



AGUACULTURE

MINDSET.TECHNOLOGY.SOLUTIONS

OUR MISSION

We are committed to becoming a watershed to Agriculture and restoring substantiated through our ability to Envision the Big Picture and pinpoint solutions which ultimately contributes to our Mandate, Commitment and Successes.

AGENDA

- ▶ OUR ROAD
- ▶ OUR SOLUTION
- ▶ HOW OUR SYSTEM WORKS
- ▶ THE PRODUCT
- ▶ OUR VALUABLE FINAL PRODUCTS
- ▶ QUESTIONS

THE HISTORY OF ALGAE/AQUATIC WEEDS

- In the late 1970's NASA discovered water hyacinths natural ability to clean water. Researchers placed the water hyacinths in sewage lagoons along with a multitude of chemicals. Within one week, the wastewater had reached drinking water standards. Algae has also been proven to have the same natural abilities.

1991 — San Diego County

The Aqua 2000 Research Center and adjacent Water Reclamation Facility are built in the San Pasqual Valley by the City of San Diego Public Utilities Department to produce 1 million gallons a day of reclaimed wastewater for irrigation. The research center studies advanced water treatment and potable reuse using a variety of treatment methods. It is discontinued in 2001.



2012, RIT Eric Lannan at Rochester Institute of Technology testing algae from the scaled up tank.



WHAT HAPPENED NEXT?

- Mechanical harvesting of algae, but more specifically water hyacinths was cumbersome and inefficient. Secondly, no one at the time had a simple solution for handling and disposing of the plant material.
- Most often the plant material was left on the side of the bank, resulting in point source pollution.



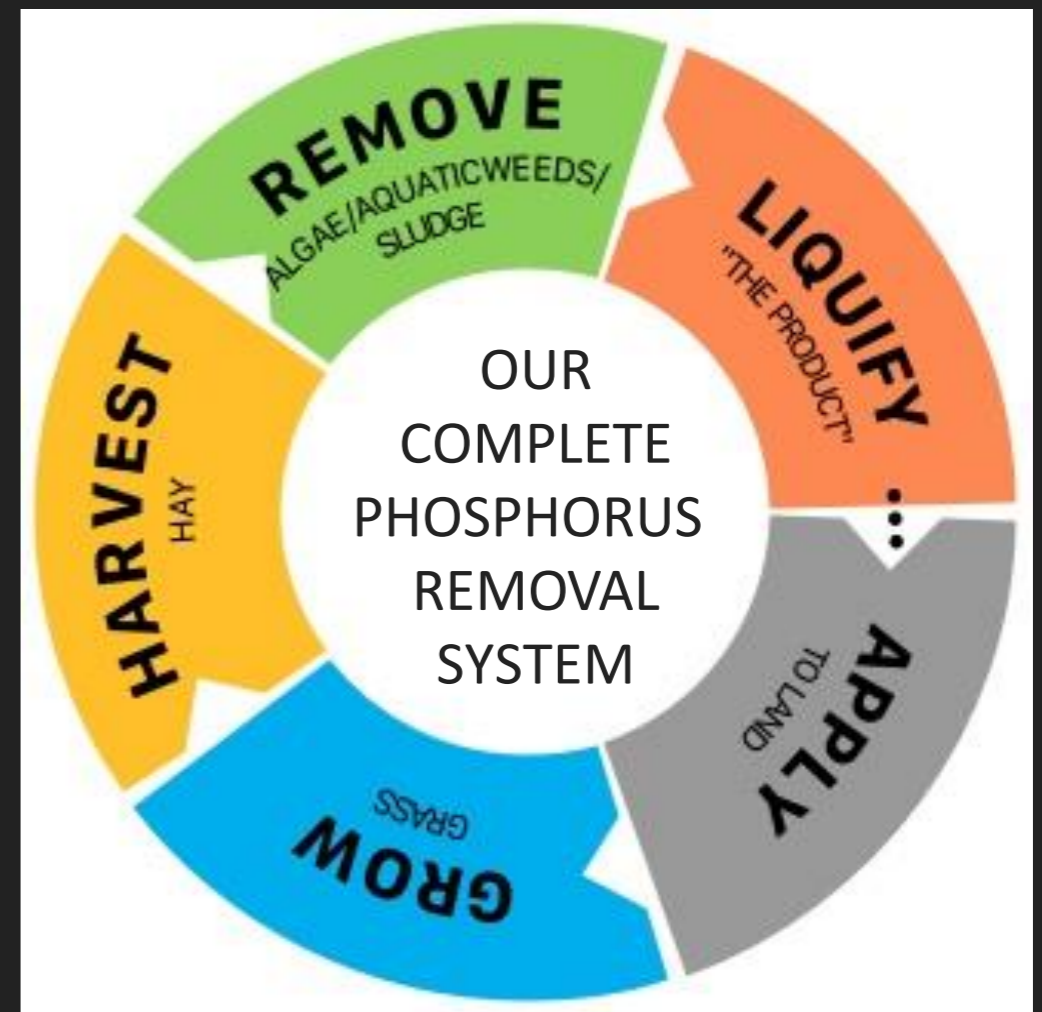
AQUATIC WEED MANAGEMENT TODAY

- Current management of Algae/ Hydrilla/Water Hyacinths consists of the use of toxic, harmful chemicals, further degrading fresh water bodies and leading to increased Algae blooms due to the massive amounts of nutrients these plants release into the water as they die and sink to the bottom.



AGUA CULTURE - OUR SOLUTION

- To harvest unconsolidated sludge/muck and algae/aquatic weeds, “the product” via our patented system.
- Immediately process the product into a liquid form.
- Pump the product to shore via our patented hose.
- Apply the harvested liquified product as a soil amendment for nutrient uptake via growing native grass. This grass can eventually be harvested to further remove phosphorus from the area and sold as hay.



GROW HAY



- Hay is a simple crop. Grass is harvested every 30 days which means that we can harvest everyday and have a place to apply our liquified product. The grass fields will hold the nutrients in place until they are absorbed into the growing grass and then harvested as hay, further removing phosphorus from the region.

PRODUCT APPLICATOR

- This applicator will apply the product to the land after the grass has been harvested.



MECHANICAL HARVESTING

- Conventional harvesters harvest the algae/aquatic weeds, then haul them to shore or place them on a barge and shuttle the weeds back to shore spending more time shuttling than harvesting.



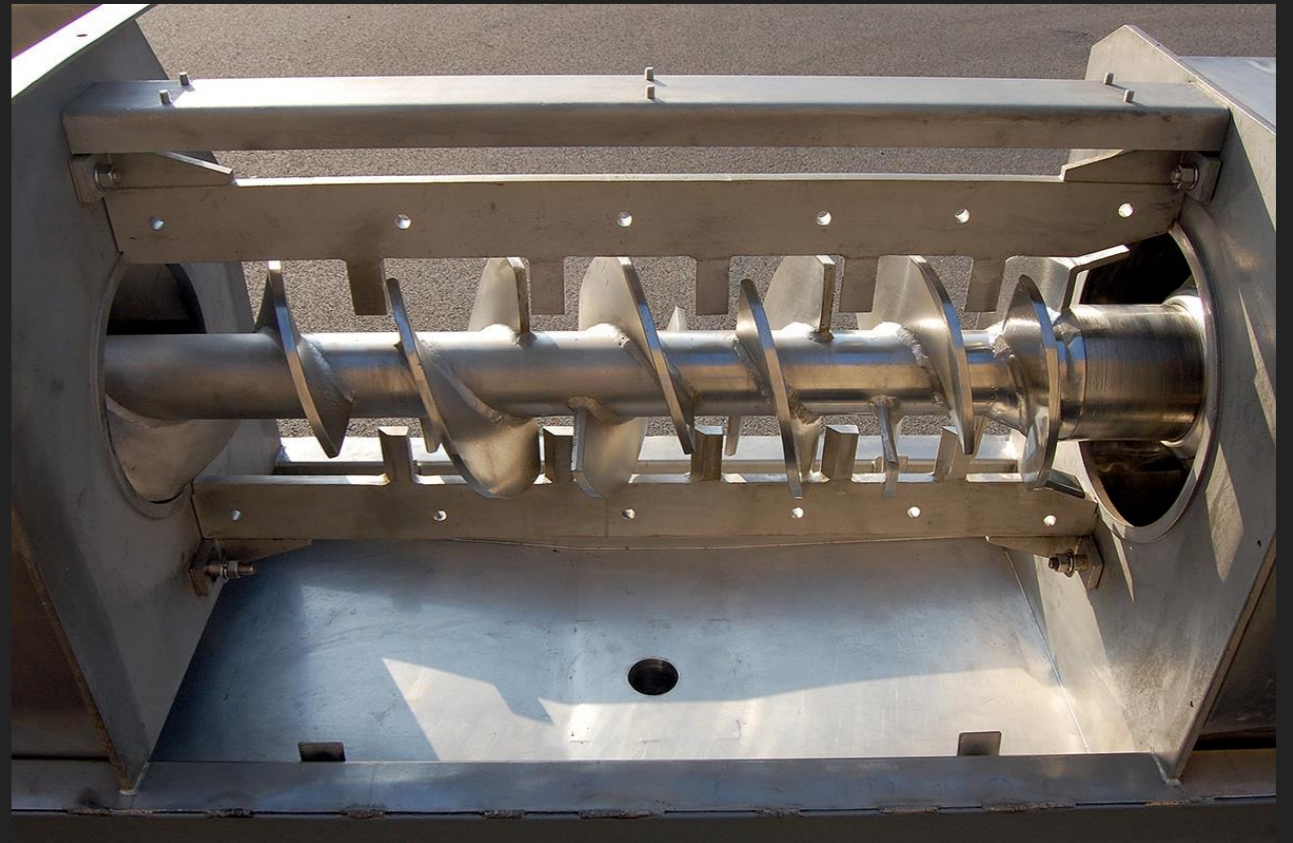
VERSATILE HARVESTING SYSTEM

- Our harvesting system will be mounted to an airboat resulting in a versatile harvester that can not only float, but harvest the product in shallow waters where traditional harvesters can not go. This includes storm retention ponds and wetlands.



PROCESSOR

- Our processor results in a liquified product that can easily be pumped to shore and utilized.



AGUA CULTURE - HOW OUR DESIGN WORKS

CMA REEL (CONTINUOUS MANURE APPLICATOR)

- This hose design eliminates the need for the harvester to travel back and forth to shore with the liquified product, maximizing efficiency and production.
- As the harvesting system goes further out onto the water the hose reel unwinds as the liquified product runs through the hose to shore.










SOIL AMENDMENT

- Algae/Water Hyacinths has proven to clean water through the plants ability to absorb nutrients such as phosphorus, potassium, nitrogen to name a few; and store it in the plant. Through third party analysis these nutrients have been measured and contain the perfect balance for conventional crops.



THE MAJOR BENEFITS OF OUR AGUACULTURE SYSTEM

-  SUSTAINABLE, VIABLE & GREEN
-  REPURPOSING A WASTE
-  REDUCE CHEMICAL USE
-  CLEANER WATER
-  IMPROVE LOCAL ECONOMY
-  SEQUESTER CARBON
-  PROVEN TECHNOLOGY



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