CAB ABSTRACTS **HOT TOPIC:**

Climate change and spread of invasive species

The negative consequences of invasive species are far-reaching, both for the environment and the economy. Invasive species are estimated to cost the USA alone more than $120 billion a year, as well as affecting habitats and biodiversity. Climate change brings the potential for invasive species to further increase their range.

CAB Abstracts covers all types of invasive species, and the effects of invasives in both terrestrial and aquatic ecosystems. The global coverage of the database makes it possible to track new introductions throughout the world, not just in developed countries.

CABI's CAB Abstracts database comprehensively covers hot topics that matter

CAB Abstracts sources the world literature to provide the complete picture on invasive species and the impact of climate change including information on:

- **Evaluating invasion risks in a changing climate:** knowledge of the ecological range of species can be used to model how climate change can make new areas suitable for invasion
  Assessing distributions of two invasive species of contrasting habits in future climate.
  Journal of Environmental Management, 2018

- **Evolution of invasives:** rapid changes in climate may promote evolutionary changes in invasive species
  Evolutionary responses to climate change in a range expanding plant.
  Oecologia, 2017

  Climatic niche divergence and habitat suitability of eight alien invasive weeds in China under climate change.
  Ecology and Evolution, 2017

- **Prioritising invasive species research based on potential risk:** by modelling environmental and climatic changes it is possible to forecast which invasive species may be the greatest future threat, and prioritise their management accordingly
  Expansion potential of invasive tree plants in ecoregions under climate change scenarios: an assessment of 54 species at a global scale.
  Scandinavian Journal of Forest Research, 2017

- **Ocean temperature and marine ecosystems:** warming oceans may enable invasive fish to move into new areas
  Impact of seawater temperature on growth and recruitment of invasive fouling species at the global scale.
  Marine Ecology, 2017

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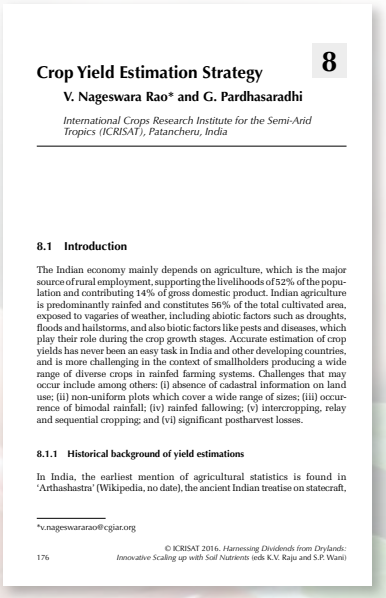

Crop Yield Estimation Strategy 8

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8.1 Introduction

The Indian economy mainly depends on agriculture, which is the major source of rural employment, supporting the livelihoods of 52% of the population and contributing 14% of gross domestic product. Indian agriculture is predominantly rainfed and constitutes 56% of the total cultivated area, exposed to vagaries of weather, including abiotic factors such as droughts, floods and hailstorms, and also biotic factors like pests and diseases, which play their role during the crop growth stages. Accurate estimation of crop yields has never been an easy task in India and other developing countries, and is more challenging in the context of smallholders producing a wide range of diverse crops in rainfed farming systems. Challenges that may occur include among others: (i) absence of cadastral information on land use; (ii) non-uniform plots which cover a wide range of sizes; (iii) occurrence of bimodal rainfall; (iv) rainfed fallowing; (v) intercropping, relay and sequential cropping; and (vi) significant postharvest losses.

8.1.1 Historical background of yield estimations

In India, the earliest mention of agricultural statistics is found in 'Arthashastra' (Wikipedia, no date), the ancient Indian treatise on statecraft,

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