

The South East Points System

Since the recent comments by Alan Coogan on Koi Chat regarding the system used at the National, our Show Chair Alan Archer has received a few requests asking about our 'Points system'.

The simple answer is "We don't have one". We have investigated the idea over the years but we never uncovered any specific data that identified a situation (i.e. the loading of a vat) that we could state was the upper limit. Equally important is the fact that we have never experienced a bad water issue at the show.

When Terry Wells was our Show Chair he examined the Vat request forms when they came in and if he felt there were too many Koi he'd tell them. When pressed further he told me he'd never had to do it and felt that our exhibitors were sensible people. There was an occasion in 2005 where two members of the benching team thought a vat was overloaded but it never showed up on the radar of the water testers.

What has come to light recently is how we have managed to avoid bad water in the past. When Bernice Brewster stopped coming to our show (in 2001) she left us with a proactive water testing method by way of a legacy. The ammonia level to avoid was 0.5 and our system was to start changing water on detection of a level of 0.25. This was a very sensible set of levels for the prevailing conditions at Bromley where the pH was 7.9 and the temperature had reached 21c on one occasion. As anybody that has listened to Bernice over the years would know; higher temperatures and pH levels increase the toxicity of the ammonia in the water. Her limit to avoid of 0.5 was

as close as we'd want to get at those levels. That temperature was one of the highest recorded, the average was 18.5c.

However, when we moved to Swanley the pH there is 7.5 and at temperatures of 20c the threshold where the ammonia becomes toxic shifts to 1.61. We didn't appreciate this until Syd Mitchell produced an enhanced version of the ammonia table that is far more specific than the ones that accompany the liquid test kits and for that matter the one OATA provide. Until Syd came along we'd been changing water according to the Bromley parameters, which although unnecessary never did the fish any harm.

Now getting back to a points system, the one provided by the BKKS is for the National where the pH is 8.5. That's ten times higher than ours and the ammonia threshold is just a minute 0.18 so its no wonder they need to put a limit onto the bio-load of a vat. Theoretically we could allow a 10 fold increase in points. The BKKS show rules allow for a 20% increase for prevailing conditions which has no relation to the science of ammonia pollution. Looking back at some old statistics we have recorded 50% increases over the BKKS point's level without incident. I know statistics ain't science but they are at least guidelines, so for want of something better let's say that our points system is that of the BKKS plus 50%. That at least maintains our vat occupancy to the same levels that we have been experiencing and managing for most of our 23 years of holding an open show. With our much lower pH, it also means that our Free Ammonia loading per vat is still far less than the BKKS recommended maximum level.

The Ammonia Table

Maximum allowable value of Total Ammonia to ensure that Free Ammonia does not exceed the Koi-safe level of 0.02 p.p.m.

		Temperature °C										
		10	12	14	16	18	20	22	24	26	28	30
pH	7.0	10.5	9.52	8.00	6.90	5.88	5.00	4.44	3.85	3.45	2.94	2.50
	7.1	8.70	7.40	6.25	5.41	4.76	4.00	3.51	3.03	2.70	2.38	2.00
	7.2	6.90	5.88	5.00	4.35	3.77	3.17	2.82	2.41	2.17	1.89	1.59
	7.3	5.41	4.65	3.92	3.45	2.99	2.53	2.22	1.92	1.72	1.49	1.27
	7.4	4.26	3.70	3.13	2.74	2.38	2.02	1.77	1.54	1.37	1.19	1.01
	7.5	3.39	2.94	2.50	2.17	1.89	1.61	1.41	1.23	1.09	0.94	0.81
	7.6	2.70	2.35	2.00	1.72	1.50	1.28	1.12	0.98	0.86	0.75	0.64
	7.7	2.17	1.87	1.59	1.38	1.20	1.02	0.90	0.78	0.69	0.60	0.51
	7.8	1.72	1.48	1.27	1.10	0.96	0.82	0.72	0.59	0.55	0.48	0.41
	7.9	1.37	1.18	1.01	0.87	0.76	0.65	0.57	0.50	0.44	0.38	0.33
	8.0	1.09	0.94	0.81	0.70	0.61	0.52	0.46	0.40	0.35	0.30	0.26
	8.1	0.87	0.75	0.64	0.56	0.49	0.42	0.37	0.32	0.28	0.24	0.21
	8.2	0.70	0.60	0.52	0.45	0.39	0.34	0.30	0.26	0.22	0.20	0.17
	8.3	0.56	0.48	0.41	0.36	0.32	0.27	0.24	0.21	0.18	0.16	0.14
	8.4	0.45	0.39	0.33	0.29	0.26	0.22	0.20	0.17	0.15	0.13	0.11
	8.5	0.36	0.31	0.27	0.23	0.20	0.18	0.16	0.14	0.12	0.10	0.09

Red (0.18) = Newark, Orange (0.65) = Bromley, Green (1.61) = Swanley.

With our enhanced measuring table and shorter testing intervals we are confident that we can maintain our pro-active water management routines at these point levels.

S.E. Adjusted Points System

	BKKS (National)	South East
2 metre vat	19 Points	28 Points
2.5 metre vat	30 Points	45 Points
3 metre vat	46 Points	69 Points