

Summer Care of Koi

Water Quality Considerations

- Ammonia is more toxic when the water is warmer
- Water carries a much smaller amount of oxygen when it's warmer
- Fishes' metabolism (oxygen demand) is much higher in warmer water
- Bacterial respiration is doubled for every ten degree jump in temperature
- PH is taxed in warmer water due to all the above
- The failure of a single pump or single electrical circuit can kill the whole group, large fish first. (Emphasize double circuits and double pumps)

Algae control

- Algae is medicine: Green water is encouraged in some conditions of illness, especially bacterial gill disease outbreaks.
- String algae, however, can kill your pump
- Control greenwater with a UV Sterilizer
- You can also use a veggie filter <http://www.koivet.com/algaefree>
- Medications to reduce algae are effective but allow nitrate accumulation
- Discuss plant respiration at night in warm water.

Medications

Formalin is contraindicated in warm (78°+) water

IMPORTANT: Do a fifty percent water change to reduce water temperature and increase aeration before attempting a Formalin treatment,

Dose for Koi is 50 PPM for 120 minutes then a 50-75% water change.

In large ponds where that water change would be hard to execute quickly, drain out fifty percent, treat with half-volume dose and begin refill process immediately.

For example:

- Pretend we have a six thousand gallon pond.
- For a fifty ppm dose, we'd use two milliliters Formalin 37% per ten gallons
- **Without** draining, the dose for whole pond would be six hundred milliliters.
- But to save water and make it quicker, drain pond down to half = 3,000 gallons
- Apply three hundred milliliters of Formalin 37%.
- Immediately begin refilling, using dechlor if you have municipal water.
- In summer, repeat every other day for three treatments.
- See <http://www.koivet.com/formalin.html>

Illnesses in Summer

The severity of summertime illnesses is enhanced by the advantage the parasites and bacteria have in warmer water.

- Oxygen deprivation – Common, especially at night in heavily planted tanks.
- New Fish Parasitisms – Failure to quarantine a new incoming fish, and the ciliates kill the resident fish like lightning. Quick, also are the bacterial agents and flukes.
- Branchiomyces – Not common – Fungal infection in gills which requires hot water to live and infect its host. Treatment requires cooler water and then Formalin for clearance. <http://www.koivet.com/branchiomyces.html>

Sunburn?

Not common. Fish can get “hukuui” which is basically an inflammatory skin condition. The red areas swell and become pale, and then they contract (become depressed) and yellow. They resemble sunburn because they are inflammatory but water cuts 65% of available UV in the first few inches of water.

How to transport in Summer

Largest possible cooler. Ice packs in bottom of cooler. Newspaper on top of ice packs. Large clear plastic bags, doubled, and filled with water and pure oxygen. Sealed with rubber band. Jungle™ brand “Bag Buddies” are highly recommended. Don’t even try to transport fish without pure oxygen or ice packs. Shipment should not be more than 12 hours in the hot summer months. Airport “Dash” Services are superior in summer to any other mode besides hand carriage. **<http://www.koivet.com/shipping.html>**

How to handle an aeration crisis in summer

1. Remove any dead fish first
2. “Floom” the pond (define)
3. Adjust filter ‘returns’ to splash as much as possible.
4. Remove uneaten food if present
5. Start Dumping warm water
6. Start replacing with cool water IMMEDIATELY. Helps to spray water in for more gas exchange.
7. Apply hydrogen peroxide 3% USP standard drugstore variety: 1 cup per 100 gallons maximum dosage. I would personally advise that you use 1 cup per five hundred gallons for starters.
8. Backwash filters to remove organics that will also increase oxygen demand.

Please visit our business partner, PondRx.com for any of the above medications or suggested supplies. Each order ships with customized guidelines for any chemical product which has a dose.