



DYACARE®





Ortho silicic acid plant nutrition and protection

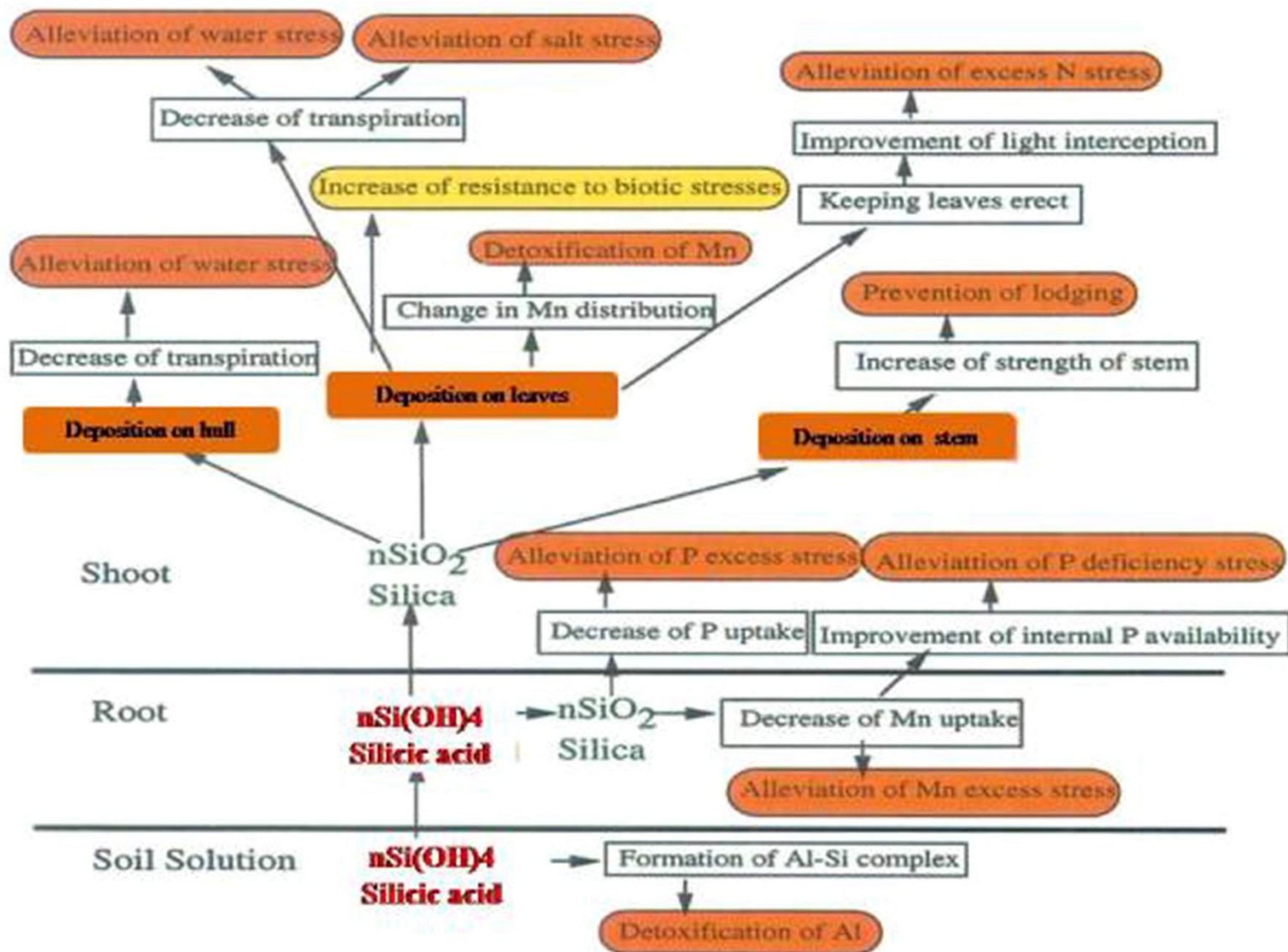
Ortho silicic acid is recognised for its benefits within plant nutrition and structural development. It helps to reinforce plant cell walls by forming solid amorphous, hydrated silica gell between the cuticle and cell wall, and between the cell membrane and cell wall, creating stronger plants with greater tolerance toward drought, heavy metals, pests and diseases.

As ortho silicic acid accumulates within cell walls it quickly hardens to provide structural support. The xylem and phloem are also strengthened and expanded to enable higher sap pressures, enabling important nutrients like calcium to move extensively throughout the plant. With the provision of improved osmoregulation, ortho silicic acid reduces stress from cold, heat, drought and environmental issues.



DYASIL-OSA liquid ortho silicic acid is recognised for its benefits within plant nutrition and structural development.

Ortho silicic acid provides a range of agronomic benefits within the soil around the root zone, and also forms beneficial complexes within the soil solution.





Agriculture and horticulture

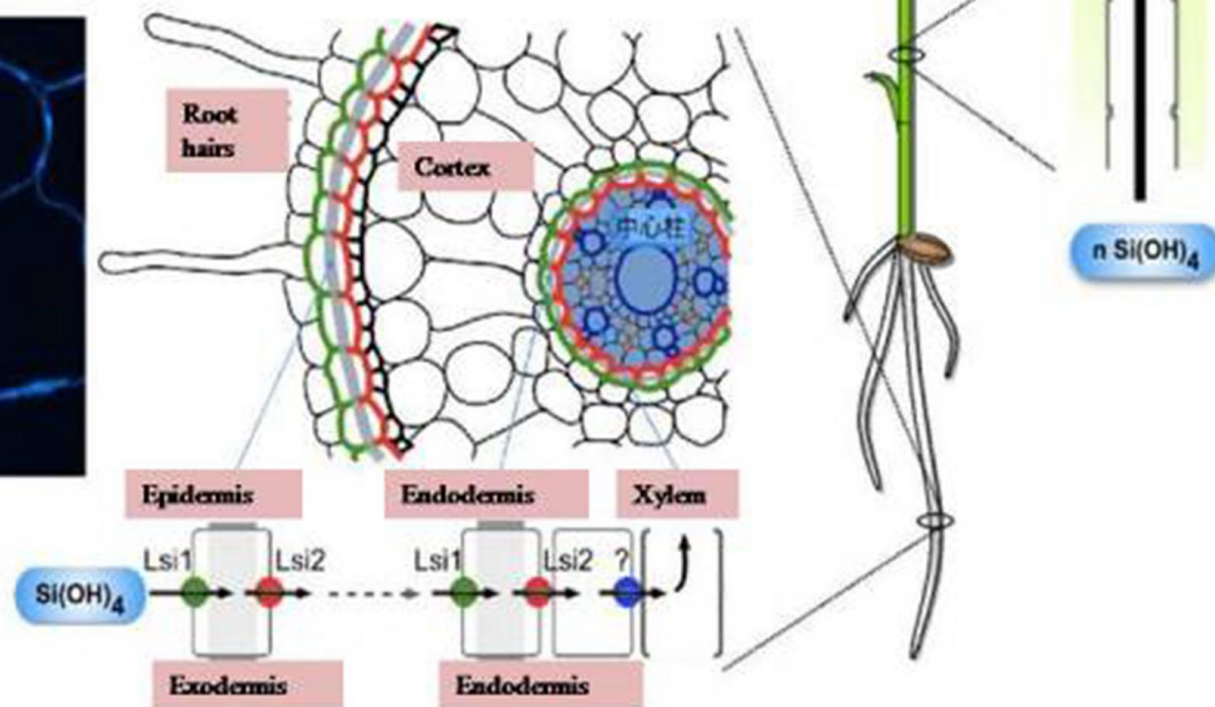
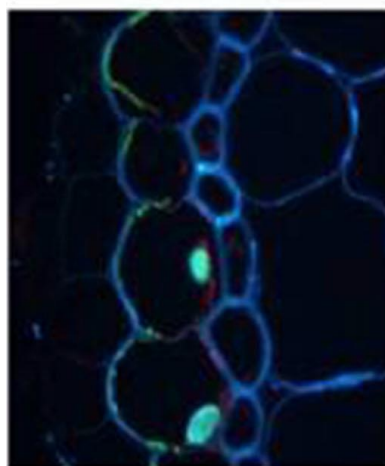
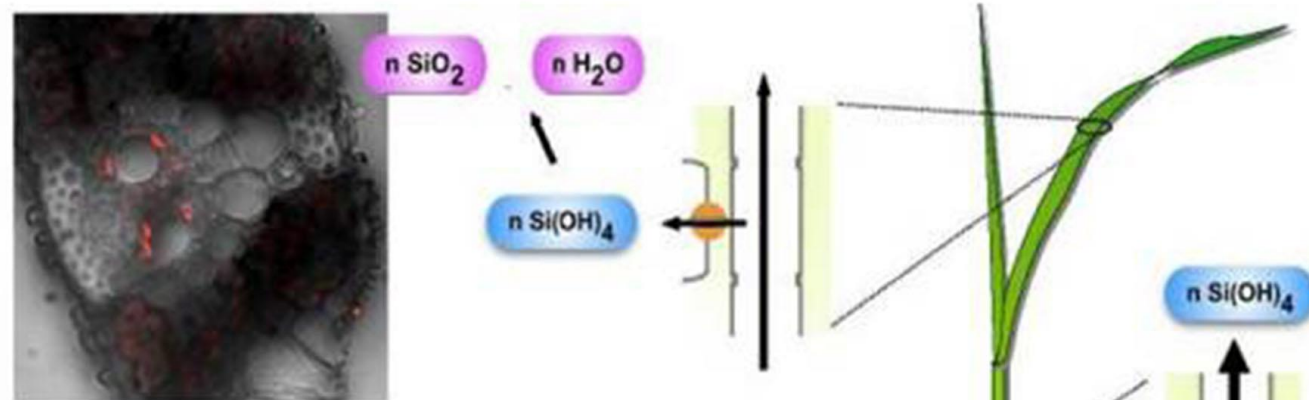
- Stronger stalks and stems for reduced risk of lodging
- Improved photosynthesis through extended leaf and chlorophyll life
- Reduced transpiration, heat and drought stress
- Greater resistance to cell penetration by pests, fungi and mildew



DYASIL-OSA improves the physical functionality of cells throughout the plant.

Si in plants is found to alleviate many biotic and abiotic stresses.

It does not form a constituent of any cellular component but is primarily deposited on the walls of the epidermis and vascular tissues conferring strength, rigidity and resistance to pests and diseases.



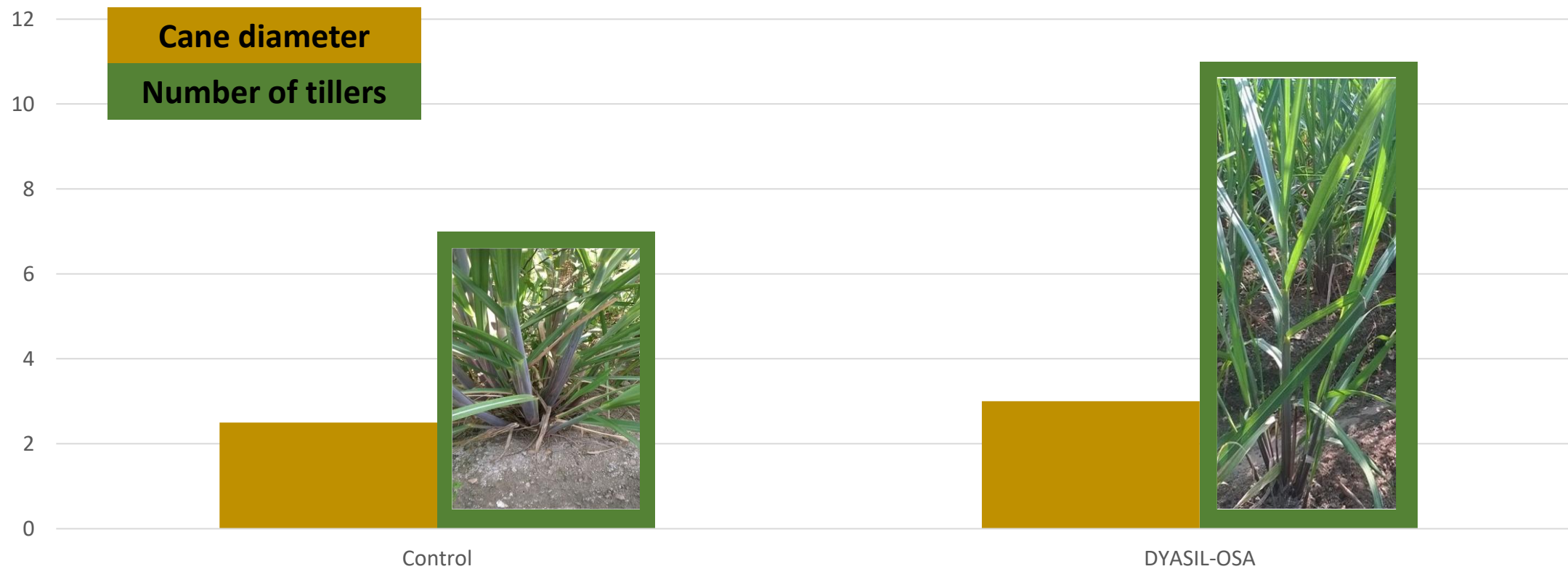


Fruit, vegetables and flowers

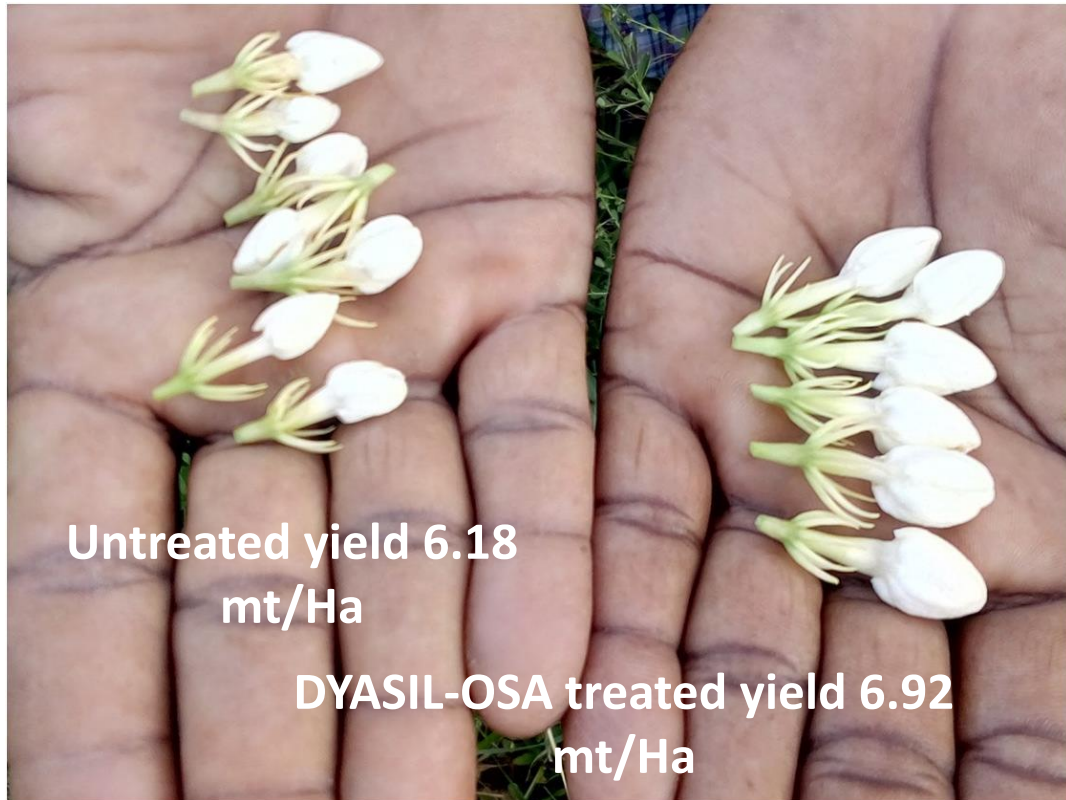
- Improved firmness and colour of flowers
- Helps resistance to frost, fungi, pests and environmental stresses
- More fruit remains on the plant until maturity building sugars for higher Brix values and improved taste
- Reduction in skin splitting shape distortion of fruits and tubers, while also providing extended shelf life



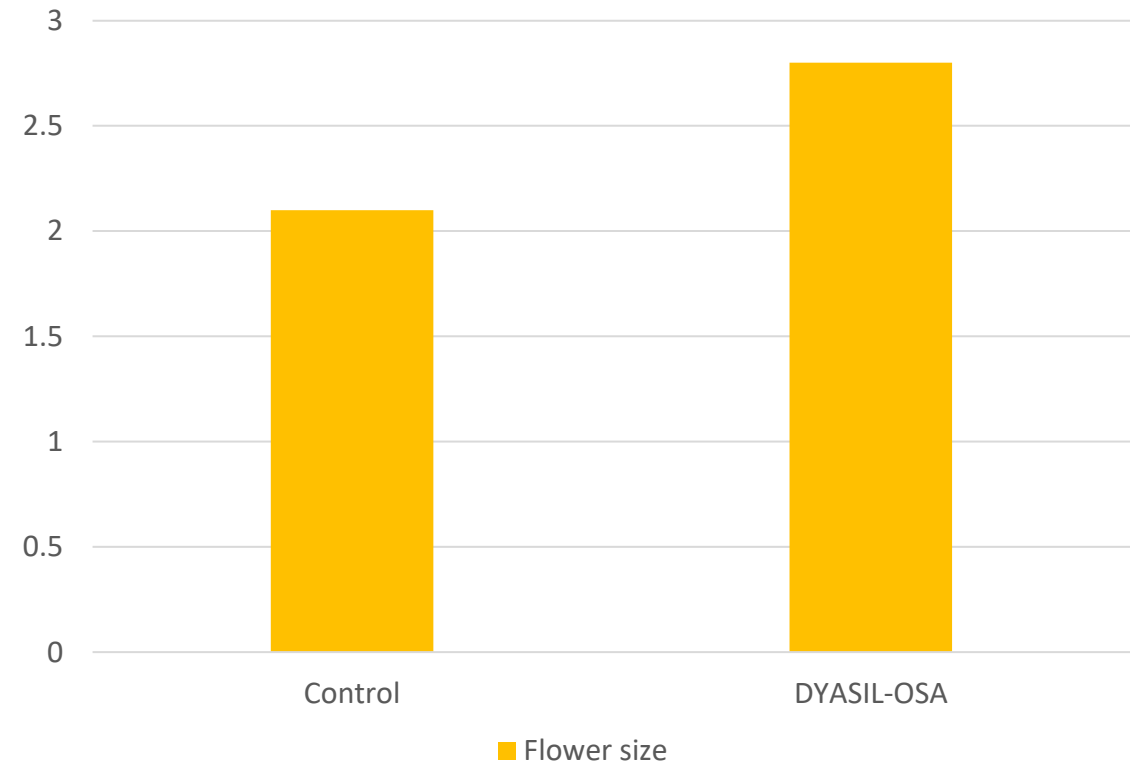
Sugarcane Trial



Independent trial - December 2018 -Viggi Agro Products, Namakkal, Tamil Nadu, India



Jasmine



Independent trial - Ecogreen Foundation, Namakkal, Tamil Nadu, India October-December 2018



Unique highly stabilized formulation of Ortho silicic acid

Molecular Formula H_4O_4Si

Molecular weight 96.11 g/mol

CAS Number 10193-36-9 (62647-18-1)

- Orthosilicic acid (H_4SiO_4), Minimum : 3.0%
- Plant available silicon, Minimum 0.9 %
- Colour Yellow
- 100 % solubility in water
- pH (1% solution in distilled water) : 1.1-2.2
- Specific gravity (g/m) : 1.07-1.15
- Sodium 0.10 maximum (as Na) per cent by weight,



Root watering and drip irrigation

- 400 ml in 500 litres each watering

Foliar application

- 200 ml/ha in 200 litres – 500 litres water
- Apply at 7 - 14 day intervals during stem elongation, flowering and early fruit/tuber/seed formation.

Application on amenity grasses

- 100 ml/M₂ applied to greens, tees & pitches

- The anomaly of silicon in plant biology; Epstein E.; Department of Land, Air and Water Resources, Soils, and Biogeochemistry, University of California, Davis, CA 95616-8627; september15, 1993
- Benefits of plant silicon for crops: a review; Guntzer et al.; INRA & Springer Science +Business Media; published online 30 June2011
- Uptake system of silicon in different plant species; Mitani et al.; Faculty of Agriculture, Kagawa University, Ikenobe2393, Kagawa, Japan; accepted21 January2005
- Role of silicon in enhancing the resistance of plants to biotic and abiotic stresses; Jiang Feng Ma; Soil Science and Plant Nutrition, 50:1, 11-18, 2004

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