

CELLULAR PLASTICS FOR IMPROVING SOILS

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Agricultural research workers have long tried to find materials with a uniform but permanent soil-improvement effect similar to that of humus. It now appears that this goal can be realized by expanded plastics. Styromull gradually improves the structure of heavy soils and composts. Hygromull improves the water retention of light soils.

Styromull is a mixture of 4 to 12 mm white flakes or beads of expanded polystyrene. It is absolutely harmless to plants and does not rot. Each bead or flake consists of a large number of small closed cells filled with air. The expanded plastic drains and aerates the soil and thus loosens it. The loosening effect improves the thermal budget of the soil. More oxygen and higher temperatures promote the growth of organisms in the soil and thus provide a good tilth.

Hygromull is an expanded plastic that also is harmless to plants. It is produced by foaming a condensation product of urea and formaldehyde. The material has a sponge-like structure; i.e., it consists largely of open cells and thus picks up large amounts of water. Hygromull allows rainwater to be stored in light soils and thus reduces watering costs.

The paper describes the use of the two expanded plastics in horticulture and agriculture, and the experience gained in trials and in practice.