

The Art Of Shooting Down

By Bill Winke, Field Editor

The chances are high the last time you missed a deer from a treestand you shot high. The first reason why this happens is a matter of gravity—you have to shoot high or Newton got that bump on his head for nothing. The second reason relates to shooting form. The third is a function of the animals themselves. There are simple things you can do to overcome each of these problems.

Understand Gravity

When you shoot your bow at a target on your level, the arrow is actually pointing slightly upward on the rest. When you release the string, it arches up, crosses your line of sight and then drops back down to the target; as a result, it crosses your line of sight twice.

Things are different when you shoot from a treestand. Gravity isn't working at a 90-degree angle to your line of sight anymore. The arrow goes up across your line of sight when you release the string; but it doesn't drop back down as far; as a result, if you're using the same bow you sighted-in on the ground, you will shoot high.

You can reduce the effects of the downward shooting angle on your accuracy by always using the horizontal distance to

Size of the Kill Zone

	10 yds.	20 yds.	30 yds.
0°	9.0"	9.0"	9.0"
20°	7.5"	8.5"	8.8"
30°	6.4"	8.0"	8.5"

leaves size of a whitetail's vital zone about 1 inch wide at the neck, which extends to the treestand (erectum). It is normally the percentage of that area gets because of the downward angle of the shot.

the animal. The line-of-sight distance is misleading; it's only accurate when you're shooting on perfectly flat ground. Using true horizontal distance will help on all but the very short shots. The only solution for shooting deer at steep angles is to practice from a stand.

You can determine horizontal distance by using a tilt-adjusted range-finder or by taking your range readings on tree trunks that are at your height. But basically, if you plan to hunt from a treestand, you must sight-in from a treestand. Whichever system you use to determine the distance (horizontal or line of sight) when sighting-in is the same system you must use when hunting.

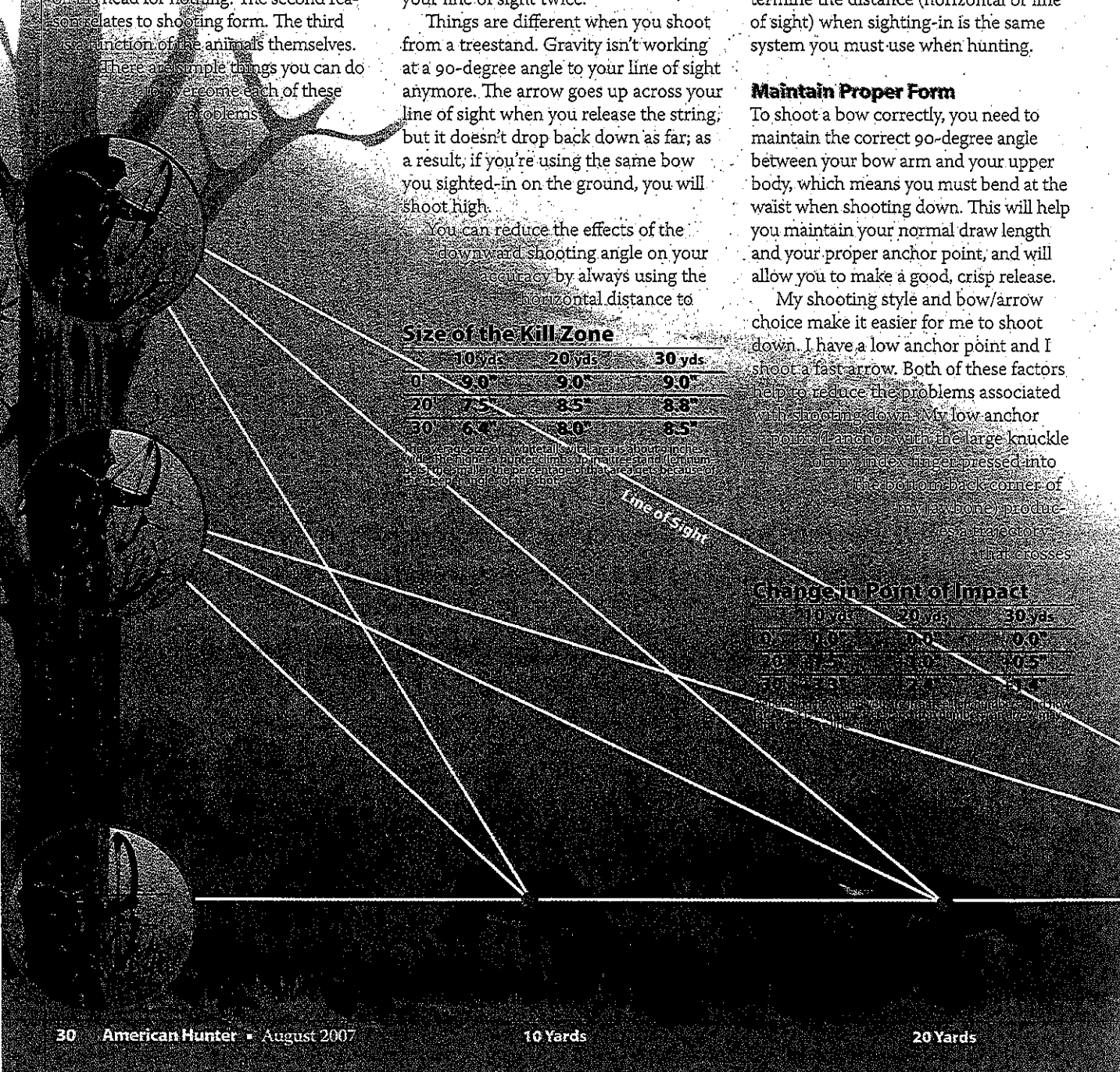
Maintain Proper Form

To shoot a bow correctly, you need to maintain the correct 90-degree angle between your bow arm and your upper body, which means you must bend at the waist when shooting down. This will help you maintain your normal draw length and your proper anchor point, and will allow you to make a good, crisp release.

My shooting style and bow/arrow choice make it easier for me to shoot down. I have a low anchor point and I shoot a fast arrow. Both of these factors help to reduce the problems associated with shooting down. My low anchor point (I anchor with the large knuckle of my bottom index finger pressed into the bottom back corner of my bow) produces a trajectory that crosses

Change in Point of Impact

	10 yds.	20 yds.	30 yds.
0°	0.0"	0.0"	0.0"
20°	1.7"	3.0"	3.5"
30°	3.4"	5.4"	6.4"



my line of sight farther out than a high anchor point allows. Consequently, my arrow stays closer to my line of sight throughout its entire flight path than one of the same speed coming from a higher anchor point. Also, because I shoot mid-weight arrows at 285 to 290 fps, my arrow's speed flattens my trajectory—like the low anchor point, it keeps the arrow closer to my line of sight. As a result, I don't have to aim low on shots at normal distances regardless of the shot angle.

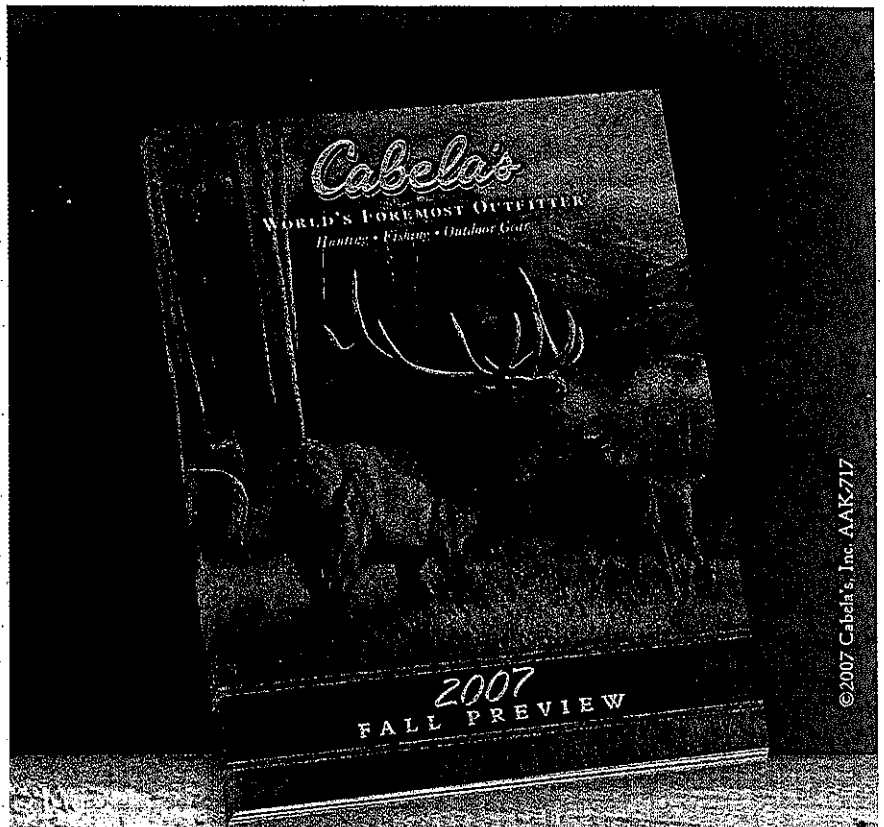
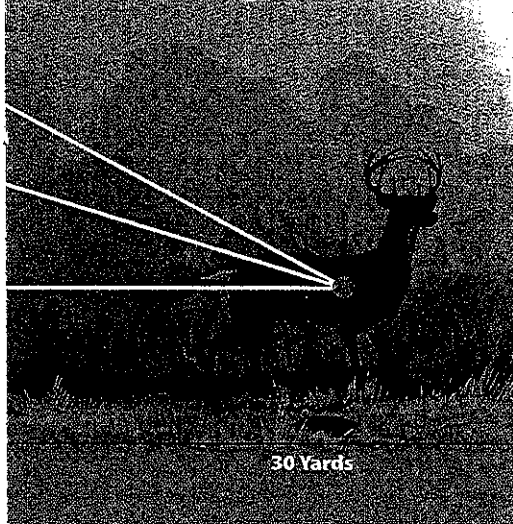
String Jumpers

You may also miss high if the deer you shoot at hears the sound of the shot and drops before the arrow arrives. This is often called "string jumping." When a deer hears a shot, it loads its legs in order to run, this causes its body to drop down before it leaps up.

I've made a few assumptions about reaction time and have done the following calculations: If you shoot an arrow traveling 230 fps from a treestand at a deer 20 yards away, the deer can drop roughly 6 inches before the arrow arrives; whereas, if you shoot an arrow traveling 280 fps, a deer 20 yards away is likely to drop closer to 3 inches. At 30 yards, a deer will drop roughly 17 inches before an arrow traveling 230 fps arrives, and a deer will drop roughly 10 inches before an arrow going 280 fps gets there.

Knowing these numbers is not enough. You also have to read the deer's body language and decide before each shot if the deer is wired tightly enough to react. Typically, does are more likely than bucks to drop at the sound of the shot, but tense body language is a dead giveaway in all cases. If the deer appears alert and focused, it's likely to react.

Illustration: Dmitry Schildovsky



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