

## **Dr. Pratap Singh Birthal**

Dr. Pratap Singh Birthal is currently Principal Scientist at the National Institute of Agricultural Economics and Policy Research, New Delhi. Earlier, he has the International Crops Research Institute for the Semi Arid Tropics, Patancheru (Telangana), and the Institute of Development Studies, Jaipur. Dr Birthal has made notable contributions in agricultural economics and policy research. His important contributions focus on the interrelationship among high-value agriculture, agricultural growth and rural poverty; market linkages and value chains in smallholder production systems; impact of information on returns from farming; institutional and policy requirements for accelerating adoption of technologies; and impact of climate change on agriculture. He has published more than 75 research papers in national and international journals, in addition to a number of books, policy papers, working papers, discussion papers etc.

Dr. Birthal is a Fellow of the National Academy of Agricultural Sciences (NAAS), and has also been conferred Recognition Award (Social Sciences) by it. He is a recipient of National Fellowship and Young Scientist Award from the Indian Council of Agricultural Research; DK Desai Prize (thrice) from the Indian Society of Agricultural Economics; and RT Doshi Award (thrice) from the Agricultural Economics Research Association (India) for his outstanding contributions in the field of agricultural economics. Dr. Birthal serves on Editorial Boards of many national and international journals, and committees of the central and state governments.

### **Recent Publications**

#### **Journal articles**

##### **International journals**

- Paul R.K. and **P.S. Birthal**. 2016. Investigating rainfall trends over India using the wavelet technique. *Journal of Water and Climate Change*, DOI: **10.2166/wcc.2015.079**
- Chen, Kevin, P.K. Joshi Enjiang Cheng and **P.S. Birthal**. 2015. Innovations in financing of agri-food value chains in China and India: Lessons and policies for inclusive financing. *China Agricultural Economic Review* 7(4):1-27.
- Birthal, P.S.**, D.S. Negi, Md. Tajuddin Khan and S. Agarwal. 2015. Is Indian agriculture becoming resilient to droughts? *Food Policy* 56(2015): 1-12.
- Birthal, P.S.**, D. Roy and D.S. Negi. 2015. Assessing the impact of crop diversification on farm poverty in India. *World Development*, 72:70-92.
- Birthal, P.S.**, S. Kumar, D.S. Negi and D. Roy. 2015. The impact of information on returns from farming: Evidence from a nationally representative farm survey in India. *Agricultural Economics* 46: 1-13
- Birthal, P.S.**, Devesh Roy, Md. Tajuddin Khan and D.S. Negi. 2015. Farmers' preference for farming? Evidence from a nationally representative farm survey in India. *The Developing Economies* 53(2): 122-134.
- Paul, R.K., **P.S. Birthal** and A. Khokhar. 2014. Structural breaks in mean temperature over agroclimatic zones in India. *The Scientific World Journal*, Vol 2014, pp. 1-9. doi:10.1155/2014/434325.

- Birthal, P.S.,** P.K. Joshi, D. Roy, and A. Thorat. 2013. Diversification in Indian agriculture: The Role of Smallholders. *Canadian Journal of Agricultural Economics* 61: 61-91.
- Pandey, L. P Parthasarathy Rao, **P.S. Birthal**, M.C.S. Bantilan and Hans Binswanger. 2012. Supply response and investment in agriculture in Andhra Pradesh. *Asian Journal of Agriculture and Development* 9(2):31-46.
- Birthal, P.S.,** T.T. Minh, N. T. Chinh, Đào The Anh, S.N. Nigam, P.T. Vuong, N T. Luong and D.H. Tham. 2011. Potential benefits from the adoption of new groundnut varieties in northern Vietnam: An ex ante assessment. *Outlook on Agriculture* 40(4): 351-57.
- Birthal, P.S.,** Harvinder Singh and S Kumar. 2011. Agriculture, economic growth and regional disparities in India. *Journal of International Development*, 23:119-131.
- Elumalai, K, and **P.S. Birthal**. 2010. Effect of trade liberalization on the Efficiency of Indian Dairy Industry. *Journal of International and Area Studies*, 17(1): 1-15.
- Birthal, P.S.** and P.K. Joshi. 2009. Efficiency and equity in contract farming: Evidence from a case study of dairying in India. *Quarterly Journal of International Agriculture* 48(4): 363-378.
- Ramaswami, B., **P.S. Birthal** and P.K. Joshi. 2009. Grower heterogeneity and the gains from contract farming: the case of Indian poultry. *India Growth and Development Review* 2(1): 56-74.
- Birthal P.S.** and P.K. Joshi. 2007. Institutional innovations for improving smallholder participation in high-value Agriculture: a case of fruit and vegetable growers' associations. *Quarterly Journal of International Agriculture* 46(1): 49-68.
- Parthasarathy Rao P., **P.S. Birthal**, B.V.S. Reddy, K.N. Rai and S. Ramesh. 2006. Diagnostics of sorghum and pearl millet grains-based nutrition in India. *International Sorghum and Millets Newsletter* No. 47: 93-96.

#### National journals

- Kishore, A., **P.S. Birthal**, P.K. Joshi, Tushaar Shah and A. Saini. 2016. Patterns and drivers of dairy development in India: Insights from analysis of household and district-level data. *Agricultural Economics Research Review* 29(1): 1-14.
- Jumrani, J., and **P.S. Birthal**. 2015. Livestock, women and child nutrition in rural India. *Agricultural Economics Research Review*, 28(2): 223–246.
- Paul, R.K., **P.S. Birthal**, A.K. Paul and B. Gurung. 2015. Temperature trends in different agro-climatic zones in India. *Mausam* 66(4):841-46.
- Birthal, P.S. 2015.** Livestock marketing and supply chain management of livestock products-Summary of group discussion . *Indian Journal of Agricultural Economics* 70(1): 106-108.
- Birthal, P.S.,** D.S. Negi, Shiv Kumar, S. Agarwal, A. Suresh and Md. Tajuddin Khan. 2014. How sensitive is Indian agriculture to climate change? *Indian Journal of Agricultural Economics*, vol. 69(4): 474-487.
- Birthal, P.S. 2014.** Rapporteur's report on Livestock marketing and supply chain management of livestock products, *Indian Journal of Agricultural Economics* 69(3): 432-437.
- Birthal, P.S.,** Md. Tajuddin Khan, D.S. Negi. And S. Agarwal. 2014. Impact of climate change on yields of major food crops in India: Implications for food security. *Agricultural Economics Research Review* 27(2): 145--155.
- Birthal, P.S.,** D. S. Negi, A. K. Jha and Dhiraj Singh. 2014. Income sources of farm households in India: Determinants, distributional consequences and policy Implications. *Agricultural Economics Research Review*, 27(1):
- Birthal, P.S.** 2013. Frontier technologies for agricultural development. *Indian Journal of Agricultural Economics* 68(1):20-38.
- Dikshit, A.K. and **P.S. Birthal**. 2013. Positive environmental externalities of livestock in mixed farming systems of India. *Agricultural Economics Research Review* 26(1): 21-30.
- Birthal, P.S.,** S.N. Nigam, A.V. Narayanan and K.A. Kareem. 2012. Potential economic benefits from adoption of drought-tolerant groundnut in India. *Agricultural Economics Research Review* 25(1):1-14.
- Birthal, P.S.** and D.S. Negi. 2012. Livestock for higher, sustainable and inclusive agricultural growth. *Economic and Political Weekly* 47 (26/27): 89-99.

- Birthal, P.S.** and V.K. Taneja. 2012. Operationalizing the pro-poor potential of livestock: Issues and strategies. *Indian Journal of Animal Sciences* 82(5): 441-447.
- Kumar, S., **P.S. Birthal** and K.R.Chuadhray. 2011. Integration of food markets in India. *Indian Journal of Animal Sciences* 81(5): 507-11.
- Dikshit, A.K., and **P.S. Birthal**. 2010. Environmental Value of Draught Animals: Saving of Fossil-fuel and Prevention of Greenhouse Gas Emission. *Agricultural Economics Research Review* 23(2): 227-232.
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- Dikshit, A.K. and **P.S. Birthal**. 2010. Environmental value of dung in mixed crop-livestock systems. *Indian Journal of Animal Sciences* 80(7): 679-682.
- Parthasarathy Rao, P. and **P.S. Birthal**. 2009. Marketing of agricultural produce in rainfed regions of India: Emerging scenario. *Indian Journal of Agricultural Marketing* 23(3): 125-139.
- Birthal, P.S.**, A.K. Jha, Marites M. Tiongco and Clare Narrod. 2009. Farm-level impacts of vertical coordination of the food supply chain: Evidence from contract farming of milk in India. *Indian Journal of Agricultural Economics*, 64(3):.
- Kumar, P., P.K. Joshi and **P.S. Birthal**. 2009. Demand projections for foodgrains in India. *Agricultural Economics Research Review* 22(2): 237-247.
- Adhiguru, P., **P.S. Birthal** and B. G. Kumar. 2009. Strengthening pluralistic agricultural information delivery system in India. *Agricultural Economics Research Review* 22(1): 71-79.
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- Birthal, P.S.** 2008. Linking smallholder livestock producers to markets: Issues and approaches. *Indian Journal of Agricultural Economics* 63(1):19-37.
- Birthal, P.S.** A. Kumar and T.N. Datta. 2008. Trading in livestock and livestock products. *Indian Journal of Agricultural Economics* 63(1): 58-63.
- Birthal, P.S.**, A.K. Jha and H. Singh. 2007. High-value agriculture and linking farmers to markets. *Agricultural Economics Research Review* 20: 425-440.
- Jha, A.K. and **P.S. Birthal**. 2007. Promoting growth in livestock sector for poverty alleviation. *Indian Farming* 57(4): 50-52.
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- Parthasarathy Rao P., **P.S. Birthal** and P.K. Joshi. 2006. Diversification towards high-value agriculture: Role of urbanization and infrastructure. *Economic and Political Weekly* 41 (26):2747-2753.
- Taneja, V.K. and **P.S. Birthal**. 2005. Smallholder dairying in India: Experiences in and development prospects. *Indian Journal of Animal Sciences* 75: 1020-1026.
- Birthal P.S.** and A.K. Jha. 2005. Emerging trends in India's livestock economy: Implications for development policy. *Indian Journal of Animal Sciences* 75: 1227-1232.
- Parthasarathy Rao, P., and **P.S. Birthal**. 2005. Raising livestock productivity in crop-livestock systems in India: Challenges and implications for research. *Indian Journal of Animal Sciences* 75: 1233-1240.
- Parthasarathy Rao P. and **P.S. Birthal**. 2005. Harnessing the potential of livestock in mixed farming system in India. *Artha Vijnana* 45 (1-2): 78-88.
- Birthal P.S.** and A.K. Jha. 2005. Economic losses due to various constraints in dairy production in India. *Indian Journal of Animal Sciences* 75: 1476-1480.

#### **Books/ Policy Papers/Discussion Papers**

- Birthal, P.S.,** Ramesh Chand, P.K. Joshi, Raka Saxena, P. Rajkhowa, Md. Tajuddin Khan, Md, Arshad Khan and K. R. Chaudhry. 2016. Formal versus Informal- Efficiency, Inclusiveness and Financing Dairy Value Chains in India. Discussion Paper (forth coming). International Food Policy Research Institute, Washington DC, USA
- Birthal, P.S.,** S.Kumar, D.S. Negi and D. Roy. 2015. The impact of information on returns from farming. Policy Paper 29. National Institute of Agricultural Economics and Policy Research, New Delhi.
- Birthal, P.S.,** D. Roy and D.S. Negi. 2015. Agricultural Diversification and Poverty in India. Discussion paper 01446. International Food Policy Research Institute, Washington DC, USA
- Birthal, P.S.,** P.K. Joshi, D.S. Negi and Shaily Agarwal. 2014. Changing sources of growth in Indian agriculture: Implications for regional priorities for accelerating agricultural growth. Discussion paper 01325. International Food Policy Research Institute, Washington DC.
- Acharya, S.S., R. Chand, **P.S. Birthal**, S. Kumar, and D.S. Negi. 2012. Market integration and price transmission in India: A case of rice and wheat with special reference to the world food crisis of 2007/08. Food and Agriculture Organization, Rome, Italy. Available at: (<http://www.fao.org/docrep/016/an034e/an034e00.pdf>)
- Birthal, P.S.,** S.N. Nigam, A. V. Narayanan and K.A. Kareem. 2011. An economic assessment of the potential benefits of breeding for drought tolerance in crops: A case of groundnut in India. Research bulletin no. 25. International Crops Research Institute for the Semi-Arid Tropics, Patancheru 502 324, India.
- Birthal, P.S.,** A.K. Jha, M.M. Tiongco and Clare Narrod. 2008. Improving farm-to-market linkages through contract farming: A case study of smallholder dairying in India. Discussion Paper 00814. International Food Policy Research Institute, Washington DC, USA
- Parthasarathy Rao, P. and **P.S. Birthal**. 2008. Livestock in mixed farming systems in South Asia. International Crops Research Institute for the Semi-Arid Tropics, Patancheru, India; National Centre for Agricultural Economics and Policy Research, New Delhi, India, and International Livestock Research Institute, Nairobi, Kenya
- Birthal P.S.,** P.K. Joshi, D. Roy, A. Thorat. 2007. Diversification in Indian agriculture towards high-value crops: Role of smallholders. Discussion Paper 00727. International Food Policy Research Institute, Washington DC, USA.
- Birthal P.S.,** V.K. Taneja and W. Thorpe (eds.). 2006. Smallholder livestock production in India: Opportunities and challenges. National Centre for Agricultural Economics and Policy Research, New Delhi, India & International Livestock Research Institute, Nairobi, Kenya.
- Joshi P.K., **P.S. Birthal** and N. Minot. 2006. Sources of agricultural growth in India: Role of diversification towards high-value crops. MTID Discussion paper No. 98. International Food Policy Research Institute, Washington DC, USA.
- Joshi P.K., S. Pal, **P.S. Birthal** and M.C.S. Bantilan (eds.). 2005. Impact of agricultural research in India. National Centre for Agricultural Economics and Policy Research, New Delhi, and International Crops Research Institute for the Semi-Arid Tropics, Patancheru, India Pradesh.
- Ramaswami, B., **P.S. Birthal** and P.K. Joshi. 2005. Efficiency and distribution in contract farming: The case of Indian poultry growers. MTID Discussion paper 91. International Food Policy Research Institute, Washington DC, USA.
- Birthal, P.S.,** Joshi, P.K. and Ashok Gulati. 2005. Vertical coordination in high-value food commodities: Implications for smallholders. MTID Discussion Paper 85. International Food Policy Research Institute, Washington D.C.
- Parthasarathy Rao P., **P.S. Birthal** and J. Ndjeunga. 2005. Crop-livestock economies in the semi-arid tropics: Facts, trends and outlook. International Crops Research Institute for the Semi-arid Tropics, Patancheru (India)

### **Policy Briefs**

- Birthal, P.S.,** Digvijay Negi, Md. Tajuddin Khan and Shaily Agarwal. **2015.** Is Indian agriculture becoming resilient to droughts? Evidence from rice production. Policy brief 41, National Institute of Agricultural Economics and Policy Research, New Delhi.

- Chand, R. and **P.S. BIRTHAL**. 2014. Buffer stock norms for foodgrains during twelfth five year plan. Policy brief 39. National Centre for Agricultural Economics and Policy Research, New Delhi.
- BIRTHAL, P.S.**, Digvijay Negi, Md. Tajuddin Khan and Shaily Agarwal. 2015. Is Indian agriculture becoming resilient to droughts? Evidence from rice production. Policy brief 41, National Institute of Agricultural Economics and Policy Research, New Delhi.
- BIRTHAL, P.S.** and P.K. Joshi. 2010. Agriculture and regional disparities in India. Policy brief 32. National Centre for Agricultural Economics and Policy Research, New Delhi.
- BIRTHAL, P.S.** and Shiv Kumar. 2009. Conditions for the success of contract farming in smallholder agriculture? Policy Brief 30, National Centre for Agricultural Economics and Policy Research, New Delhi.
- Beintema, N. P. Adhiguru, **P.S. BIRTHAL** and A.K. Bawa 2008. Public agricultural research investments: India in a global context. Policy brief 27, National Centre for Agricultural Economics and Policy Research, New Delhi
- Parthasarathy Rao P., **P.S. BIRTHAL** and P.K. Joshi. 2006. Sustaining growth in high-value food commodities: Role of urbanization and infrastructure. Policy brief No. 9. Global Theme on Institutions, Markets, Policy and Impact, ICRISAT, Patancheru, India.
- BIRTHAL P.S.** and P.K. Joshi. 2006. High-value agriculture for accelerated and equitable growth. Policy brief 24. National Centre for Agricultural Economics and Policy Research, New Delhi.
- Parthasarathy Rao P. and **P.S. BIRTHAL**. 2006. Crop livestock systems in India: Research and policy implications. Global Theme on Institutions, Markets, Policy and Impact, ICRISAT, Patancheru, India.