

What if I told you that most everything we as bass anglers have been instructed to do to help keep our fish alive during tournaments is wrong?

A new study on livewell treatments for bass, currently in press, has come to some interesting conclusions that are somewhat contrary to what most bass anglers have been instructed to do for years. In this particular study*, they tested 3 different livewell treatment scenarios in 3 different situations- a field study, a laboratory study and a pond study. The field study took place with the help of bass tournament organizations over on Shelbyville Lake in Illinois. The three tournaments used in the field were held in June (surface temp = 77), July (surface temp = 94), and August (surface temp = 87). The parameters tested were based around livewell additives, and were randomly assigned to boats in each tournament. Treatments included:

- Non-iodized salt only treatment (~3.8 oz. per 5 gal. = 5%; twice daily)
- Ice only treatment (1 gal. block to cool water ~9 deg., every 2h as needed)
- Combined ice + salt treatment (as stated above)
- Controls (no treatments, just lake water additions and recirculation)

No other additives (Rejuvenade, Please Release Me, etc.) were allowed to be used by boats in the study. These exact same conditions were also replicated during the laboratory and pond studies to compare against more controlled holding and treatment conditions.

Results in the field experiments showed that initial mortality across all months and treatments was low at 1.9 +/- 1.2%. Delayed mortality (5-day) varied among months, with July having the highest rate (55.8 +/- 8.36%), August was next (29.9 +/- 9.75%) and June having the lowest (12.4 +/- 5.22%).

By treatment type, 'salt only' had the highest average mortality at (52.4 +/- 11.6%), followed by 'ice only' (32.4 +/- 14.7%), 'combined' treatment (31.6 +/- 10.7%) and controls (25.5 +/- 7.5%).

After analysing the laboratory and pond data, researchers were able to come to the following conclusions:

- The use of livewell water additives such as salt and ice or their combination does not significantly reduce tournament related mortality.
- Fish size and ambient water temperature may have a greater influence on delayed mortality observed during competitive angling events than specific livewell additives.
- Smaller sized fish appear to be more resilient to tournament related stressors that result in mortality as compared to larger fishes regardless of ambient water temperature or livewell additive because they experience less physiological disturbances since they are often played for shorter periods of time and endure shorter periods of air exposure during weigh-in procedures.
- *“Collectively, these results suggest that the addition of livewell additives does not enhance fish survival following competitive angling events. As a result, we encourage anglers to practice proper fish handling practices as well as maintain good water quality within livewells as opposed to altering water quality with additives.”*

So these are pretty interesting data that support some previous research but also conflict with others. It certainly isn't the final word, as there are still several questions around commercial treatments that would be interesting to see tested, as well as factors related to oxygen (hydrogen peroxide, in particular, along with the various pure oxygen infused systems) that I'd like to see data on. It does suggest that tournaments during the warmest months of the year are likely the most detrimental from an overall mortality standpoint, as well as having a more negative effect on the largest fish caught during an event, a conclusion that has been largely derived and accepted in most, if not all studies I've seen to date.

* Kenneth G. Ostrand, Michael J. Siepkor and David H. Wahl (2011) *Effectiveness of Livewell Additives on Largemouth Bass Survival. Journal of Fish and Wildlife Management In-Press*