

Full-bore- Just getting a tan  
Small-bore- Range finally open

# The



July 2020

# Buffalo Chips



**MANITOBA PROVINCIAL RIFLE ASSOCIATION**

Air Rifle      22 Long Rifle      High Power Rifle

Like always, if you have any questions, scores, tips or advice, comments, or have something that you would like to have published in the For Sale / Wanted section, email me at [mprachips@gmail.com](mailto:mprachips@gmail.com)



# Windy and hot, then windy and wet.

So as you know, St Charles is closed until further notice and so is Selkirk while they construct new berms at 50, 100 and 150 yards on the main range. Now a good note, the air range is open and 22LR competitions/ practice sessions are being held at the Portage La Prairie range and Gateway

Next 22LR outdoor match is at the Portage La Prairie range on July 25<sup>th</sup> and the Provincials, August 8<sup>th</sup> and 9<sup>th</sup>. To get off the e-mail list for these or any other 22 monthly matches and directions contact Paul Lemire at [pilot11@shaw.ca](mailto:pilot11@shaw.ca) and go compete.

The range, located about 12 miles N-NE of Portage La Prairie, can be reached as follows:

1. Drive west from Winnipeg toward Portage La Prairie on the Trans Canada Hwy
2. Turn right off of the Trans Canada at the Hwy 26 N exit just before off reaching Portage
3. Turn left on Hwy 26 and drive a short distance toward Portage la Prairie
4. Turn right on 33<sup>rd</sup> Rd W; the first street intersecting #26 as you drive west
5. Follow 33<sup>rd</sup> Rd West (drive north) until you come to the end of the road.
  - a. Caution! The last section of the road will be more of a trail and may be wet depending on how much it has rained. However, follow the trail until it takes you past the Lodge and to the covered firing point. The parking area is located to the south of the range firing line.

This is an outdoor range but COVID protocols will be followed:

- 6 ft. physical distancing
- Hand sanitizer to be used
- Self-scoring of targets

Bring your gear, your own lawn chair, your sunscreen lotion and plenty of mosquito lotion.

Gateway is also open during the summer on Monday nights thanks to Rob Wiebe being the key holder. If you want to shoot 22LR indoor prone contact Rob at [rwiebe1@mts.net](mailto:rwiebe1@mts.net)

# Trigger Control: Mastering The Mechanics Of A Precision Press



Manipulation of the trigger without disturbing the lay of the sights sounds easy, but some shooters can put a lot of movement into their shots because the rifle is not properly set up for them.

**Of all the fundamentals of precision marksmanship, trigger control is among the most weighty for consistent and accurate shooting.**

What Are The Finger Mechanics Behind Trigger Control:

- The trigger shoe squarely on the pad of the finger.
- Finger should create a 90-degree angle at the second joint.
- The trigger finger should not touch the stock.
- When executing the press, the trigger finger should move like a hinge straight to the rear.

This is an excerpt from Frank Galli's new book, [Precision Rifle Marksmanship](#) available now at [GunDigestStore.com](#)

Trigger control is defined as the manipulation of the trigger without disturbing the rifle or the lay of the sights on the target. Most errors when shooting can be attributed to improper manipulation of the trigger. In fact, we are such creatures of habit, we can improperly actuate the trigger over and over yet still manage to group well. This is the most influential point, because we are turning on the machine. Pressing the trigger to the rear starts the process. In most people's minds it is also the end, which causes them to inadvertently affect the shot placement. We literally beat the bullet out of the bore by moving the rifle and altering the sights off the target. In some cases, the shooters are so relieved at having fired the shot that they immediately disengage from the rifle. This is a bad idea.

## **Firing Hand Mechanics**

The purpose of the firing hand is to manipulate the trigger and hold the rifle into the shoulder pocket. We aren't gripping it like a handgun, rather holding it straight back to the rear. This requires very little pressure, so we don't want to have a death grip on it. The shooter should establish a firing position on the stock that starts from the trigger back and not from the stock forward. This is more a mental process than a literal one, as we don't want people putting their fingers on a live-weapon trigger first. The initial practice should have the shooter visualize the trigger finger before the grip. You can do this during dry practice, which is highly recommended.

## **Trigger Finger Placement**

We want to place the trigger shoe squarely on the pad of the finger, creating a 90-degree angle with the finger and second joint. This will vary slightly from shooter to shooter based on their hands, and type of stock, but the goal should be to get the fingernail to point to 9 o'clock for a right-handed shooter, 3 o'clock for a left-handed shooter. This right-angle position should be there before the trigger is pressed and remain there afterward. Shooters who find their trigger fingers curling or even flying off the shoe, need to work on their trigger control and follow-through.



Look at the trigger finger when placed on the shoe. Is your finger starting and stopping at 3 o'clock (or 9 o'clock for a right-handed shooter) when manipulating the trigger?

When addressing the stock, regardless of the type, we want to make sure the movement of the trigger finger is not touching the stock. In the old days, they called this “dragging wood” for the obvious reasons. If the trigger finger is resting against the stock, you will influence the rifle, which is not good. As our skin moves, it compresses the muscles and pushes our flesh out under the skin creating a lateral movement on the stock.

The trigger finger should be moving like a hinge, straight to the rear using our body mechanics to our advantage. If the fingernail starts at 9 o'clock and ends at 9 o'clock, you can rest assured you are manipulating the trigger straight back to the rear. In many cases, you'll find the finger is moving much less than it moves if you are incorrectly pressing the trigger shoe.

# Ballistics Basics: Initial Bullet Speed

By  
Ryan Cleckner

**Although gravity and wind are the main influences on a bullet's path, there are certainly some other factors to consider as well. One of these is the initial bullet speed.**

How does initial bullet speed play into external ballistics?

- Bullet speed does not lessen or increase gravity's effects.
- It merely gives more or less time for the force to act on the projectile.
- Three things determine speed: a bullet's initial speed, its efficiency and environmental variables.
- A longer barrel permits a faster bullet, but this doesn't equate to more accuracy.
- Temperature also can affect velocity.

Hopefully, we dispelled the myth that a fast bullet somehow resists gravity. Instead, a fast bullet merely gets to the target faster and therefore has less time to fall. Also, the longer it takes for a bullet to reach a target, the more exponentially it falls.



In an example we used, a bullet from my .308 Winchester only falls 4 inches between the 100- and 200-yard berms, but it falls almost 100 inches between the 900- and 1,000-yard berms. The bullet falls more when it's farther away because it is traveling slower (it takes longer to cover the 100 yards between berms), and it is also falling faster.

When we discuss wind in a future article, you'll see that the amount of time a bullet is exposed to wind (how long it takes to get to the target) also has a direct effect on how much a bullet is blown off of its original path.

## Gravity And Wind

At a basic level, the two main things that will affect your bullet's path are gravity and wind. All of the other variables you hear about — air pressure, temperature, altitude and humidity — don't affect the bullet's path. Instead, those variables only change how much gravity and wind can affect the bullet.

Of course, there are other things that will affect your bullet's path. For example, the spin of the earth and the spin of your bullet can both change a bullet's path. However, let's save those for a future discussion once you understand the basics first.

There are three variables that determine a bullet's speed on its way to the target:

- The initial bullet speed
- The efficiency of the bullet
- External/environmental variables

In this piece, we'll explore initial velocity. The other variables will be discussed in future columns.



Don't fall into the trap of thinking that faster is always better. There are many shooters who chase the newest fad cartridge to get whatever velocity increase they can. Yes, a faster bullet has less time to fall and be affected by the wind, but just because it is faster doesn't mean it's necessarily better overall.

Sometimes a slower bullet can be more accurate, lighter recoil from a smaller cartridge can be easier to manage, or a heavier, slower bullet might perform better when hunting (e.g. .17 HMR vs. [.30-06 Springfield](#) while elk hunting).

## **Initial Bullet Speed**

A bullet is never faster than when it first leaves your barrel. Just as it starts to immediately fall due to gravity, it also starts to slow down due to air resistance.

The cartridge largely dictates a bullet's initial velocity range. The same bullet can be shot faster with more pressure up to the safe limit for a particular cartridge. Once you reach the pressure limit, you'll need to upgrade to a cartridge that can handle more pressure.

Another way to increase initial bullet speed is to shoot a lighter bullet. Within the same cartridge, a lighter bullet can be shot faster. However, that lighter bullet will slow down faster due to air resistance, and it will be affected by wind more than a heavier bullet going the same speed.

## Barrel Length

Generally, a longer barrel allows for faster bullet speed. As I mentioned above, however, this isn't necessarily better.

For example, a shorter rifle barrel can make for a lighter rifle that is easier to carry in the field while hunting, and it can make a rifle more maneuverable in a tactical situation.

Do you know what else a shorter barrel can do? It can make a rifle more accurate. Yes, you read that right. A longer barrel does not provide more accuracy; it only provides more velocity.



Consistency is the key to accuracy. A longer barrel of a certain diameter can flex and “whip” more than a shorter barrel of the same diameter. The shorter barrel is relatively “stiffer.” Imagine two sticks of the same diameter but different lengths — the longer one is easier to flex and break.

## Temperature

A bullet's initial velocity isn't constant. Even with the same cartridge shooting the same bullet with the same powder charge, higher temperatures will result in faster velocities.

Higher temperatures can be experienced either because of the temperature of your environment (it's a hot day) and/or the temperature of your chamber (it's a cold day but you've been shooting a lot).



Powder manufacturers continue to make gunpowder that is more temperature stable (less affected by temperature). Although great advances are being made, no powder is completely immune to temperature changes. You should shoot in different temperatures and record what happens to your bullet.

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