

In this issue

Social Equity

In higher education

2017. Unknown by most higher academic institutions, ICAR, supported by the World Bank, initiated the National Agricultural Higher Education Project. In tune with the affirmative action required by the Constitution, the project examined equity and inclusion in higher education. The equity action plan that emerged is executed via 62 state agricultural universities – disabled-friendly campuses, the development of bridge courses, regular and suitable counselling and mentoring for under-privileged groups, inclusive curricula, ...

A General Article in this issue assesses and evaluates the impact of the National Agricultural Higher Education Project. The social inclusion measures and capacity building for faculty and students, on the one hand, and improving the infrastructure to make it differently abled and female friendly, on the other, have had an impact. This is demonstrable in terms of improvement in enrolment, placements, industry linkages, the emergence of agripreneurs, and the empowerment of the backward sections of the society and women.

The high point of the project is that the experiments in networking Krishi Vigyan Kendras with Anganwadis to address childhood and maternal nutritional deficiencies became so successful that the Bihar government has taken it over as a project and extended it to 18,000 anganwadi centres.

At a time when social equity issues in premier educational institutions of India is making news headlines, the article on **page 539** provides some clues to fix one of the persisting problems in higher education. Moreover, it provides tips to improve the social relevance of institutions of higher education.

Soil-based Intervention

For crop yield and economic returns

Crop yield depends on soil fertility. To feed its growing population, nearly five decades ago, India started subsidising chemical fertilisers. This impacted the environment and alternatives came up – first organic fertilisers and then biofertilisers. This led to the birth of two concepts: balanced nutrient management and integrated management of soil nutrition.

But do we have adequate data to make informed decisions to select between the two soil management practices?

When reviewing a field for evidence-based decision making, PRISMA, or the preferred reporting items for systematic reviews and meta-analysis, need to be used. And that is what the Review Article does in this issue.

For the ensuing recommendations for researchers and policy makers, turn to **page 547**.

Food and Home for Hornbills

Dispersers of seeds for trees

In the Pakke Tiger Reserve, Arunachal Pradesh, hornbills and trees have intimate relationships. Trees provide food and nesting places for the three species of hornbills: the great pied hornbill, the wreathed hornbill and the oriental pied hornbill. All three eat fruits and disperse seeds, ensuring the propagation of trees. The bird–plant mutualistic relationship means that hunting the birds will impact the tree population and the felling of trees will impact the birds. For conservation management, the species–habitat association must be respected.

So a Research Article in this issue assesses the occurrence and relative abundance of different hornbill species in and around the eastern boundary of the Reserve and examines the relation-

ships with the vegetation. Ornithologists, foresters and conservationists are invited to delve into the details delineated on **page 617**.

Changes in Indian Shoreline

During a decade

India has more than 7500 kilometres of shoreline. The shoreline changes dynamically due to waves, tides and the coastal currents. Since nearly a quarter of the Indian population lives in coastal areas, human activities and constructions along the coast also impact the shorelines.

Researchers from the Indian Space Research Organisation defined shorelines as the high tide line and extracted relevant images from the Linear Imaging Self-Scanning Sensor IV aboard Resourcesat-1 and 2, corresponding to 2004–06 and 2014–16. Images with a spatial resolution of 5.8 metres along with the Survey of India topo-grid at a 1 : 25,000 scale were used to prepare shoreline change maps using the digital database. The entire Indian coast was captured in 618 map grids.

The Research Article will take you on a journey through the Indian coastline, explaining the erosion and accretion there. The rocky coastal stretches keep the western coast more stable than the deltaic coastal environment more common on the east coast, say the researchers.

About 15% of the Indian shoreline is eroding. About 3680 hectares of the coastal land area have been lost to erosion. However, due to the accretion of a larger area elsewhere, India has gained 362 hectares from the sea. The article on **page 578** also points out some considerations needed before decisions to make infrastructure encroachments into the sea.

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