

In this issue

Regeneration *in vitro* of an endangered banana cultivar

Rajeli, an economically valuable Indian banana, is used for making Sukeli (dried bananas) of superior quality. Sukeli-making is a traditional small-scale business in the Vasai-Virar region of the Maharashtra state and the farmers opine that desired quality can be achieved only from Rajeli. Presently this cultivar is under the threat of extinction due to fungal and viral diseases, and hence there is a greater need for its conservation. The development of *in vitro* regeneration system is a prerequisite for studies on conservation and genetic improvement. In this regard, Kulkarni *et al.* (page 842) have identified the cultivar and developed protocols for *in vitro* regeneration via shoot-tip culturing and somatic embryogenesis.

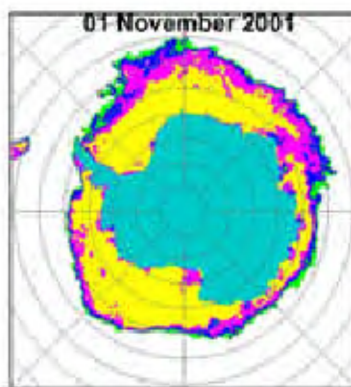


Conceptually, bananas have been considered suitable for the expression of therapeutic proteins, however, a short post-harvest shelf life could be a constraint in practically launching transgenic bananas as edible vaccines. Rajeli seems to be an ideal system from both these points of

view since the therapeutic proteins can be specifically expressed in maturing bananas and shelved for long in the dried form. Such a facility of extended storage either in the dried form or via any other suitable method such as banana juice could benefit researchers and manufacturers for assaying, processing and distributing the therapeutic proteins to remote destinations at a convenient time.

Antarctic sea ice mapping for climatic change study

The mapping and monitoring of the sea ice variability in the polar regions is of prime importance for global climate modelling. With temperatures increasing in parts of Antarctica in recent years, melt waters are penetrating deeper into the ice crevices. Sreenivasan and Majumdar (page 851) have studied sea ice mapping surrounding Antarctica during its depletion phase (November 2001 to January 2002) using Special Sensor Microwave Imager (SSM/I) passive micro



wave data. The overall extents under all ice concentration categories during different months over the study period have decreased in the order of 1 to 3 million

km² in comparison to the sea ice concentration categories during 1978–1987 period. The thermal conductivity of snow is about an order of magnitude less than the sea ice. Hence the presence of small amount of snow on sea ice can greatly affect the heat flux between the sea surface and atmosphere. Depletion in snow depths over sea ice (from 1988–94 to 2001–02) could be observed particularly in December, though not much change has been observed in November and January. These changes (shrinking ice covers/depletion in sea ice concentration) can partially be attributed to regional phenomena like global warming.

Quadrature method for computing nonlinear source term

Prabhakar and Pandurangan (page 812) present an accurate method using composite Gauss–Legendre N-point quadrature formula for solving the nonlinear wave–wave interaction source term in deep waters. This method employs a polar grid in the wavenumber space with a constant geometric ratio λ and uses the scaling relation for the transfer integral. The accuracy of the method can be tested for different λ s by increasing N . This increase in λ will help in calculating the nonlinear source term at less number of frequency points, resulting in reduced computation time. The authors also included the procedure for obtaining the nonlinear results at more number of frequency points. A comparison study of 1-D nonlinear source term $S_{nl}(f)$ with results of exact methods, indicate that the present results are comparable and qualitatively in good agreement with Webb–Resio–Tracy (WRT) method inspite of slight differences at higher frequencies. The method considers possibilities that are not explored in WRT method.