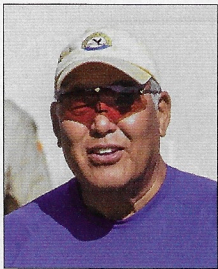


Point of Focus Determines Depth of Focus

Where is your focus, exactly?



▲ John D. Shima

When I stand behind a shooter, I can determine whether their depth of focus is closer to the target or to the end of the muzzle by looking at the way the muzzle moves and where it is pointing. Most shooters, and many instructors, don't really comprehend that consistent depth of focus is essential to differentiate a lead picture that is real, or an optical illusion.

The concept of shooting "lead pictures" relies on a two-dimensional approach to a three-dimensional game. That third dimension is the distance between the end of the muzzle and the clay target as it moves along its flight path. The distance to the target and the target's angular velocity are continuously changing in relation to the shooter. Hence, the change in the distance between the muzzle and the clay target requires a compensatory change in the shooter's depth of focus to maintain a consistent perception of the correct lead picture. There are many variables that determine whether a shooter's perception of lead is real or an optical illusion.

Visual perception varies from one shooter to the next due to a variety of physiological and psychological factors. It goes without saying that every shooter sees lead differently. For purposes of discussion, I separate the perception of lead into two categories, which are determined by depth of focus.

Blended Focus: When using blended focus, the point of focus of the shooting eye is located somewhere between the end of the muzzle and the target. Blended focus allows shooters to see the muzzle and the target simultaneously. When the target appears more distinct, their depth of focus is closer to the target, and when the end of the muzzle seems to be in sharper focus, their depth of focus is closer to the muzzle. Elite shooters who use blended focus are able to maintain a depth of focus that remains consistently closer to the target throughout the shot. Hence, the target is in their primary focusing zone, and the muzzle is in the secondary focusing zone of the shooting eye's central visual field.

Absolute Focus: When the point of focus is above and beyond the muzzle and directed onto the target, the shooter is using absolute focus. As the target moves through its flight path, the depth of focus will change to accommodate the change in distance. The depth of focus is 100% on the target,

so there is no awareness of the muzzle in the shooting eye's central visual field.

I believe watching the target continuously, with the depth of focus primarily on the target, is essential to seeing lead pictures in a state of consistent reality. Watching a clay target continuously during its flight involves depth of focus and point of focus. Whether a shooter prefers to use blended or absolute focus is irrelevant. All shooters must develop consistency in the way they manage their depth of focus to eliminate the visual deceptions that cause inconsistent lead pictures.

Depth of Focus: If I ask any person with normal vision to stand on a skeet station, call for a target, and tell me where it goes, it is easy for them to "watch the target continuously." Their eyes will naturally detect the movement of the emerging target with their soft focus, acquire it, and track the target while it travels along its flight path. Their depth of focus remains on the target throughout its flight because it is the only moving object for them to watch.

Point of Focus: The central visual field of the shooting eye has a primary focusing zone and a secondary focusing zone. An object in the primary focusing

zone is clearly in focus, and objects in the secondary focusing zone seem blurry or out of focus. When a shooter looks at a specific portion of a moving clay target, the primary focusing zone is "hard" focusing, which makes the details of the target very clear. At the same time, the end of the muzzle appears out of focus (blended) or out of the picture (absolute) completely.

In my opinion, the only way for shooters to perceive consistent lead pictures in the break zone is to maintain the depth of focus on the target until it breaks. Focusing on the target continuously also synchronizes muzzle speed to target speed. Since the distance from the end of the muzzle to the target changes during the flight of the target, the only way a shooter can maintain the proper depth of focus in the break zone is to control the point of focus on the target. Hence, the point of focus (hard focus) on the target determines the proper depth of focus, which creates consistent lead pictures in the break zone. **CTN**

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