SCIENCE NEVS®

The Weekly Newsmagazine of Science

Science Service Publication Volume 144, No. 12, September 18, 1993

Alfred Scott McLaren Publisher
Patrick Young Editor
Laurie Jackson Managing
Vaughan, Editors

Vaughan, Blair Burns Potter Janice Rickerich

Janice Rickerich Production/Design Director
Greg W. Pearson Associate Editor
Janet Raloff Senior Editor Environment/Policy

Astronomy

Behavioral Sciences

Ron Cowen Bruce Bower Richard Lipkin

Richard Lipkin

Richard Monastersky
Kathy A. Fackelmann, Elizabeth Pennisi
Ivars Peterson
Larry Norland
Gabrielle Strobel
Cait Anthony

Chemistry/
Materials Science
Earth Sciences/
Biomedicine
Biomedicine
Mathematics/Physics
Editorial Assistant
Science Writer Intern
Cait Anthony

Books/Resource Man

Gabrielle Strobel Science Writer Intern
Cait Anthony Books/Resource Manager
Donald R. Harless Advertising/Business
Manager

SCIENCE NEWS (ISSN 0036-8423) is published weekly on Saturday, except the last week in December, for \$39 50 for 1 year or \$68.00 for 2 years (foreign postage \$6.00 additional per year) by Science Service, Inc., 1719 N Street, N.W., Washington, DC 20036. Second-class postage paid at Washington, DC, and additional mailing office. POSTMASTER: Send address changes to Science News, PO. Box 1925, Marion, OH 43305. Change of address: Four to six weeks' notice is required — old and new addresses, including zip codes, must be provided.

Copyright © 1993 by Science Service, Inc. Title registered as trademark U.S. and Canadian Patent Offices. Printed in U.S.A.

Editorial and Business Offices: 1719 N St., N.W., Washington, DC 20036 (202-785-2255)

Republication of any portion of SCIENCE News without written permission of the publisher is prohibited.

Subscription Department: PO. Box 1925, Marion, OH 43305 For new subscriptions only, call 1-800-247-2160. For customer service, call 1-800-347-6969.

This Week

180 Finding Riddles of Physical Uncertainty

180 Greenhouse gas ebbs in time

Tamoxifen's maker publishes cancer data
 Visual skills show two-pronged development

High-tech gene therapy to target HIV
Polymer chains: Like snakes, they wriggle
Vitamin pills reduce cancer risk in China
Finding the origins of the X-ray sky

Research Notes

188 Astronomy
188 Behavior
189 Biomedicine
191 Climate
191 Physics

Articles

184 Sudden Recall

Cover: A fierce debate has emerged among researchers and clinicians regarding adults who say they have recovered long-buried memories of childhood sexual abuse. One side accepts most such cases as true reflections of widespread sexual abuse of children. An opposing camp asserts that the vagaries of memory render these claims suspect unless corroborating evidence turns up. (Illustration: Whitney Sherman)



Departments

178 Books 179 Letters

Science Service, which publishes SCIENCE NEWS, is a nonprofit corporation founded in 1921. It gratefully accepts tax-deductible contributions and bequests to assist its efforts to increase the public understanding of science, with special emphasis on young people. More recently, it has included in its mission increasing scientific literacy among members of underrepresented groups. Through its Youth Programs it administers the International Science and Engineering Fair, the Science Talent Search for the Westinghouse Science Scholarships, and publishes and distributes the Directory of Student Science Training Programs for Precollege Students.

Board of Trustees — Chairman, Glenn T. Seaborg; Vice Chairman, Gerald F. Tape; Secretary, David A. Goslin; Treasurer, Willis Harlow Shapley; Joseph W. Berg Jr.; Robert W. Fri; J. David Hann; Dudley Herschbach; Shirley M. Malcom; Elena O. Nightingale; Ben Patrusky; Peter H. Raven; H. Guyford Stever; Sanford J. Ungar; Deborah P. Wolfe. Honorary Trustees — Edward Bliss Jr.; Bowen C. Dees; O.W. Riegel; John Troan. President: Alfred Scott McLaren; Vice President and Business Manager: Donald R. Harless.

Letters

Competing claims for composting

Elin Larson's letter suggesting that compost be delivered via irrigation systems ("Avoiding well-tainting fertilizers," SN: 7/10/93, p.19) fails to recognize the primary benefit of compost as a soil amendment: It improves the structure of the soil, permitting it to absorb and hold moisture. Modern farming practices tend to compact soils, often fail to restore organic materials taken from the land, and through frequent over-irrigation, leach nutrients beyond the root zone and into our water supplies.

"Compost tea" may be useful in the greenhouse, but in the field it would be little better than readily soluble synthetic fertilizers. Further, those of us who have maintained open canals or pumping systems cringe at the thought of transporting active chemicals in closed systems or fertilizing algae and other plants already a nuisance in open systems.

As for John P. Kelly's comment about distribution ("Composting: A costly cure?" SN: 4/10/93, p.235), there are at least two solutions.

First, every farm should compost its own waste organic material. Second, if compost is recognized as the valuable commodity it is, then either finished compost or waste suitable for composting should find ready transport.

If we recognize our once-rich soils as the waning asset they are, and if we account for the cost of dumping compostable organic waste in landfills, then the economic benefits of restoring our farmland through composting become apparent.

Richard Yarnell Portland, Ore.

Who will guarantee the contents of this compost? Urban lawns receive numerous types of herbicides to kill crabgrass, dandelions, and other weeds, but the residual chemicals are not destroyed by the composting process. These same chemicals will kill or retard the growth of the plants the farmer is trying to produce.

Another consideration is the volume of compost and its method of application. Most granular fertilizer is applied at the rate of 100

pounds per acre. Compost would be applied at 1,000 times that rate. If the compost were put down after planting, many seeds would be too deep for the plants to grow. If compost were spread before planting, seeds would be planted in the compost alone and, because of the low water retention of most compost, many seeds would not germinate.

The only solution would be to work the compost into the soil. In order to qualify for federal subsidies, minimum tillage or no-till practices must be observed (that is, farmers are no longer allowed to plow their fields). Consequently, regulations must be revised before farmers will consider using compost.

Andrew C. Baumert Omaha, Neb.

Detrimental concentrations of nutrients in the environment (or in wells) can just as readily originate from manure, sludge, barnyard runoff, or a horde of migrating animals as from "chemical" fertilizer.

Marvin E. Kahn Germantown, Md.

SEPTEMBER 18, 1993 179