

## Assoc. Landscape Contractors Slate Convention In Jan.

IMPACT '74, the 12th Annual Meeting and Exhibit of the Associated Landscape Contractors of America, will be held at the Hilton Palacio Del Rio, San Antonio, Texas, January 28 through February 1.

The five day conclave is structured around the various forces impacting the landscaping profession — examples of which are consumerism, unionism, specialization, and diversification.

Highlighting the meeting, according to Ronald Ahlman of Lawrence and Ahlman Landscaping, Dundee, Ill. program chairman, will be an address by Dr. Walt Lewis, environmental scientist from the University of Illinois, and marketing consultant Welde Cox, from a Philadelphia enterprise bearing his name.

Additionally, ALCA's Annual Trade Exhibit, featuring the best of the industry's suppliers and equipment manufacturers, affords delegates an excellent chance to do some comparative shopping.

The opening day of the convention will feature an address: "Creating ECOLibrium" by Dr. Walter H. Lewis of the University of Illinois, an acknowledged authority on construction techniques and contracts, who has some pertinent observations on the economy of ecology.

Panel discussions are also scheduled. Tom Roberts of Thomas Roberts Associates, in Oklahoma City Oklahoma, George Hederhorst of Southern Landscaping in Houston, Texas, Dick Brickman of Theodore Brickman & Associates in Long Grove, Illinois, and Carl McCord of Landscape Design & Construction, Inc. in Dallas, Texas will discuss "Design Services and Landscape Contracting." Then Clarence Davids of Clarence Davids & Sons in Evergreen, Park, Illinois, James Christian of Tri-County Turf in Foster, Ohio, and Terry Jones of Jones Nursery in Grand Rapids, Michigan will share their observations on the Landscape Maintenance business.

An irrigation panel will be conducted by Austin Miller of Sprinkler Irrigation Association in Royal Oak, Michigan, Brad Tolson of Siesta Irrigation & Supply Co. in Tucson, Arizona, and Wally Gunderson's of Gunderson's Inc., in Rapid City, South Dakota.

"Marketing Your Landscape Contracting Business" with Welde Cox of Welde Cox & Associates in Philadelphia, Pennsylvania, starts off the business of Thursday, the 31st. Originating with the problems faced by

architects, Cox has branched out into other marketing problem areas, such as Landscape Contracting, and will advise delegates on how aggressively professional services should be marketed.

The final day of the conference, will be devoted to talks from Owen Peters, president elect of the American Society of Landscape Architects, David Spencer of Spencer & Spencer in Springfield, Illinois, and Norman Gray of Transit Seeding in Mansfield, Massachusetts. The afternoon begins with a Bonding/Banking Workshop with Tom Frost, Chairman of Frost National Bank, in San Antonio, Texas, and ends with a Board of Directors.

## Extruded Soil Blocks Automate Tree Planting

One of the biggest problems of reforestation bare land is the two to three year wait from the time new trees are needed until seedlings are available for planting. A University of Idaho scientist is developing equipment to automate a process enabling trees to be transplanted within four months after a seed is planted.

Walter L. Moden, Jr., associate agricultural engineer, said land deforested by logging, forest fires or mine gas pollutants can be replanted much sooner and at less cost with the new method.

Trees grown in the nursery as bare root stock need two years of nursery growth before they can be transplanted in the forest. Planting expenses must be planned far in advance. Weeds and brush which grow back during that time must be cleared before trees can be planted, increasing costs.

In the new process, a tree seed is planted in an extruded soil container—soil formed into a rectangular block. The seeded container is kept in a greenhouse for two to four months before the seedling and container are transplanted. The soil around the roots of the seedling prevents planting shock and root damage, Moden said.

Because the soil containers have a greater bulk density than the surrounding soil, moisture is retained more readily. Moisture is not lost to the surrounding soil as is the case when peat moss is used around the roots, he said.

Moden explained the equipment he is developing will take a special mixture of soil materials, press it into blocks one inch square and four inches long, insert seeds and place

seeded blocks in a tray for germination and growth in the greenhouse.

Extrusion of the blocks or soil containers is now done by a machine the scientist developed in 1971, but seeding and placing containers in germination trays must be done by hand. Two to three people can extrude and seed about 2,000 containers per day. The automated process, once completed, should produce over 10,000 containers per day using the same number of people, Moden said.

He estimated the cost of the blocks by the process now used to be 1.3 cents each. The automated process would reduce the cost. Nursery-grown trees at the U of I nursery cost 2 to 4 cents each to produce.

Some work has been done in the past with containers of different materials and construction, but none has been totally successful, Moden said. Many have plastic shells which do not decompose and will restrict root development.

The extrusion machine forms soil blocks stable enough to withstand greenhouse watering and handling during transplanting without an outer covering. A hole for the plant taproot to follow is formed during the extrusion process.

Another machine being developed will plant containers with their seedlings at set intervals, the U of I scientist noted. Only one person will be required to drive the tractor. Presently seedlings must be planted by hand. The planting machine can go anywhere a small crawler tractor can pull it.

He noted future project work will include revegetating highway cuts. The process should enable cuts to be planted with grasses or low shrubs which will reduce erosion and improve the appearance of the cuts.

## Paper Mill Wastes Makes Landfill Sandwich

The Earl of Sandwich, the renowned English nobleman who discovered the sandwich, would be proud of Michigan State University's Dr. Orlando B. Andersland.

Dr. Andersland, a professor of civil and sanitary engineering, has taken the good Earl's idea and transformed waste and sludge from paper mills into useful land forms. His concept of a "sandwich" is a layer of sand, a layer of sludge and a load of natural soil on top to weight the layers down. Since nobody likes a soggy sandwich, Andersland figured that the sand layer would drain the water from the sludge. The top soil

would compress the sludge to ensure such drainage.

The system has worked so well that a 25 foot sandwich shrank to 20 feet in height because of the water drainage during the first year. The area retained its stability and equilibrium through the winter snows and spring rains during the second year.

According to the professor, roughly 200 million cubic yards of paper mill sludge are produced annually, with much of it going into landfills throughout the U.S., but with no plans for later use.

He's now preparing a final report on the project for the Environmental Protection Agency, who supported the project along with the National Council of the Paper Industry for Air and Stream Improvement.

The specific design of Dr. Andersland's sand-sludge sandwich had five layers. First came a one-foot base of sand with suitable drainage arrangement, then a 10 foot layer of sludge dumped in by the truckload. On top of this was deposited another one-foot layer of sand, followed by another 10 foot layer of sludge. A final three-foot layer of natural soil capped off the sandwich.

A vertical boundary or dike of natural soil was put around the area to stabilize it until it drained and settled.

When the drainage was complete the lower layer of sludge had shrunk from 10 to 7 feet and the higher layer of sludge had shrunk from 10 to 8 feet, accounting for the total 5 feet of shrinkage in the 25 foot sandwich.

After one year, the supporting dike was removed at an almost vertical angle in order to ensure a "failure." Dr. Andersland wanted to determine whether the planned failure would lead to a general slide of the sand-sludge mass. But no further failure occurred despite snow and rain.

Dr. Andersland sees the method as useful for reclamation of paper mill waste in landfills, for incorporation in recreational terrain such as for golf courses, or sliding or ski hills. "Implications of the project for land conservation are enormous," he said.

"Gravel pits and waste areas are being filled with paper sludge which retains water because of its high organic content, so that the landfills stand useless and basically unchanged for decades. Sludge consists of water, plus solids that are about half cellulose fibers and half clay.

"Compacting the sludge according to carefully engineered procedures permits disposal of large quantities of sludge in each landfill," he said.

"Compacted sludge could be removed and taken to areas where lightweight fill is needed . . . Covering of a soil layer would restore the land to use."

## Toro Irrigation Division To Hold East-West Meetings

The Irrigation Division of the Toro Company will hold two national distributor sales meetings early next year.

Robert E. Landesman, director of marketing for the division, said the

decision was made in line with distributor preferences determined by a survey conducted by district managers.

Distributors in Colorado, Oklahoma, Texas and West Coast states will meet for three days at The Inn, Rancho Bernardo, Calif., Jan. 31-Feb. 2. Distributors from all other states will be at Innisbrook Resort & Golf Club, Tarpon Springs, Fla., Jan. 24-26.

The program for each meeting will be identical: a full day each devoted to service, product application and sales of Toro's irrigation equipment.

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