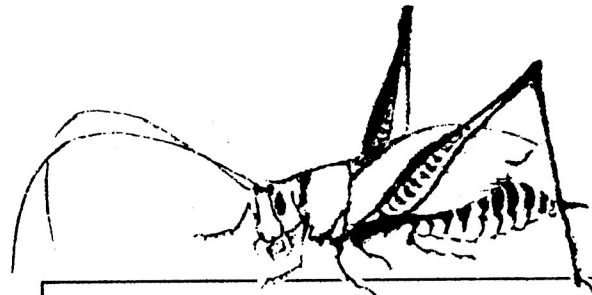


INVISIBLE TECHNOLOGY

The best technologies are often the invisible ones—where people have figured out how to avoid problems rather than to solve them. Often all that is required is a perceptual change such as seeing grasshoppers as an airborne mobile protein harvesting and conversion unit—a food source—rather than a destructive pest. Or living near where we work rather than building better transportation technologies. Or eating lower on the food chain so you don't have to pay for or grow food for the conversion losses of meat animals. Or planting trees rather than air conditioners.

The second-best technologies are also invisible. They're based on people's skills and relationships rather than machines—the skilled calligrapher drawing a line or carpenter cutting a line rather than needing a jig or machine; good neighbors rather than locks on doors; caring for the ill or elderly at home rather than in a Home; hiking rather than mini-biking; an auto mechanic or piano tuner's ear rather than a tuning machine. But there's always a range of skills and scales and situations where things need to happen, and we're interested in expanding the range of tools for situations that have been neglected, and learning when there are good reasons for choosing one scale rather than another. One size can't fit every situation well, and a technology that tries is likely not to fit *any* well.

Be resourceful, be clever, be wise.



CHEMICALS FROM BIOLOGICAL SOURCES

Products obtained by dry-distillation of 1 ton of hardwood scrap
(ca. 70% maple, 25% birch, 5% ash, elm and oak)

<i>Charcoal</i>	600 lb
<i>Gases:</i>	5,000 cu ft
Carbon dioxide (38%)	
Carbon monoxide (23%)	
Methane (17%)	
Nitrogen (16%)	
Methanol	3 gall
Ethyl acetate	15 gall
Ethyl formate	1.3 gall
Acetone	0.7 gall
Creosote oil	3.3 gall
Sol. tar	22 gall
Pitch	66 lb

Alan J.P. Dalton, 'Chemicals from Biological Resources', ITDG