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(a collection of development oriented science news briefs that may be used as a column **NOT** as separate items)

THERE IS NOTHING LIKE A NEEM!

(Approx. 200 words)

In the tropics there is no tree quite like the neem. It grows fast in poor soils with little water, and it actually improves the quality of the soil. Cattle, sheep and goats leave it strictly alone, and most insects would sooner starve than eat its leaves -- even the hungry locust.

That's not all. Neem wood is heavy and tougher than teak. It makes excellent firewood and gives almost as much heat as coal. It grows straight, so is ideal for construction and furniture making. The seeds contain oil that can be used as a fuel or a lubricant, while the remaining pulp can be used in the production of methane gas, or as a fertilizer.

All manner of industrial chemicals can be extracted from parts of the tree for use in manufacturing soap, disinfectant, cosmetics, even insect repellent. And if left to its own devices the neem will grow into a beautiful shade tree and serve as a sturdy windbreak for decades.

Little wonder that the neem, which probably originated in India, is now found all over Asia and Africa, nor that it has caught the attention of many forestry research institutes. Scientists see the amazing neem as potentially one of the most valuable of all arid zone trees.

#### WEED POWER!

(Approx. 200 words)

Scientists the world over have developed a strong interest in weeds recently. Plants that were once considered pests have suddenly become potentially important crops -- all because of soaring oil prices and uncertain supplies.

The plant kingdom contains many natural oil sources. There are the obvious ones, such as linseed and rapeseed, which are already under investigation as potential sources of diesel fuel. And there are the less obvious ones, like the California jojoba bush, which yields a substitute for sperm oil, the gopher plant, which produces a petroleum-like oil, the Brazilian Cobaifera langsdorffii tree, whose sap is almost identical to diesel fuel, even the pesky milkweed, which plagues North American farmers, produces a latex that has petrochemical potential.

Biochemist Prof. Hamish Rattray, of the University of Guelph, Canada, predicts the day may well come when some of these oil-producing weeds will be cultivated on "fuel farms". Such home-grown oil production may be most suited to the rural tropics, where energy demand is relatively low.

Prof. Rattray estimates that to meet North America's insatiable demand for oil would require 700,000,000 acres of inedible oil crops -- more than double the total acreage for all types of agriculture in the US today.

#### FISH FOOD FROM FUEL FACTORIES

(Approx. 170 words)

A highly polluting organic waste from Brazil's gasohol programme could become a bonus for the country's fishing industry, according to the World Environment Report.

By 1985 Brazil expects to be producing 10.7 billion litres of alcohol-based fuel annually. But for every litre of alcohol produced, 13 litres of slurry or swill are left over from the distilling process. When this slurry is illegally dumped into rivers its decomposition absorbs an enormous amount of oxygen. As a result fish and other aquatic life die of oxygen starvation.

But scientists have noted that when the slurry reaches the ocean there is a sharp rise in the quantities of fish and plankton. Researchers from Rio de Janeiro's Industrial Technology Foundation are investigating the possibility of piping the distillery slurry to the coast for selective dumping.

Brazil has an extensive coastline and a fledgling fishing industry. The lack of nutrient upswelling currents in coastal waters, however, keeps fish stocks low. Recycling the organic slurry may turn an environmental problem into a bonus.

#### UNHEALTHY AND INEFFICIENT

(Approx. 170 words)

Wood smoke can be a danger to your health according to a paper published by the energy task force of the United Nations Environment Programme (UNEP). That's bad news for the vast majority of people in the Third World for whom firewood is still the only available source of fuel for cooking and heating.

The paper says studies have shown that wood smoke contains a total of 37 pollutants, carcinogens, and toxic agents. Another study in rural Fiji supported by Canada's International Development Research Centre (IDRC) points to sustained exposure to a smoky atmosphere as possible causes of chest complaints and eye irritation. Eighty five percent of women interviewed wanted better cooking facilities.

The IDRC study concludes that cooking over an open fire is both unhealthy and inefficient -- and the Centre is supporting research in Africa to develop better woodstove. UNEP agrees, the energy task force calls for a thorough assessment of the social, economic, and environmental impacts of firewood production and use. It also stresses the need for improved smokeless stoves that would help to reduce the health hazards, and would burn fuel more efficiently.

- END -

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