

Re: Oil proportion of biodiesel.

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> I think its a brilliant idea. The basic mechanism for the center pivot
> irrigator can provide an attachment point for automated ploughing,
> seeding, cultivating and harvesting equipement.

Nah... Far too complicated/expensive/troublesome with so little tangible benefit. In the US less than 1% of the labor force is involved in agriculture (see CIA world factbook for US <http://www.odci.gov/cia/publications/factbook/geos/us.html>). Since the definition of the "labor force" only includes about half of the total population, the total amount of labor needed on agriculture is clearly very tiny, maybe around 0.3%–0.4% of the population.

On the other hand, if you still want to use technology to improve/streamline the way food is produced...

I suggest CHON food. CHON is a word found in some of the Gateway series of science fiction books by Frederick Pohl. CHON stands for Carbon, Hydrogen, Oxygen, Nitrogen, or in other words the primary elemental constituents of food. Larry Niven uses a similar type of concept in his book Ringworld.

Basically, food should be produced in factories. As it is right now, we require huge amounts of real estate and sunshine to grow crops. Some of those crops are then fed to animals. All in all we require most of our free open real estate suitable for crop production just to feed our current world population. If the world population is ever to get larger, clearly it would be beneficial to produce food in a factory. We are currently victims of mother nature. Storms and droughts can cause shortages of food (at least in countries that don't normally produce large surpluses). Even modern farming practices have some sustainability issues such as soil nutrient depletion, salt buildup in the soil, and finite fresh water supplies. Additionally, nitrate fertilizers are responsible for the contamination (ex: pollution) of a great many surface freshwater supplies.

So how would we make food in a factory?

In order to be fully scalable and sustainable the input ingredients should

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primarily be: nuclear derived baseload electricity, plain atmospheric air, and perhaps water or other extremely abundant raw materials. Not too long ago someone in the sci.energy newsgroup described a process of producing alcohol from CO₂ scrubbed from plain air using electricity (some source of hydrogen, such as water or water vapor in air is also nee