

Koi Health Seminar

8/12/2021

1. **Quarantine Tank, Inspection/Treatment Tub or Bowl and Koi Net**
2. **Water Test Kits & Meters** -LaMotte Test kits are the best but more expensive. You can replace individual parts. API test kits work fine. Not quite as accurate but less expensive.
 - a. PH/Temp meter- cost around \$100
 - b. Salt meter- around \$75
 - c. ORP meter-around \$150
3. **Salt Formula** - Used to determine actual number of gallons when treating with certain products. Take a reading using the salt meter: say .2 ppt (.02%); then add say 50 lbs of solar salt; wait about 6 hours and take a second reading 2.6 ppt (.26%); calculate the change in salinity first $.26\% - .02\% = .24\%$. Now multiply the pounds of salt added (50) =times a known constant of 12. ($50 \times 12 = 600$); then divide 600 by the change in salinity; ($600 / .24 = 2500$). The pond is 2500 gallons.
4. **Parasites**
 - a. Chilodonella
 - b. Costia
 - c. Ich
 - d. Trichodina
 - e. Flukes
 - f. Anchor Worm
 - g. Fish Lice
 - h. Carp Pox
 - i. Dropsy
5. **Treatments**
 - a. Salt can be used to treat some parasites but is better at knocking down the parasite
 - b. Proform C- \$80 gal from Pentair; Microlift BSDT \$69 a gal. Use for a, b, c, & d parasites
 - c. Flukes- see separate sheet for the many treatment options
 - d. Dimilin- Anchor worm and fish lice
 - e. Elbarju Salt – can treat fin & tail rot but best used in Q tank. Also can be used when transport fish any distance. Use 10 grams/250 gals. Costs about \$25/50 gram packet
 - f. Potassium Permanganate (PP) - broad spectrum but is very caustic and will deplete the oxygen levels in the pond. A 2 ppt treatment is $\frac{1}{2}$ gram per 100 gals.; a 4 ppt treatment is 1 gram per 100 gals. When using this for a treatment, I take a reading before starting with an ORP Meter, then after I put the PP in the water, and finally I check over the next several hours until it reaches the starting point.
 - g. Chloramine T – It can treat flukes and some bacterial infections but today is not widely used.

6. Drugs

- a. Batril- the only animal drug and probably the only one you can get from a local Vet; there are many protocols-every day for 3 days and then every other day for 3 more times.
- b. Amikacin-human antibiotic that must be compounded. I use it conjunction with Batril and give every third day. It is hard on the fish's kidney.
- c. Fortaz (Tazicef)- It is a power that you mix with sodium Chloride. Once mixed it is only good for about 3 weeks and must be refrigerated. Give on Day 1 and again on Day 5.
- d. Ceftriaxone-similar to Fortaz and the same rules apply
- e. I use 1 cc & 3 cc syringes that are 25 gauge & 5/8 long
- f. I also use Tricide Neo in a spray bottle mixed with distilled water. I usually treat a wound with iodine and then spray on tricide neo. If stored in a refrigerator it is good for a year. You also can use as a dip but when finished you can't reuse.

7. Anesthesia

- a. Oil of Cloves – It is cheap (\$35 for a 4 oz bottle) and can be found at most health food stores. It works moderately fast and is easy to remove from the fish's gills.
- b. MS 222 – it is a power that most vets use for surgery. I feel it puts a fish under too much.
- c. I use two containers when I treat fish; one for the anesthesia and one for fresh pond water to remove the clove oil before returning the fish to the pond.

8. Reasons to Inject a fish

- a. Mouth rot, fin rot, and tail rot that is too severe
- b. Ulcers
- c. Pine coning
- d. Dropsy
- e. Scrapes that look infected
- f. Bacteria: This are hard to spot and usually manifest on the fish's belly.

9. Reference Books that all hobbyists should consider having.

- a. Koi Health and Disease 2011 by Dr. Erik Johnson, DVM
- b. Advanced Koi Care by Dr. Nicholas Saint-Erne, DVM

10. If you want to learn more about fish health, consider taking the KHA course offered by AKCA.