

AGRITECNOVE INC.

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STATION REPORT / 2000-2001

This last year was very busy for us. Several of the greenhouse projects that were designed last year are now under construction and some were completed this year. We currently have 25 ongoing projects either under design or under construction.

On the containment research greenhouse side, allow us to briefly mention the following which greenhouses were designed by Agritech and are currently under construction:

University of California - Davis, California / Contained Research Facility	A six zone BSL-3 facility with three different suites. Under construction. Estimated completion: early 2002.
USDA SARL / Weslaco, Texas, USA	A BSL-2 insect rearing facility, upgradable to BSL-3, under negative pressure. Opened in late 2000.
University of California - Riverside, California / Insectary and Quarantine Facility	An 11 zone complex, including 4 BSL-1, 5 BSL-2 and 2 BSL-3 zones for insect rearing and research. Facility was commissioned last month and should open in early October 2001.
Agriculture & Agrifood Canada / Lethbridge Research Center, Alberta, Canada	A fairly large research complex with one zone for contained research. Presently under construction, estimated completion circa mid-2002
University of Minnesota - St.Paul, Minnesota, USA / Plant Growth Facility	A new greenhouse complex with BSL-3 containment research facility for insect rearing. Presently under construction, estimated completion: fall of 2002.
USDA ARS APHIS - Beltsville, Maryland, USA / Maximum Security Laboratory and Greenhouse	A BSL-3 Ag highly contained laboratory and 4 zone greenhouse. Will be one of the most secure greenhouse in the US. Under construction, estimated completion: January 2002.
(undisclosed) Pharmaceuticals / California	Evaluation of an existing greenhouse facility to upgrade into a BSL-2 growing range for transgenic corn.
USDA ARS - Hilo, Hawaii / New research station	Still in its early stage, this project will have several contained air conditioned greenhouses. Programming phase completed, design to begin shortly.

Agritechnové also participated this year in the redaction of Virginia Tech's "Containment Guidelines", a publication to summarize the requirements and characteristics of containment greenhouses with respect to transgenic experiments.

The firm was involved this year in the design of several new types of instrumented tools and devices for research, including the following:

Mesocosm Benches: special benches for research on marine plant life and sedimentation (capable of holding up to 175 mm of silt or clay. Simulates tides from tiny to large, fast or slow flowing, for various angles from flat to steep. Units can be set for various depths of temperature controlled water. All of this arranged in cycles based on time and controlled through the greenhouse computer control. Units were designed for the Environmental Research Science Centre of Acadia University in Nova Scotia, Canada. The same greenhouse includes 6 air conditioned zones with environments that can range from pH 2 to pH 7 to simulate moderate to severe acid rain for research.

Another interesting tool are the "*Rhizotron Boxes*" designed for the University of Minnesota. Rhizotrons consists of all aluminum insulated cubes 1.5 m square capable of holding up to 4 cu.m. of soil. A cooling system allows proper control of the soil temperature through circulation of chilled water in a polyethylene coil. Each box has 16 water tight glass tubes going through it to allow the passage of video equipment to monitor the root growth. Units can be set to any height of water table to simulate inundation or dry conditions. Several soil temperature coils can be embedded in the soil to monitor and log temperatures and also to control the operation of the chilled water coil. Current project calls for 12 such rhizotrons with 24 more to be fabricated in the future. Each rhizotron is under full computer control and is set in a 4.5 m high greenhouse to allow for studies involving trees.

Agritechnove also introduced recently input jacks in the equipment typically specified with the computer control system. These jacks are located in each greenhouse zone and allow users to connect any analog sensor having an output of 0-10 mV or 4-20 mA or other directly in the greenhouse. This signal is brought to the computer and is either simply logged or used to trigger the operation of any one of the greenhouse systems or used to turn on or off a computer controlled power outlet on which any electrical piece of equipment is connected. This is what we call flexibility.

Seventeen (17) other projects are currently under design or construction for various Universities throughout Canada and the United States for a total area of more than 20,000 square meter or more than 400 different compartments entirely dedicated to research.

A new web site is scheduled to be brought on-line at the end of October, under www.agritechnove.com. This address will get you to much information on our firm but also a rather extensive list of greenhouse related links constantly updated. You are welcome to visit at your convenience.

This was our last year. No doubt the next one will be even more exciting...

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Agritechnove Inc.