Arbuscular Mycorrhizas:

Producing and Applying Arbuscular Mycorrhizal Inoculum

by Mitiku Habte and N.W. Osorio
Department of Tropical Plant and Soil Sciences
College of Tropical Agriculture and Human Resources
University of Hawaii at Manoa

This is a simplified laboratory guide to making and using inoculum to ensure that crops are adequately colonized by these useful soil fungi. It will be helpful for those in university research laboratories, agricultural research institutes, and commercial laboratories and other enterprises producing crop inoculants. Extension personnel and agriculturists with some basic laboratory training will find it to be an informative guide to the science and techniques of inoculum production.

Wire-bound to fold flat; color cover; 48 pp.



Contents

Arbuscular mycorrhizal associations
AMF functions
Sources of AMF inoculum
Producing crude inoculum
Producing root inoculum
Producing hydroponic and aeroponic inoculum
Inoculum storage
Amount of inoculum to apply
Evaluating effectiveness of AMF inoculum

Appendixes

Extracting AMF spores from soil or crude inoculum Extracting spores from a crude inoculum and determining their viability A modified Hoagland's solution II for use in AMF inoculum production

Hydroponic production of AMF inoculum
Aeroponic production of AMF inoculum
Detecting and quatifying AMF colonization of roots
Determining the abundance of infective propagules in

crude inoculum and in soil

Determining AMF symbiotic effectiveness by the pinnule technique and similar nondestructive approaches

Determining the P-sorption capacity of soils

Monitoring the symbiotic effectiveness of indigenous

AMF

Table of most probable numbers for use with 10-fold dilutions, five tubes per dilution

	ORDER FORM	ISBN 1-929325-10-X
Individual order: Quantityx \$7.00 Bulk order: (sets of 10 copies)x \$70.00 Shipping and handling: To a U.S. zip code (priority mail): \$3.00 for 1 book; \$5.00 for 2–6 books; \$8.00 for bulk order (10 copies). Outside the USA: for 1 book, \$5.00 by surface, \$9.00 by Global Priority Mail; for bulk order (10 copies), \$25.00 by surface mail, \$35.00 by air parcel post. Please send <i>Arbuscular Mycorrhizas</i> to:		Total for books:
		Total shipping and handling:
		Total amount enclosed:
		Do not send cash; send check or money order only, payable to RCUH , to:
		CTAHR Publications and Information Office 3050 Maile Way, Gilmore Hall 119 Honolulu, HI 96822 USA
Name		Phone (808) 956-7036, fax (808) 956-5966
Company		E-mail: ctahrpub@hawaii.edu Visit our Web site: www2.ctahr.hawaii.edu
Address		—
CityState	Zip	_ TO C /T/A/H/R
Phone E-mail		College of Tropical Agriculture & Human Resources University of Hawaii at Manoa