

wherever the virus occurs and can be successfully used in breeding programme.

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1. ** Iwanowski, D., *Camthl. Bakt. (etc.)* 5, 1899,

**Original not seen.

Abt. 2, 250.

2. ** Sachchidananda, J., Sansher Singh, Nam Prakash and Varma, S. V., *Phytopath. Z.*, 1973, 2, 88.
3. Nene, Y. L., *Uttar Pradesh Res. Bull.*, No. 4, G. B. Pant Agri. and Tech. Uni. Pantnagar, 1972, p. 191.
4. Khatri, H. L. and Singh, L., *J. Res. PAU., Ludhiana*, 1974, 11, 287.
5. Lima, J. A. A. and Nelson, M. R., *Plant Dis. Rep.*, 1977, 61, 864.

NEWS

MICROBES ARE MORE THAN GERMS

... "Microbes, often studied as disease 'germs,' are not generally considered in context as normal components of ecosystems. For one thing, their ubiquity and density tend to be underestimated. Although the notion of species as borrowed from the animal world is probably invalid for microbes, we are talking about over 200,000 different types of organisms. . . . But recent work by a growing number of scientists who begin to call themselves microbial ecologists . . . is starting to change this picture. Microbial communities, which offer enormous potential for study, have lately been recognized as sources of crucial information about the biosphere, including the atmosphere and ancient sediments. At least some microbial communities are tightly organized and demonstrate phenomena well known in ecology, such as dominant species and succession. Indeed, microbial communi-

ties can provide us with unique live systems that can be used to test general concepts about how natural populations are organized. They occupy little volume and grow rapidly and are thus far more manageable than, for example, forest or desert communities. Furthermore, the complexity of every community is augmented by its underlying, surrounding, and penetrating microbial communities. For these reasons, microbial communities lacking plants and animals are in principle less complex and more amenable to study than communities of larger organisms." [(Lynn Margulis *et al* (Boston U.) in *Bioscience* 36(3): 160-70, Mar. 86, (American Institute of Biological Sciences). Reproduced with permission from Press Digest, *Current Contents*®, No. 20, May 19, 1986, p. 15, (Published by the Institute for Scientific Information®, Philadelphia, PA, USA)].

GROWING REPLACEMENT SKIN

Sheets of skin cells on a dressing are placed in transport chambers ready to be applied to raw wounds at the Birmingham Accident Hospital, which has one of the largest burns units in Europe. The hospital's skin culture laboratory is among the few in the world able to grow replacement human skin.

In the past, burn injuries have been treated by shaving the superficial layer of normal skin in an unaffected area of the body and applying it to the raw injured area. The "donor area" from where grafts have been taken normally heals within two weeks, but the

patient is often subject to pain because of exposed raw nerve ends.

With the skin culture technique, only a small area of skin, no larger than a postage stamp, is taken from the patient. This small piece of skin is then cut into even smaller pieces and live cells are extracted by the enzyme trypsin. Further treatment allows these live cells to develop into larger sheets of skin cells. (*Spectrum*, 197, p. 12, 1986; *British Science News*, R. P. Nash, British High Commission, New Delhi 110 028).