

*A monthly features service on
scientific, technical, and
educational subjects pertinent
to development.*

FEATURE

SCIENCE WORLD

*(a collection of development-oriented science news briefs
that may be used as a column, or as separate items)*

MUNCHING ON MICROBES

(Approx. 250 words)

Microbes are tiny single-cell organisms, invisible to the naked eye. They are the smallest life forms on earth, but some time in the future they may well play a major role in feeding an increasing human population.

In fact many people already eat microbes regularly. They are found in yeast bread, in cheese, and in some other dairy foods, for example, and they are rich in protein. But some scientists believe this is only the beginning, and that microbially-derived protein from yeasts, moulds, or bacteria could one day be mass-produced to meet all our dietary needs.

This single-cell protein (SCP), as it is called, could be made in just about any form, from a simple colourless powder to sprinkle in or on food, to nutritious "candy" bars and "meat" patties. But don't look for these products in the shops just yet, there are still considerable problems to be overcome.

Although microbes feed on almost any hydro-carbon source — from sugar to petroleum — and multiply with amazing speed, they sometimes create so much heat energy in the process that they self-destruct. According to an article in the US publication *Bioscience*, raw SCP is very high in nucleic acids, which, among other things can cause gout in humans. The taste also leaves a lot to be desired and SCP can also be hard to digest.

But many scientists believe that all these problems can be overcome, that production costs can be brought down to a reasonable level, and that one day we'll all be munching on microbes.

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SEE THE SHOW — GET THE MESSAGE

(Approx. 225 words)

Villagers in many parts of rural Asia who turn out to see traditional forms of folk entertainment may well be getting more than they bargain for. In most developing Asian countries the folk arts have become vehicles for development messages as well as entertainment and culture.

Folk music, dance, and drama have always been used to convey messages, say the communications experts. Traditional beliefs and values are passed on this way. So why not add some "contemporary themes" to pass on national development news and encourage people to help themselves and their country?

The technique is used in many ways — to promote rural community development, or family planning, or a new strain of wheat or rice. It is used in the *Wayang Kulit* shadow plays of Malaysia, or the *balitao* musical performances of the Philippines, where studies have shown their effectiveness in communicating to the rural people, regardless of sex, age, education, or income.

Similar studies of India's rich culture show that as many as 600 different folk forms have been used to carry development messages. In Bangladesh the government has gone so far as to establish an organization called Mass Communication Through Music. And in Sri Lanka folk theatres are widely used for development communications.

Perhaps what is most remarkable is that, in spite of all the preaching, the villagers still seem to be enjoying the show!

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FOOD — THE BEST MEDICINE

(Approx. 165 words)

Health workers in developing countries have long suspected that immunization does not protect all children against common childhood diseases equally. Now medical researchers believe they know why.

Early investigations have turned up a link between malnutrition and a weakening of the body's ability to defend itself against disease by manufacturing antibodies in response to vaccination.

Just how much protection vaccination actually gives malnourished children is the subject of a study in South America funded by Canada's International Development Research Centre. The effectiveness of vaccines commonly used against polio, whooping cough, diphtheria, tetanus, measles, mumps, and rubella will be compared in slum children in Cali, Colombia, who are first divided into groups according to how well nourished they are.

The information from these studies should give a much clearer picture of how best children can be protected. And the children taking part in the experiment will benefit both from being immunized, and from growth and development programs set up for them as part of the project

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