

## COLD WEATHER PATTERN PERFORMANCE

Dear Technoid.

Ever see data posted for patterning based on temperature changes? The "Winter Velocity Loss" topic provided some good insight but unfortunately did not talk about % pellets differences due to temp changes. Also unfortunate is that last year within a 4 month time period I had a chance (and failed) to collect such data from a 115 to 10 degree range of temps.

Dove hunting in AZ and QUAIL/Pheasant hunting in N. MO provided the opportunity. It seemed to me that it was worth maybe a choke difference between the seasons. That is the skeet choke appeared to perform about like a modified choke in the sept 1. AZ sun. I was amazed at 40-50 yard shots being made consistently with 1 1/8 oz 2 3/4 Dram #8's in the heat.

I have a fair understanding of boundary layer separation and affects of drag placed on shot in different temps. I wish I had only put a few rounds on paper to really verify it. Any data along these lines?

Thanks, Allen

Dear Allen:

I did not do anything on temperature dependent pattern analysis because I was never clever enough to think that temperature might have an effect on pattern other than the slightly lower pellet deformation caused by the loss in velocity.

I do know that altitude and its accompanying thinner air tend to tighten patterns. At the Olympic games in Mexico City in 1968, many shooters remarked on the tightening of patterns in the higher altitudes. I had never thought about the fact that cold air is less dense than warm and might mimic the thinner air of higher altitudes. I never even considered the fact that there might be a boundary layer difference. Perhaps to "Often in error, but never in doubt" I should add the tag "Never a clue, either".

I too have definitely noticed the better performance of shot loads during warm weather, especially on game. It always seemed to me that game in thicker winter coats/feathers was harder to bring down, but I never thought that their reluctance to flop into the stew pot may have something to do with cold weather shell performance. It is for sure that clays definitely do not break as well in cold weather as they do in warm, but I always attributed that to cold weather velocity loss and also to the fact that clays get harder when they get cold. I never thought that cold weather might degrade patterns and, shamefully, never tested for it.

If you have any hard figures or pattern testing in this area and would like to write a little monograph, I would be honored to publish it in SHOTGUN REPORT. That is one thing nice about the Internet. There is always someone out there who is smart enough to ask a question that I never even thought of.

Best Regards,  
Bruce Buck  
Shotgun Report's Technoid