Integrated Management of Algae, Turbidity, and Other Difficult Problems In Ponds

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Algae & Weed Prevention & Control

• Maintain the pond with deep edges
• Livestock should be fenced out
• Fertilize early in the year
• Maintain Secchi Disk 18-24”
• Observe Pond Regularly & React
What is a Pond Weed?

- Any undesirable Macrophytic Plant growth in Ponds
- Filamentous Algae is frequently termed “weeds”
Why Control Algae & Weeds?

• May Cause Oxygen Depletion
• Unsightly
• Nutrient Consumption
• Interferes with recreational uses
• May cause feeding problems for bass
Plant Identification

- Know What plant(s) you have in your pond
- Proper identification is key for control
- Treat only identified plants
- Follow Treatment Recommendations
- Prevent Misapplication of Herbicides
Algae

- Planktonic Algae
  - Green - Desirable
  - Blue - Green -
    May Cause Odors & Off-flavor

- Filamentous
  - Unsightly
  - Interferes with fishing & other uses
Weed & Algae Control Methods

- Prevention
- Biological Control
- Drawdown
- Mechanical Removal
- Herbicides
Begin fertilizing when water temperature reaches 60 F. Maintain a Secchi Disk water clarity of 18-24”
Filamentous Algae Growth in Small Ponds
Algae - Filamentous & Planktonic
Algae Control Agents

Chelated Copper (Liquid)  Copper Sulfate
Algae Control Agents

- **Hydrogen Peroxide**
  - Has performed well in ornamental ponds

- **Enzymes**
  - No experience with use of them
  - Reportedly good results with multiple apps.
Muddy Ponds

How to Cure Suspended Clay Particles
Muddy Ponds

- How do you Cure Muddy Ponds?

- Claude Boyd (Auburn Univ.) Compared Gypsum, Slaked Lime & Alum (Aluminum Sulfate) in Removing Turbidity from Ponds

- Alum Worked Best of the Three When applied at rates of 15.0 – 30.0 ppm.
Muddy Ponds – Alum Application

- Check Alkalinity and pH prior to application

- Soft Water (low alkalinity) applications may cause low pH resulting in fish Mortality

- Calcium Hydroxide can be used to offset drop in pH
Muddy Ponds

- Personal Experience – 25.0 ppm started almost immediate flocculation of suspended clay particles
- Alum must be spread evenly over pond from boat
- Should be applied when there is little or no Wind
- Turbidity improved in a matter of hours
Check pond on a regular basis for:

- Turbidity
- Any signs of weed or algae growth.
- Take necessary actions promptly

**NEVER FERTILIZE!**
When Weeds or Filamentous Algae are growing in pond.
Fertilizer will make them grow and spread faster.
Mechanical Control

- Limited Application in Small Ponds
- Plant Harvesters not Practical & too Expensive for Recreational Ponds
- Digging/removing small areas of plants – good physical exercise!
Herbicide Weed Control

Herbicides are our last resort for weed control. Chemicals are expensive, provide only short-term control, and may have toxic effects on the fish and other animals (including humans) using the pond.

(See Extension publication ANR-48, “Chemical Weed Control for Lakes and Ponds.”)
Types of Herbicides

**Contact** - is not translocated in the plant

Examples: Copper Sulfate, Endothall, Diquat

Contact herbicides are usually fast acting. The effect may be short-lived if the plant can regrow from unexposed parts. Care must be taken to prevent oxygen depletion from rotting plants.
Types of Herbicides

**Systemic** - chemical is translocated, killing the entire plant

Examples: Fluridone, 2,4-D, Glyphosate

Systemic herbicides usually act slowly reducing the concern for oxygen depletion. Normally must stay in contact with the plant for much longer time than contact herbicides. The effect is much longer lasting.
Read the Label – First!
Herbicide Application Methods & Rates Applied to plants

- Apply at label rates for plants treated.
- Know volume of water in pond.
- Check Alkalinity of pond before adding any copper compounds
Herbicide Application – Safety Equipment

Take precautions and use equipment and clothing specified on applicable herbicide label
Weeds From Hell!

LEMON BACOPA
Houston Co. Recreational Pond

LEMON BACOPA
Houston Co. Recreational Pond

LEMON BACOPA – Started Here
Attempted Cure

50 Grass Carp per Acre
Dothan City Park Pond

LEMON BACOPA
Conecuh Co. Farm Pond

LEMON BACOPA
Conecuh Co. Farm Pond

LEMON BACOPA
Conecuh Co. Farm Pond

LEMON BACOPA
Lemon Bacopa Challenge

1.) 2,4-D Granules & Liquid – Very little kill
2.) Grass Carp (50 per acre) did not eat
3.) Mechanical removal – lots of labor hrs.
4.) Followed by tank mix of Aquathol & Diquat multiple applications
5.) Need Complete Coverage of All Plants
6.) 2 of the 3 ponds now clean
Fragrant Water Lilies
Watershield
WATER HYACINTH
Watermeal
Watermeal
Treatment for Watermeal – Fluridone
Watermeal
- affected by fluridone
Other Pond Stakeholders

They will allow you to share “their” pond!
Routine Maintenance Required for Nice Ponds & Good Fishing
Enjoy Your Pond & Catching Nice Fish!