P. Gandhi, Dr. K.R. Ashok, Dr. S.S. Raju and Dr. Seema Nath, besides 17 lead and Keynote presentations. The present special volume includes a Foreword by Dr. Keiji Otsuka and sixteen papers covering the various aspects of the main theme.

We are grateful to Professor Otsuka for writing a Foreword to the volume, to the various lead paper-writers and keynote paper-writers for delivering the keynote addresses and to the paper-writers and to the participants for attending the symposium and making valuable contribution. Our thanks are due to the Chairman of the various sessions for moderating/guiding the discussion and to the Co-chairman for preparing the respective reports.

The papers were screened, selected and edited by Dr. Dinesh Marothia, Dr. Will Martin, Dr. A. Janaiah and Dr. C.L. Dadhich. We are thankful to them for the time and attention they have devoted in bringing out this publication.

We owe a deep debt of gratitude to National Institute of Agricultural Extension Management (MANAGE), Hyderabad and to Shri B. Srinivas, the Director General of the Institute and his colleagues for agreeing to organise the Symposium at MANAGE and for providing the necessary facilities.

The Society is grateful to a number of people who make it possible to organise the Symposium and provided help in bringing out the volume. The key proponents were Dr. C. Ramasamy, the then Society's President and Late Dr. N.A. Mujamdar, the then Editor of IJAE, Dr. Walt Armbuster and Dr. Johan Swinnen the then President of International Association of Agricultural Economists. The task of

processing the papers and technically editing them for publication was undertaken by Mrs. Vijaya Venkatesh, Honorary Joint Secretary of the Society. We are thankful to all of them for undertaking this responsibility.

We acknowledge our gratitude to the International Association of Agricultural Economists, National Bank for Agriculture and Rural Development, Reserve Bank of India and Indian Council of Agricultural Research, New Delhi for providing financial support to meet a part of the expenses of the Symposium as well as to the National Institute of Agricultural Extension Management (MANAGE), Prof. Jayashankar Telangana State Agricultural University and Acharya N.G. Ranga Agricultural University, Hyderabad for providing the necessary facilities.

November 9, 2016
Mumbai

Abhijit Sen
President

DINESH MAROTHIA, WILL MARTIN, A. JANAI AH AND C.L. DADHICH

Introduction

BACKGROUND

The period since the 1990s has witnessed a significant shift in the macroeconomic policy environment around the globe, with India and the developing countries as a whole growing much more rapidly than the industrial countries. The new economic policy of India (1991) is based on the three elements, viz., liberalisation, globalisation and privatisation. Though India has been one of the fastest growing countries its growth has not been inclusive. One of the excluded sectors during the early reform period was agriculture that registered low growth. Similarly the problem of globalisation particularly for agriculture was not seriously addressed. In this backdrop, Government India's first agricultural policy statement NAP 2000 was drafted with a major objective of agricultural growth rate of 4 per cent per annum by increasing the efficiency of resource use. Sustainable and demand driven inclusive growth was envisaged. However, there has been considerable vacillation in policies on farm subsidies, market reforms, liberalisation of farm input sector, trade liberalisation and other areas.

Upcoming challenges at the national level include: the need for more investment in infrastructure; multi-land use planning including soil nutrient management under exponential growth in fertiliser subsidy; considerable gaps between the varieties released by the public sector institutions and the varieties adopted by the farmers; private sector research and seed industry focusing only on varieties and hybrids with large markets; rainfed crops getting less research attention; and controversies about transgenic food crops; under-funding of agricultural research; identifying cultivars with stress tolerance to climate change; under-performance of extension agencies; frequent failure in timely availability of quality seeds; inadequate fodder availability and poor access to animal health to support the dairy industry; lesser success in linking small producers with markets; and an urgent need to improve the productivity of common pool resources through workable technical and institutional arrangements including secure tenure (Marothia, 2010). To share global experiences a Symposium was organised so that the outcomes of discussion can be useful to closely look into the agricultural policy issues.

OBJECTIVES

The main objectives of the Symposium were:

- To facilitate interaction among researchers and stakeholders on agricultural policies in the context of globalisation.

- To document problems emanating from globalisation that have not been seriously addressed by government policies and strategies, and to suggest suitable policy options.

Organisers

Being a pioneering organisation in the field of agricultural economics, the Indian Society of Agricultural Economics took the lead and the Symposium was jointly organised by the Indian Society of Agricultural Economics, Mumbai; National Institute of Agricultural Extension Management (MANAGE), Hyderabad; Professor Jayashankar Telangana State Agricultural University, Hyderabad and Acharya N.G. Ranga Agricultural University, Hyderabad. The sponsors of the Symposium were the International Association of Agricultural Economists, U.S.A; National Bank for Agriculture and Rural Development, Mumbai, Reserve Bank of India and the Indian Council of Agricultural Research, New Delhi.

Papers

Accordingly papers were invited from researchers, academicians and professionals in the field of agricultural economics, agribusiness policy analysts, and key policy makers from India and abroad. More than 80 papers and posters were received. These papers/abstracts were referred to eminent experts for review. Based on these reviews, the best papers were considered for deliberation in the symposium.

Symposium

The symposium was organised at Hyderabad during 12-13 October 2014. It was attended by more than 100 delegates representing different countries.

To accomplish the objectives, the Symposium was divided into (a) plenary sessions; (b) technical sessions, (c) poster sessions and (d) round table sessions. A special session was organised by International Rice Research Institute, on *Distribution and Impacts of Stress Tolerant Varieties in South Asia*. Eminent experts were invited to share their knowledge and wisdom during the plenary sessions. The technical sessions were developed in such a way that they covered the key theme of Globalisation. It was also decided to publish some of these papers under the copyright of ISAE in the form of a volume for wider circulation. Of these papers only 16 papers with pointed focus, strong policy relevant to the theme and authors responsive to the suggestions made during deliberations and the editorial process were selected for inclusion in this volume.

Emerging Issues

As mentioned earlier this volume contains only 16 papers. These papers can be broadly grouped into seven areas: methodology; major sources of growth; lopsided

policy measures; impact of policy measures; viability trends; globalisation of Indian agriculture; and WTO regulations.

1. *Sources of Growth*

Pratap Birthal *et al.* evaluate 'how policy shifts have influenced patterns and sources of growth in Indian agriculture, and their implications for food security and poverty. Decomposition of agricultural growth shows technology as the main source of growth, followed by diversification towards high-value crops. The contributions of area expansion and price increases to overall growth have remained small and erratic suggesting that these cannot be sustainable sources of growth in the long-run. Diversification has been found to exhibit pro-poor bias, and also does not have any adverse effect on household food security. These results clearly suggest that in the long-run, growth in agriculture has to come from technological change and diversification, and to realise its growth and poverty-reduction potential it is essential to increase investment in agricultural research; prioritise research agenda considering emerging agricultural challenges and market opportunities; and to promote high-value agriculture through enabling policies, institutions and infrastructure.

A paper by Anita Kumari *et al.* shows that estimates of the real rate of growth of agricultural output based on the internationally standard methodology and India's national income accounting methods are largely similar. However, they are quite different at sub-sectoral levels. In this context, it is suggested that while making any comparison across countries it is desirable to use compatible methodologies.

2. *Lopsided Policy and Policy Measures*

Kiran Kumar *et al.* note that water policies at both State and National levels focus largely on the demand side of water management (drip/micro irrigation at farm level for instance) ignoring the supply side of groundwater (on-farm recharging well/borewell). They further add that policies lack focus on disciplining farmers towards sustainable use of groundwater, including both the demand and the supply side of natural resource use, i.e., in some areas, farmers are bearing more than 75 per cent of the cost of investment in groundwater; but they still treat investment as an implicit rather than an explicit cost. Incidentally the CACP methodology also treats the cost of groundwater with: (1) depreciation on irrigation well and irrigation pump set (IP) treated as a fixed cost (for a non-specified number of years) and (2) the number of hours of operation of IP payment as a variable cost.

Anjan Chakrabarti points out that during the reform era, the cost of production has increased. As a result a large share of the small and marginal farmers in West Bengal find it difficult to ensure livelihood from agriculture. Increase in incidence of land alienation of pattadars and increasing eviction of bargardars (share cropper) in the state has further aggravated the agrarian situation in the post reform period. The

absence of large scale manufacturing has adversely impacted employment opportunities outside agriculture. The study points out that the lack of alternative employment avenues to a large extent crippled the economic status of agrarian community in post-reform era.

Incidentally, efforts have been made to guarantee minimum rural employment during the last few years to the poor households in rural areas under the Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA). MNREGA was also envisaged as helping develop rural infrastructure in the country. Using the framework of village-wide economy modelling with Village Social Accounting Matrixes (SAMs), P.S. Srikanthmurthy *et al.* analyse the direct and economy-wide impacts of MNREGA in two different dryland villages of Karnataka state by constructing village SAMs from primary and secondary data for the agricultural year 2012-13. Multiplier effects (feedback effects estimated using the SAMs) of MNREGA on the two villages (Markabinahalli and Belladamadugu) of Karnataka were very weak. This is due to already high market wage rate in the local economy, and MNREGA fund spent for more of materials and machines (diggers) than for labour, as these materials and machines were brought from outside of the village economy which benefited others outside the villages rather than the targeted poor agricultural labour households in the village. The village wide assessment of impacts and construction of village SAM contributes to the applied policy analysis on the topic of impact assessment.

An attempt was made by Rakesh Singh *et al.* to review the market reforms and their impact on agricultural growth in Uttar Pradesh. Farmers' perceptions and infrastructure were also examined. They noted that, although efforts have been made to change over from regulated marketing of agricultural produce to liberalised marketing, the impact at the farm level is not visible. The marketing of agricultural products in the state is still operated under the old APMC Act 1964. During the period 2003-2013 private corporate investment in agriculture has declined, which has adversely affected growth of agricultural sector. Farmers are highly dissatisfied with the present marketing system. Infrastructure is very weak in secondary markets, while most of the primary mandies are also lacking support and storage infrastructure.

Anjani Kumar *et al.* investigate the effect of food subsidies through the Public Distribution System (PDS) on poverty and food security in India. Analysis shows that the effectiveness of the PDS has improved over time and it has contributed significantly to tackle the twin problems of poverty and food insecurity in India.

Prem Chand *et al.* discuss the pattern of diversification and its determinants. They reveal that the composition of agriculture is changing and is shifting towards high value crops, livestock and fishery. The contribution of cereals declined while that of horticultural crops increased drastically from 10.49 per cent to 27.77, oilseeds from 8.26 per cent to 9.71 per cent, sugarcane from 3.49 to 5.83 per cent and fibres from 4.29 to 7.15 per cent during the reference period. In livestock sector also the share of eggs, milk, and meat group in total livestock output has increased while that of wool, hair, dung, and silkworm has decreased. Rural infrastructural facilities and scale of

holding were found to be the major determinants of diversification towards high value commodities.

3. *Impaired Viability of Indian Agriculture*

A study undertaken by Dipika Basu and Arun Kr Nanda reveals that 61 per cent of farm units earned profits. Important among the determinants of farm profitability were size of farm, quantity of chemical fertilisers used, use of high yielding variety of seeds, etc. They suggest development of organic farming, reduction in the use of high cost chemical technology, promotion of effective marketing facilities, higher utilisation of by-products, etc. will go a long way in augmenting farm profitability.

A study undertaken by A. Narayanamoorthy *et al.* brings to the fore that debilitating viability of agriculture is on account of rise in production cost on the one hand and unremunerative prices of produce on the other hand in recent years. Analysing the plight of sugarcane growers they reveal that the state government has failed to take into account rising cost of farm inputs when announcing fair and remunerative prices or state advised prices. A large number of bruised farmers were committing suicide every day.

N. Nagaraj *et al.* also points out that the net income derived from agriculture has been declining over the years, while income from non-farm sources has increased sharply. Small farmers are likely to remain unviable, if they do not get access to off-farm income. In order to enhance the viability of small farms, technology driven options to accelerate productivity and profitability are vital for policy intervention. In addition, non-farm diversification needs strong policy support towards infrastructure, transport, storage, credit and market.

4. *Globalisation of Indian Agriculture*

The share of foreign trade (export and import) to gross domestic product (GDP) is an important indicator of globalisation. The share of agricultural exports and imports of India increased from about 12.85 per cent of agriculture GDP in 2009-10 to 17.90 per cent in 2014-15 indicating growing degree of globalisation.

Purushotam Sharma brings to the fore that in the post-WTO period the growth rate of the majority of oilseed crops has witnessed declining trends. Liberalised import policy of edible oils under the WTO regime has adversely impacted oilseed production scenario. To assess the instability in area, production and yield of oilseed crops, the Cuddy-Della Valle Index was used. The analysis further revealed that production of oilseeds was more volatile than yield levels and found to be higher during the post-WTO period. The instability was greater for safflower, sunflower, soybean and castor crops. The decomposition analysis of output growth of soybean reveals that growth in production of oilseeds in India was due to changes in yields (59

per cent) and area (31 per cent). Analysis also points out that output growth during the post-WTO period was mainly on account of area effect, while the yield effect was found to be negative for some crops. Growth in total factor productivity of important oilseed crops was found to be low, and has slowed down during post-WTO period. Furthermore, the post-WTO phase witnessed an increase in import dependence which is currently about 50 per cent. Yield gap analysis reveals that there exists enough potential available to harness provided there is a consistent increase in research investment, policies upheaval and support services.

Sukhpal Singh examines the role of FDI Multi-Brand Retail Trade (MBRT) up to 51 per cent in improving the efficiency of food chains and its implications for various stakeholders in the chain, based on empirical evidence from the experience of Indian domestic food supermarkets and compares with the other developing countries. He concludes that the experience of food supermarkets in developing countries in general and in India particular is not an encouraging one. Farmers and suppliers especially small ones are likely to be left out unless appropriate mechanisms like farmers groups or associations with institutional framework to ensure effective governance regulations and monitoring operations of global retailers are put in place. Effective institutional frameworks with good governance are imperative for deriving full benefits of policies.

A case study of Greek co-operatives is somewhat relevant to take benefits of globalisation. P. Sergaki *et al.* demonstrates that re-engineered co-operatives have higher performance levels than traditional co-operatives. Moreover, traditional co-operatives are more prone to cost-reduction strategy while re-engineered co-operatives mostly adopt differentiation strategies. Policy-makers may advance their knowledge on how different kinds of agricultural institutions in the world impact fair growth of globalisation.

5. Indian Agriculture and WTO Regulations

World Trade Organization (WTO) was set up in the early 1990s as an apex institution in the world to regulate, negotiate, facilitate and to settle trade-related disputes for services and commodities including agricultural commodities across the trading countries.

As a member of the World Trade Organization (WTO), India is subject to the rules of the Agreement on Agriculture and the notification requirements of the Committee on Agriculture. The rules impose yearly ceiling limits on certain kinds of support to farmers. Exemptions apply for some kinds of support and support is calculated in a prescribed way. India has notified the WTO of its domestic support to agricultural producers only for the years 1995-2003. Lars Brink discusses the domestic support rules of the Agreement on Agriculture and reviews India's notifications, and summarises the key issues in India's domestic support. He calculates price gaps for rice, wheat, cotton and sugarcane in 1995 to 2013 under four

scenarios – one corresponding to the rules of the Agreement and three scenarios incorporating adjustments of the external reference price or the price gap itself. Accordingly, the amounts of WTO market price support, which are non-economic indicators, make up all or almost all of each year's Aggregate Measurements of Support (AMSs) for rice, wheat, cotton and sugarcane. The AMS's are compared to their limits, which are based on the year's value of production. The AMSs show large excesses above their limits in the 1995-2013 period in the base scenario, while the adjustment scenarios show no or smaller excesses. The differences among alternative interpretations of the Agreement suggest huge scope for negotiations.

This apart, development in other countries have, far reaching impact on agriculture in developing countries including India. In this context, developments in the U.S.A are worth mentioning. Sachin Kumar Sharma critically examines the commodity and insurance programmes of USA Farm Act 2014 with reference to domestic support under Agreement on Agriculture and Doha round negotiations with particular reference to developing countries. Interestingly, the USA Farm Act 2014 has repealed many programs related to different commodities. Apart from highlighting many trade distorting programmes like Price Loss Coverage (PLC), Agriculture Risk Coverage (ARC), Stacked Income Protection Plan (STAX) and Supplemental Coverage Option (SCO). The study discussed the shortcomings in US domestic support notification to the WTO and its impact on product-specific support to agriculture sector.

Important among the issues emerging from these papers include:

The major share of growth in agricultural output has been from increases in area rather than increase in yield. It is important to note that growth measurement methodology followed in India is internationally not compatible. Further, policy measures hugely focus on demand side and supply is relegated to secondary importance. Rising cost of production on the one hand and unremunerative prices of agricultural produce on the other hand have pushed many farmers out of agri based livelihood. Wage employment programmes have benefitted more the machine and material provider than labour class in the villages. Labour replaced by machines is being gainfully utilised in non-farm activities leading to poverty reduction.

Improvements in the efficiency of the public distribution system that has led to reduction in poverty incidence and augmented food security

Indian agriculture is being diversified towards high value crops. About two-fifths of farm holdings are running losses. Diversification alone may be necessary but not sufficient to improve viability of farms, support of non-farm activities is equally important.

At times, Government procurement policies do not take into account the rising cost of production leading to this state of affairs. Reforms always help in accelerating globalisation through increased exports of non-traditional commodities but at the cost

of higher imports that may lead to fall in domestic prices and lead to further fall in domestic production of imported commodities. Without proper regulatory frameworks in place, even the growing flow of FDI may not give the intended results. At times, higher the incidence of globalisation higher is the exposure to institutional innovations in trading countries. In order to ensure smooth negotiations, WTO needs to work out models with different scenarios before release of notifications.

Looking Ahead

Since globalisation in general leads to higher inequality, it is important to examine agricultural and trade policies from an equity perspective and that too in a differentiated manner meaning there should be separate treatment of dryland and irrigated agriculture and food and commercial crops besides special focus on small producers.

Further, since it is markets which determine viability of agriculture, there is a need to focus on policy reform in agricultural input and output markets especially output markets where new players are coming in and working with producers. The various implications of such interface need to be understood with empirical studies and need for more effective governance and regulation assessed.

There is very important role for collective agencies in smallholder context. Therefore, there is need to examine the institutional context of agri growth and development in terms of new institutions like farmer producer companies or contract farming. These would play a role in determining whether small farmers can participate in globalised markets. In the era of globalisation, where market solutions receive primacy, the restoration of common pool resources poses major research and policy challenges (Marothia, 2010).

Like policy formulations, policy review also needs constant and continuous attention to capture the trends and development on time. In this backdrop researchers and academicians should revisit agricultural policy at regular intervals if not on the regular basis. Being a pioneering organisation in the field of agricultural economics, the Indian Society of Agricultural Economics (ISAE) should visit agricultural policy every fifth year in its Annual Conferences. Similarly revisit to global experience on frequent intervals is imperative. In this context such symposia should be organised more frequently in India and other developing countries. However, sufficient time should be given to researchers for in-depth analysis. With a view to providing sufficient time for in-depth analysis of this theme, it is necessary that this topic is again selected by IAAE for its conference in 2021 in India.

REFERENCE

- Marothia, D.K. (2009). "Decentralisation of Natural Resource Management in India: An Institutional Perspective", Presidential Address, *Indian Journal of Agricultural Economics*, Vol.65, No.1 January-March, 2010, pp.1-34.