

## **Green Solar Energy in Algae**

### **Food, Fuel, Freshwater and Fine Medicines**

Green Solar Energy describes how to produce clean, carbon negative food, feed, fuel, freshwater and medicines in an ecologically responsible manner, This production model uses no or minimal fossil fuel, freshwater, fertile soils, agricultural chemicals or poisons such as pesticides.

Green solar energy creates a portable energy source and grows biomass with solar energy stored in forms that may be used for a variety of purposes:

- **People** – organic protein in food
- **Animals** – organic protein in fodder
- **Fowl** – natural protein for birds
- **Fish** – natural protein in fish feed
- **Land plants** – organic nitrogen fertilizer
- **Fire** – high energy algal oil for cooking and heating
- **Cars** – carbohydrates refined to gasoline for transportation
- **Trucks and tractors** – high energy clean, green diesel
- **Trains, boats, barges and ships** – high energy clean diesel
- **Planes** – high energy, clean aviation gas and jet fuel

Algae also offer low energy and low cost pollution solutions to clean waste, brine or salt water, sequester CO<sub>2</sub> from coal fired power plant plumes and recover abandoned soils. This presentation will highlight the status of the algal industry with a focus on food and energy.

Presenter:

Mark Edwards, Professor of Strategic Marketing and Sustainability at ASU, has studied algae for over 40 years and is an internationally recognized expert on algae and its many coproducts. His book *Green Algae Strategy* is the best-selling book on algae and won the 2009 Independent Publishers Gold Medal for the “Best Science Book of 2008.”

Mark graduated from the U.S. Naval Academy with degrees in engineering, oceanography and meteorology. He earned an MBA and PhD in marketing and consumer psychology at Arizona State University where he has taught marketing, entrepreneurship and sustainability for over 30 years. Mark served as a director for a Fortune 50 international foods and transportation company where he began his quest to find and develop new food sources.

He served as CEO of the advanced technology and software firm he founded, TEAMS Intl., for 24 years. TEAMS sold to an international consultancy after it won the Inc. 500 award for profitability and growth in 1998. Mark served as lead consultant to over 400 firms and governments including Disney, GE, Intel, J&J, HP, British Petroleum, Saudi Aramco, General Mills, Nabisco, Mayo Clinic, Coca Cola, Motorola, Bank of America and several U.S. agencies including DOD, Special Forces, DOE, FAA and the National Laboratories.