

**SALTING A POND**— Jerry Kyle, Koi Health Advisor (“KHA”)

Dissolved salt in the water helps in the osmoregulation of the fish’s body fluids while increasing the production of slime coat, protecting the skin, and prevents nitrite toxicity. Useful levels are from 0.1% to 0.3%. It is a great stress reducer and is known to kill most ciliated protozoan pathogens, including Ich, Trichodina, Chilodonella, Costia, Scyphidia, and Epistylis while reducing Flukes. For these and other reasons, it was once widely used in ponds throughout all seasons. Until koi keepers learned more.

I am told exporters in Japan, in the past, would hold koi in heavily salted water for all the above reasons but they do not do it today. For good reason. While the salt may not kill 100% of the pathogens, it so greatly reduced them that the koi natural immune system could often handle the little remaining. To have a 100% kill the salt would have to be so high as to kill everything – including the fish. The very few remaining pathogens live and reproduce and much of the next generation is also killed by the salt, but not all. Generation after generation later a salt resistant strain of trichodina emerged and devastated the industry. Salt would not kill it. The term we use is “super bugs.” Salt, in time, may have the potential to help develop super bugs. Experience was/is a great teacher and helps us to know better.

Today it is recommend to not continually salt a pond. By not continually salting a pond, salt becomes an easy and cheap way to help clear 8 out of the 10 top problems we have to deal with and, by not salting; we can have a few potted water plants to beautify the setting if we chose. There are still those who salt ponds. People who take koi to koi shows may salt at 0.1% upon returning home as a stress reducer for a week. People who travel or are not home for periods of time may chose to salt but at only 0.1%. The reason is to reduce stress if a problem arises and there is no one home to see it, help the osmoregulation, enhance the slime coat, and if the bio-filter fails there is a longer safety factor in case of a nitrite spike. Less than 0.1% is the same as not salting and a waste of time. Much more than 0.1% may get you accused of developing super bugs to poison the environment. Does your overflow go to the river and to the seas?

Most of us have decided to not salt except as temporarily needed. In the spring, coming out of winter, when the natural immune systems of the koi are at the lowest level, many will salt up to 0.3% for a month as a precaution for all the reasons stated in the first paragraph while the water is warming and the fish immune system is developing. After a month the salt is eliminated through regular water changes. This way the salt is simply therapeutic and temporary and harmful effects are minimized. Because we have not developed salt resistant strains we can get better results with less application for less stress on the pond environment and less stress on us.

Salt can be good or it can be bad. It can help man’s food taste better or help raise blood pressure and kill. Too much is a bad thing. It is just like everything else that can be good as it depends on good sense of the application. It is all about being responsible. Or not! There are too many “or nots” out there who salt by dead reckoning, guessing, and/or approximating. If you will salt, use a test kit and monitor. Too little does no good and too much may do harm. Be careful or be ashamed of yourself for only pretending to care about your koi. Use test kits for everything if you care. I know you care or you would not have read this far. Thanks for being a good koi shepherd.