

KHA Korner – RAIN??

So like most months I was giving some thought to what I might write about for the next KHA Korner article and then the phone rang and I had my article – unfortunately a club member had half his koi floating on the top of the pond, most rolled over on Wednesday evening and he had some questions about the heavy rains on the preceding Monday and Tuesday???

So what about rain and your koi pond?? Water parameters and the effect rain has on your water quality is something you need to give some thought about – first when you design and build your pond and also afterwards when you know a heavy rain is forecasted and during the rain and measuring the water quality effects after the rain. So yes, rain is something you have to think about even in Southern California.

First – what do you know or what should you want to know about the rain that falls from the sky and heaven forbid if any of it gets to your pond as RUNOFF (ground or roof). Just a couple general ideas – our local rain is less acid than other parts of America and believe it or not it's what your local area puts in the air that comes with your local rain that can affect your pond and koi. Farms use pesticides and fertilizers – cities put all sorts of pollutions in the air – heavy industry chemical emissions all this stuff can come with a rain drop to your pond. Note: We have a club member who lives close to and downwind of a LARGE cement mill and they get just about daily a dusting over their entire property and it has affected their koi pond water quality requiring some pond system maintenance modifications. Back on point – you can collect some rain (not runoff) and do your own testing (pH, GH, KH, O₂, NO₂, and NO₃). Better yet you can measure these same tests on your pond water quality just before the rain and a couple hours after the rain is over to see your results. And yes pesticides, fertilizers (sulfates and nitrates) and heavy metals can and do affect a pond and your koi in negative ways which can be severe leading to loss of koi. Acid rain can and does affect your pond pH – back in the northeast it's killing the forest, but our local area has less acid rain and based on amount of rain and the total volume of water in your pond system you will most likely see no change to very little change in your pond pH. That's been my experience for the past 14 years with a 12,500 gallon koi pond. So size of your pond does matter when it receives rain water (the solution to pollution is dilution). This is more important for smaller ponds and heavy rains which can account for larger and QUICKER changes to your pond pH causing the blood system of your koi to become acidosis or alkalosis. Koi deal with slow changes in daily pH swings by releasing stored acids and/or bases into their bloodstream.

Second – Now to runoff water flowing into your pond. **AVOID AT ALL COST!!** Just think of all the _____ that can come with the runoff water reaching your pond. The stuff you or your neighbors spray to kill bugs/weeds or grow bigger fruits and vegetables can kill your koi. And the county can and does spray fruit trees for some of the real bad bugs – I have notified the county that I have a koi pond so the fruit trees in my yard and my neighbors get pellets around the base of our fruit trees vice the county spraying – got fruit trees as close as 10 feet from my filter box. Any runoff reaching your pond will most likely cause some water cloudiness and you should remove any debris from rain or wind at your earliest convenience. For the more serious water quality nuts out there (like me) you can additionally measure your ponds ORP (Oxidation Reduction Potential or as I like to call it the pollution index) and TDS (Total Dissolved Solids) before and after the rain to see just how much pollution was caused by the rain. These are the readings that will lead me to a larger than usual water change after a heavy rain – 25 to 30%. Oh - crazy note: I strongly suggest your pets not swim in your koi pond (flea collar or any spray on or bath medications – just a thought). The other runoff of concern is from your roof or patio covers – think gutters. So final thought would be to eliminate any access for rain runoff or yard waste water getting to your pond!!

I hope I've provided some food for thought when it comes to the issue of rain and your koi pond.

Oh, the phone call I mentioned leading to this article resulted in increased air and a large water change in the dark followed by another water change early the next morning. Only one dead koi the next morning (the largest one). The pond had suffered from a never before significant runoff coming from above the pond.

r/koiack