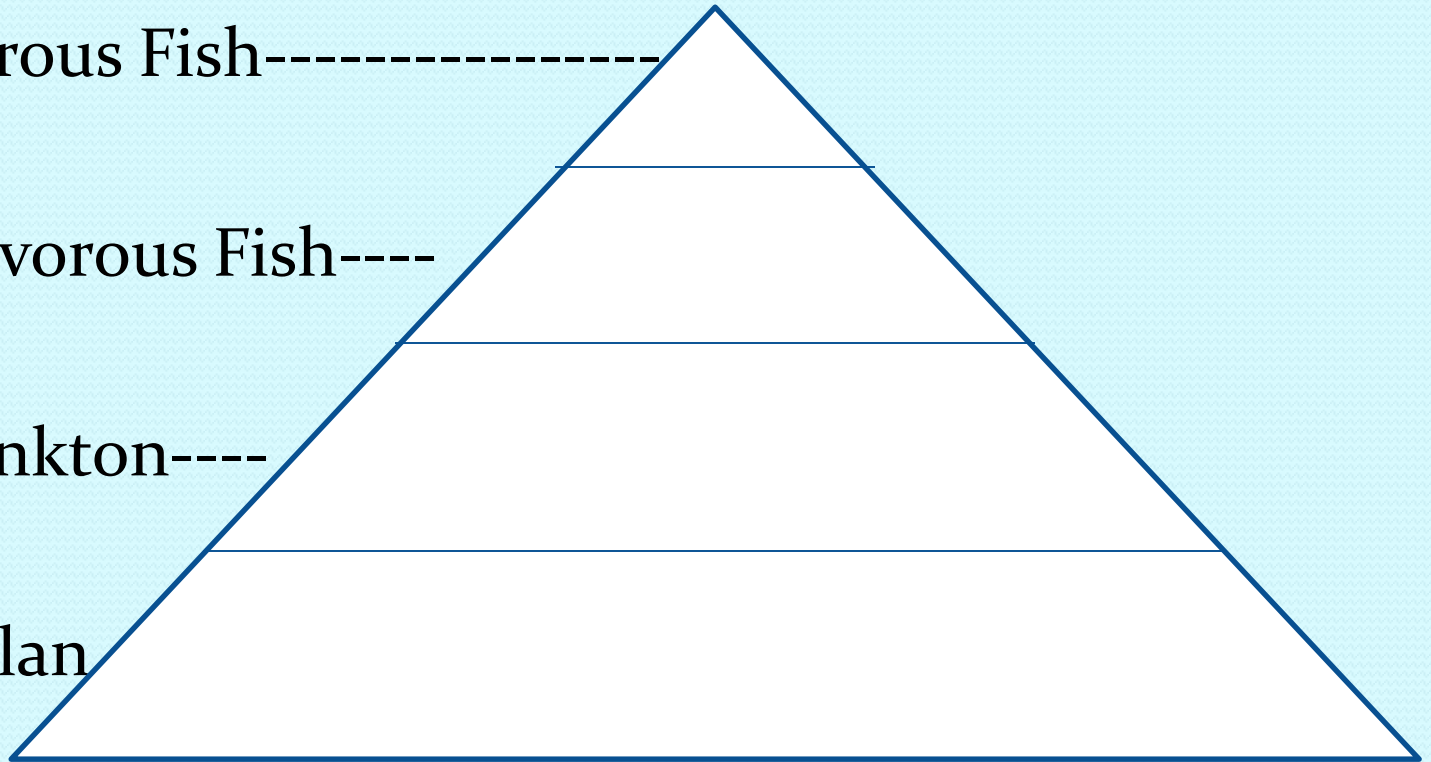




Managing Plants in Ponds

Aquatic Food Pyramid 1

- Piscivorous Fish-----
- Planktivorous Fish----
- Zooplankton-----
- Phytoplankton



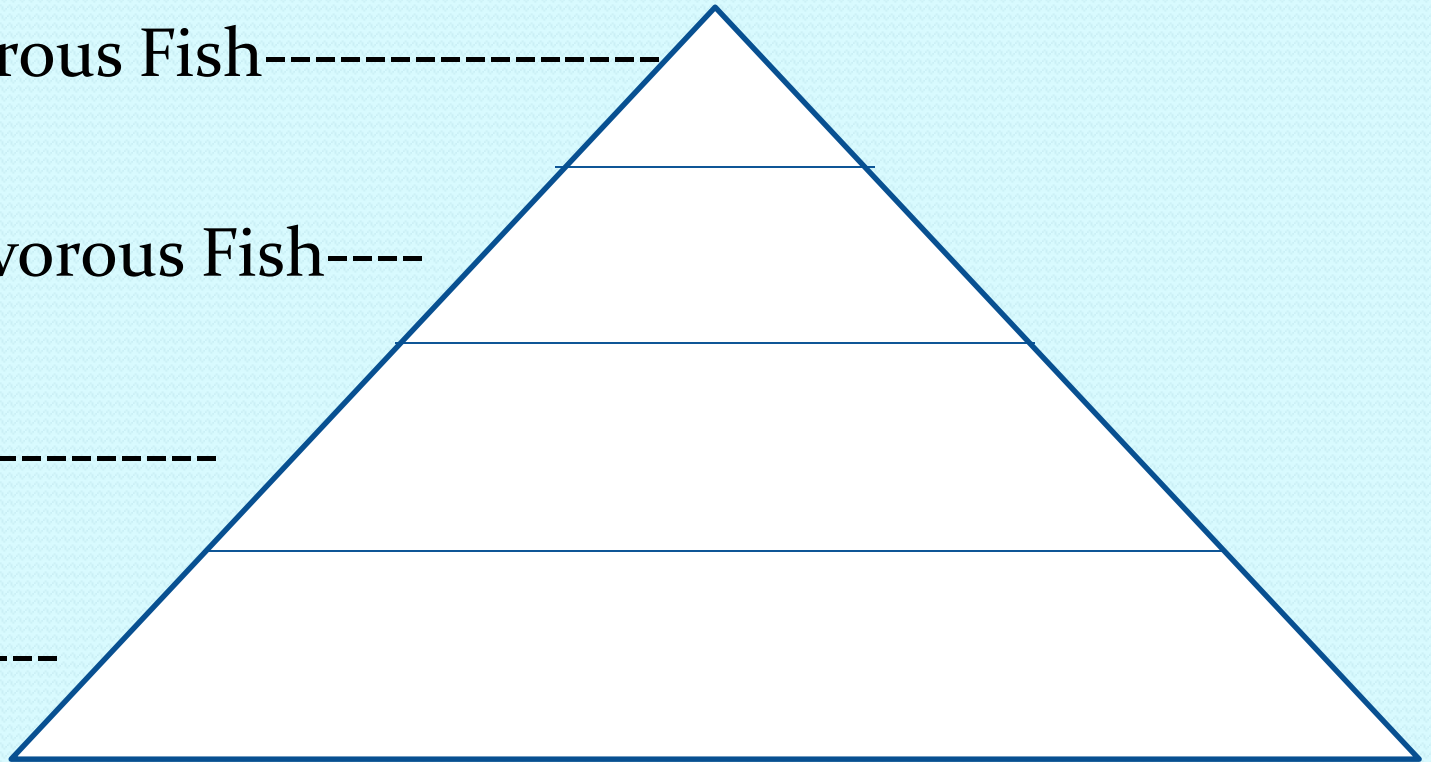
Aquatic Food Pyramid 2

- Piscivorous Fish-----

- Insectivorous Fish----

- Insects-----

- Plants ---



Aquatic Plant Benefits

- Rooted plants help hold sediments in place
- Can improve water quality
- Provide structural habitat for fish and invertebrates
- Single-celled algae are basic link in aquatic food chain

Aquatic Plant Requirements

- Water!
- Nutrients – Nitrogen, Phosphorus, Potassium
- Sunlight

Plant Types

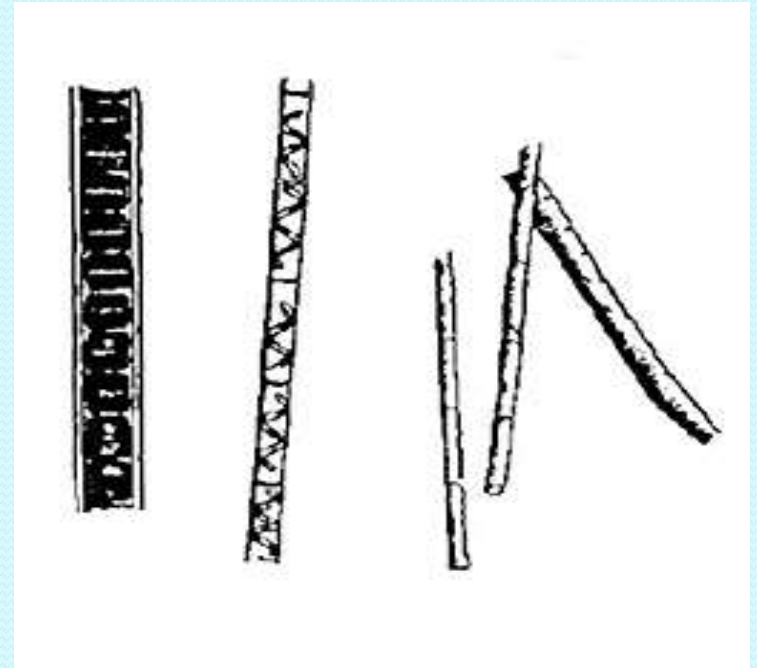
- Algae
- Higher plants

Algae

- Planktonic – single-cell
- Multicellular
 - Filamentous
 - Chara, spp.



Filamentous Algae



Higher Plants

- Pondweeds
- Cattails
- Duckweed

How Much is Too Much?



- Normally about 15-20% pond surface area coverage by rooted aquatic plants provide excellent habitat for bass and bluegill.

Control Options

- Biological
- Mechanical/Physical
- Chemical

Biological

- Stock grass carp
- Add grass cover to drainage
- Dredge

Grass Carp

- Can provide long-term control for certain plants
- Prone to exit pond in high flows
- Difficult to get stocking rate just right
- Cost – \$12.50/fish.
- Stocking rate varies depending upon plant palatability



Grass Carp Stocking Rates Per Vegetated Acre

- Southern Naid – 10 (\$ 125)
- Pondweeds – 10 (\$ 125)
- Coontail – 26 (\$ 312)

- Not effective on filamentous algae, duckweed or cattails.

Increasing Grass Coverage Within Drainage

- Help reduce siltation
- Can reduce nutrient inputs.



Silt Removal

- Expensive, but can provide long-term benefits



Mechanical/Physical Control

- Raking
- Cutting
- Liners



Vegetation Removal



Liners/Barriers

- Lake Mat 12 X 24' = \$ 359
- Lake Bottom Blanket 10X 80' = \$ 546



Chemical Control

- Plant ID critical
- Area/volume calculations need to be based upon accurate measurements to insure correct dosage
- Must follow label instructions



Aquatic Plants That Sometimes Become Problems and Chemical Control Recommendations

- Filamentous Algae
- Coontail
- Southern Naid
- Pondweeds
- Duckweed
- Cattails

Filamentous Algae

- Copper sulfate – 2.7 lbs per ac-ft (\$ 5.94)
- Cutrine Plus – 0.6 gal per ac-ft (\$ 24)



Coontail

- Aquathol K – 1.6 gal per ac-ft (\$ 172.80)
- Reward – 0.5 gal per ac-ft (\$ 63.53)



Southern Naid

- Aquathol K – 2 gal per ac-ft (\$216)
- Reward – 0.5 gal per ac-ft (\$ 63.53)



Pondweeds

- Aquathol K – 1.6 gal per ac-ft (\$ 172.80)
- Reward – 0.5 gal per ac-ft (\$ 63.53)



Duckweed

- Reward – 1 gal per surface acre (\$ 127.05)



More Duckweed!



Cattails

- Rodeo – 6 pints per surface acre (\$ 27)



The End

