

2006
CALL FOR ABSTRACTS
DUE DATE: AUGUST 18, 2006

Interested parties are invited to give oral and poster presentations at the 6th New Crop Symposium: Creating Markets for Economic Development of New Crops and New Uses. This symposium, sponsored by the *AAIC* and the Purdue University Center for New Crops and Plant Products, will be held 14-18 October 2006 in San Diego, California.

Abstracts (printed copy of the text and diskette or CD-ROM copy in Word™ or WordPerfect™ format) are to be submitted to:

Dr. David A. Dierig
USDA-ARS
US Arid Land Agricultural Research Center
21881 N Cardon Ln
Maricopa, AZ 85239
USA
Tel: (voice) +1 520-316-6360
(fax) +1 520-316-6330
E-mail: ddierig@uswcl.ars.ag.gov

In your letter of transmittal, please indicate the method of presentation (oral or poster) and the section (Oilseeds; General Crops; Natural Rubber and Resins; Meadowfoam; Medicinal, Aromatic, and Nutraceutical; Ornamentals; Vegetables; or Fruits and Nuts) in which you prefer your abstract to be considered for presentation. Space and time constraints may limit the total number of oral presentations. Abstracts will be reviewed and may be revised for grammar, clarity, and format.

FORMAT: One page only [letter-size 8½ × 11 in (21.59 × 27.94 cm) with 1-in (2.54-cm) margins at top, bottom, and sides] with Times New Roman or similar font in 12-point size. Files should be saved in Word or Word Perfect format. Electronic files can be transmitted as e-mail attachments to Dr. David A. Dierig at the above e-mail address. A hard copy is required in case files transmitted by e-mail are lost or corrupted.

TITLE: The title should be all capital letters and centered on the page.

AUTHOR(s): Author names should be centered under the title with one blank line between the author names and the title. The presenting author's name should be underlined.

AFFILIATION(s) and ADDRESS(es): Skip one line after author name(s) before affiliation(s) and address(es). Use superscript numbers to designate authors that have different affiliations or addresses. Do not include position descriptions or titles of author(s).

BODY OF ABSTRACT: Skip one line after affiliations and addresses before beginning text. Text should be single-spaced and left justified. Indent the first sentence of each paragraph. No figures, tables, references, or acknowledgments are permitted.

ORGANIZATION: The abstract should include the following:

1. A rationale or justification for the study
2. The objectives of the study
3. Brief materials and methods used
4. Results and discussion
5. Conclusion

CONTACT: Skip one line after last sentence of body of abstract. Include name of corresponding author, complete postal address, telephone number, and E-mail address.

Abstracts will be reviewed and may be revised for grammar and clarity. A sample abstract follows:

SAMPLE ABSTRACT

GUAYULE AS A WOOD PRESERVATIVE

F.S. Nakayama¹, S.H. Vinyard¹, P. Chow², D.S. Bajwa²,
J.A. Youngquist³, J.H. Muehl³, and A.M. Krzysik³

¹ U.S. Water Conservation Laboratory, USDA-ARS, Phoenix, AZ 85040, USA

² Natural Resources and Environmental Sciences, University of Illinois, Urbana, IL, USA

³ U.S. Forest Products Laboratory, USDA-FS, Madison, WI 53705, USA

Rationale

Conventional chemically-derived preservatives used to protect wood from insect and microbial damages are presently of major concern to human health and the environment. Reliable replacements must be found. Resinous extracts obtained from the guayule plant (*Parthenium argentatum*, Gray) when impregnated into wood have been demonstrated to protect the wood against both termite and fungal attacks. The large amounts of waste wood material or bagasse resulting from the production of hypoallergenic rubber latex from guayule could be a source of natural biocontrol agents.

Objective

Method

The objective of this preliminary study was to determine whether wood composites made from guayule bagasse, and also, wood treated with the resinous material extracted from the bagasse are resistant to termite and wood-rot damage.

Bagasse was obtained by extracting latex from ground guayule shrub using a water-based extraction procedure. The composite boards were prepared by mixing the bagasse with a plastic adhesive and molding this mixture under heat and pressure. Resinous material in the bagasse and whole plant was extracted with acetone or an azeotropic mixture of acetone and hexane. The extract was impregnated into soft yellow pine wood blocks.

Results & Discussion

The prepared composite board, resin-treated wood blocks, and plant stem were exposed to Eastern subterranean termites and wood-rot fungi in the laboratory. ASTM test procedures were used to evaluate the resistance of the fabricated wood products against the wood damaging organisms.

Additional adhesives were necessary to fabricate guayule composite boards that had adequate physical properties even though the plant had some natural adhesives. The composite board, resin-impregnated wood, and plant stem all exhibited resistance to termite and wood fungal attack. The resistance of the resin-treated wood depended upon the amount of resin contained in the wood.

Conclusion

Guayule's drought tolerance and biocontrol properties in protecting wood will help conserve water and forest resources and improve its commercialization as an alternative crop.

Contact: F.S. Nakayama, U.S. Water Conservation Laboratory, 4331 East Broadway Road, Phoenix, AZ 85040, USA. Tel: 602-437-1702 (X255). E-mail: fnakayama@uswcl.ars.ag.gov.