EXAMINING a long-lasting foam that keeps strawberries or other plants 20 degrees warmer on freezing nights are Dr. Harry Braud Jr., left, LSU professor of agricultural engineering, who developed the foam, and Percy Hawthorne, professor of horticulture, LSU Experiment Station project.

Engineers Develop Foam to Give Crops Protection

LSU Project to Protect Plants from Frost

(Baton Rouge, La.) — The next time Jack Frost descends on Louisiana and threatens to inflict heavy losses on agriculture, he may be stopped in his tracks thanks to a new discovery by Louisiana State University agricultural engineers.

The new weapon is a long-lasting foam, which raises temperatures around plants some 20 degrees during unseasonably cold nights. It was developed under the leadership of Dr. Harry J. Braud Jr., professor in the department of agricultural engineering.

Dr. Braud is believed to be the first researcher to formulate a foam that will last long enough to give protection to crops.

The new foam, which can be made to last all night or for several days, represents a major breakthrough, since conventional foams like those used in fire fighting disintegrate rapidly.

Although the LSU Agricultural Experiment Station project is presently concerned with testing the foam with low-growing crops, it holds promise for most any plant, even trees.

Horticulture Professor Percy L. Hawthorne, who assisted in the research, believes an application of the foam around tree trunks could have staved off the wholesale destruction of citrus trees in Louisiana during the abnormally hard winters of 1951 and '62.

Considering the tremendous cost factors involved in the virtual loss of an entire citrus industry for many years, he said such a discovery could well mean savings of millions of dollars to Louisiana and other citrus states.

The protection of large acreages of fruit trees, of course, would require an early warning of freezing weather to permit foam application.

The LSU researchers believe the inexpensive light-weight foam also holds particular promise for tomatoes, sweet peppers, potatoes and sugar cane, which frequently suffer from spring freezes. It may be used to make sure cold snaps do not destroy blossoming flowers of ornamentals.

The LSU researchers say a tractor can be used to apply the foam. The field operation involves a tank, generator and tractor — powered compressor on a platform behind the tractor, and ejecting the foam from two nozzles under the vehicle. Extension bars holding more nozzles can be adapted on each side making possible a multi-row operation in one sweep.

Except for very slight growth inhibition imposed on strawberry plants by the skin-caps remaining several weeks after application, the foam had no adverse effect on the plants or their fruit. Research is now underway to overcome this problem, Dr. Braud said.