.270 Winchester

History

The .270 has proven itself as one of the most versatile and effective medium game cartridges in the world. It's effectiveness on game is so well embedded in our minds that we automatically use it as a benchmark when discussing other calibers.

By the 1920's the .30-06 U.S military cartridge had proven itself to be a very effective and flexible cartridge for hunting North American game. Taking this a step further, Winchester designers were most likely inspired by the German designed 7mm bore (actually 7.2mm or .284") as a means to enhance the ballistic performance of the 06. A 7mm version of the .30-06 could utilize a lighter bullet than the 06 and produce a flatter trajectory along with lower recoil.

At this time, U.S citizens still carried a large degree of resentment towards German military technology having only recently been at the receiving end of first, the 7x57 during the Spanish-American war of 1898 followed by the 8mm during the first world war. Anything metric meant trouble and bad memories for some. Winchester avoided this problem by creating a similar but new cartridge caliber of .277" (7mm).

The .270 Winchester was released in 1925 chambered in the Model 54 bolt action rifle. The first factory load featured a 130 grain bullet at a muzzle velocity which closely approached the factory advertised figure of 3160fps from the 54 rifle's 24" barrel. It should also be noted that in this same year, Winchester also offered the 7x57 as an option for the Model 54, perhaps as a means of testing the market (and the 7x57).

As much as Winchester hoped that the .270 would become an immediate and immense success, the cartridge (along with the 7x57) went largely unnoticed due to the popularity of the sporterized ex-military .30-06 Springfield. A major problem was that factory loads for the .30-06 featured a 150 grain bullet at an advertised 3000fps, a potentially harder hitting load than the .270 130 grain bullet.

Fortunately for Winchester, U.S gun writer Jack O'Connor rescued the .270 from obscurity. O'Connor suggested that the .30-06 loads were likely to have been chronographed in extremely long factory test barrels but were unrealistic velocities for sporting rifles. Hunters, generally having no access to a chronograph, relied solely on the factory's word.

As hunters gradually began to use and experiment with the .270, the cartridge proved its worth, showing excellent exterior and terminal ballistic performance. The 130 grain bullet, though seemingly light, was designed with a stout jacket to withstand high velocity impact. Winchester's original 130 grain bullet delivered high shock, killed fast and gave outstanding penetration.

Much of the early acceptance of the .270 can be attributed to the writings of Jack O'Connor. O'Connor bought a Winchester Model 54 .270 during the year of it's introduction in 1925.

Some hunters felt that O'Connor's opinions were biased towards his enthusiasm for hunting light game in open country. The cartridge was certainly designed as a lighter version of the .30-06. Nevertheless, O'Connor hunted and took 36 species of game with the .270 and used it in North America, Mexico, India and Africa. O'Connor favored the 130 grain Nosler Partition which he used to take most of his game. Some of the large game shot by O'Connor with the .270 include Eland, Zebra, Black bear, Elk, 12 Moose and 2 Grizzly bear. He was not however biased towards the .270 and had a list of favorite cartridges including the 7x57, .7mm Rem Mag, .30-06, .300 Weatherby Magnum, .338 Winchester Magnum and the .375 H&H Magnum. To his mind though, the .270 offered a level of power and a flat trajectory suitable for all North American hunting at a recoil level that most hunters could comfortably handle.

As the .270 gained popularity with U.S hunters, negative opinions also arose. Hunters began to complain that the 130 grain loading ruined too much meat and tore large holes in skins. To help with the problem Winchester released a 150 grain load at a very moderate velocity. Ironically, sales of the mild performing 150 grain load were very low. As a compromise and as an easy means of optimizing profits, ammunition manufacturers reduced the powder charge weight of 130 grain loads, lowering muzzle velocities to below 3000fps.

It was at this time that New Zealand government hunters began to utilize the .270 for the mass culling operations on NZ wild deer. The new lower velocity loadings caused abysmal results. After locating a herd of deer, the culler would open fire, quickly shifting aim from one animal to the next. Once the entire herd was culled, the next job was to collect the tails as required proof of the kill. In the South Island of NZ, when Red deer hinds became lean in the winter, the .270 130 grain bullet would pass straight through the chest with either little expansion or simply low energy transfer. Slow kills allowed animals to escape unnoticed by the culler who was focused solely on placing one chest shot after another on successive animals. The .270 was soon discarded for other faster killing combinations.

In the U.S, similar comments occurred over several decades, however the widely opposed complaints of either too much meat damage or too little did nothing to inspire ammunition manufacturers. Factory loads remained unchanged till the mid 1990's when premium options started to become available. Since the year 2000, competition between ammunition manufacturers has resulted not only in more variation of bullet styles, but also a general, major increase in performance all around.

Despite the extreme views of either too little or too much meat damage, the .270 has been an immensely popular mainstream cartridge and most likely will remain so for several more decades. Hunters have come to expect such reliable performance from the .270 that the cartridge is all too often taken for granted, receiving little praise, a utility work horse and for many, an almost boring subject.

The .270 is popular with both factory ammunition users and hand loader's. With hand loads, like many cartridges, the performance of the .270 can be greatly enhanced but with great economy. Both factory ammunition and hand loading components can be found in abundance world wide and one would have to look very hard to find a gun store that does not stock at least one .270 caliber rifle.

Performance

The performance of factory .270 Winchester ammunition has undergone a significant change since the U.S war on Terrorism began in 2001. The war on Terrorism sparked a massive corporate bidding frenzy for military contracts. Contractors such as Federal not only increased their focus on military ammunition but also smartened up their entire company profile by enhancing the performance of sporting ammunition. For several decades, U.S factory sporting .270 130 grain ammunition produced between 2800 and 2900fps with 2850fps being the average. The only company that produced a load with a muzzle velocity above 3000fps was Olin (Winchester).

Most pre 9/11 ammunition produced very poor performance on game. The combination of low muzzle velocities, non aerodynamic bullet designs and the trend towards 22" barrels all took a toll on performance. At close ranges this ammunition performed adequately but at ranges beyond 100 yards, kills could be very slow. At 200 yards, lean bodied animals would often show no sign of a bullet strike whatsoever and escape to cover. Many hunters would have been fooled by what seemed like a complete miss when using this ammunition of the past.

After 9/11 several .270 loads were revised by various manufacturers. Muzzle velocities for 130 grain loads are currently in the 3030fps range as an average. This has also been helped by the return of 24" barrels on factory rifles. Today's ammunition hits noticeably harder and kills are much faster, especially out at the 200 yard mark. The sole remaining problem with the most common ammunition brands are poor BC's. There is a definite and noticeable drop in performance on medium game at 275 yards and beyond due to the excessive loss of velocity with the majority of factory loads.

Generally speaking, the current range of factory ammunition is wide enough to suit almost any hunting situation. The various entry level 130 grain soft point loads are ideal for light framed game, the premium core bonded or Barnes TSX 130-140 grain loads are suitable for heavy bodied medium game. Hand loads for the .270 are capable of producing outstanding performance and can be further adapted too suit a wide range of situations. The .270 is easily downloaded to produce lower felt recoil with performance duplicating the 6.5x55. The .270 also makes for an excellent varmint cartridge. With high BC bullets loaded to full potential velocities, the .270 is a spectacular killer of medium game out to generous distances.

As for heavy game, the .270 has enough power to drive premium projectiles fully through the largest bovine broadside but wound channels are narrow and bleeding is slow. With head and spine shots, the .270 loaded with premium projectiles is able to anchor large animals instantly but in truth, the .270 is vastly inferior to the flexibility and humane capabilities of a magnum medium to large bore cartridge.

Factory Ammunition

Today, there is a huge range of factory ammunition for hunters to choose from and it is common for factories to offer two to three distinct lines of ammunition, standard, semi premium and premium. For the hunter, shopping for .270 ammunition can end up a confusing and frustrating affair. More often than not, hunters, regardless of their financial means, will opt for a low priced load and buy several packets in order to gain practice.

Winchester Olin, PMC, Remington, Hornady and Federal all offer basic entry level 130 and 150 grain soft point bullets. In earlier days, these designs were the feature loadings. Muzzle velocities for the 130 grain loads now average 3030fps from 24" barrels. Both Federal and Winchester offer the hottest loads producing between 3050 and 3060fps, right on advertised specifications. PMC is now the slowest at 2900fps but makes for a good, light recoiling medium game, moderate range load, duplicating the 6.5x55 Swedish Mauser with hand loads.

Generally speaking, the basic factory 130 grain soft point loads produce hydrostatic shock on medium game down to an impact velocity of 2600fps. Remington, Federal and Olin loads stay above the 2600fps figure out to between 150 and 175 yards. Between the impact velocities of 2600fps and 2400fps, hydrostatic shock is absent but wide wounding leads to fast killing in a matter of a few seconds. The above factory loads break 2400fps at between 250 and 275 yards. At impact velocities below 2400fps or beyond 275 yards, wounds become narrow and killing delayed. At these ranges, rear lung shots should be avoided in favor of the forwards shoulder point of aim.

Winchester Olin standard loads currently feature the 130 grain Power Point at a true 3060fps in 24" barreled sporters, the 130 grain Silver Tip also at 3060fps and the 150 grain Power Point advertised at 2850fps for a realistic 2780fps. The ball powder used by Winchester in their 130 grain loads loses little velocity in shorter 22" barrels - to the order of 20fps per inch of barrel lost - while the 150 grain load is true to the rule of thumb, losing 35fps per inch.

The 130 grain Power Point and Silvertip are ideally suited to lighter deer species but each performs differently. The Silver Tip's original aluminum ballistic tip gives explosive expansion for cross body lung shots while an attempt to arrest mushrooming occurs at the cannelure which in turn tends to cause a delayed but gradual total disintegration of the projectile . The 130 grain Power Point offers slightly more controlled expansion and although the Silver Tip will sometimes exit lighter medium game on cross body shots, the Power Point's longer wound channel is more able to create a broader exit wound for blood trailing.

The 150 grain Power Point load gives around 2710fps in the average 22" sporter, duplicating factory .308 Win 150 grain loadings. The low velocity of this loading, initially designed to minimize meat damage, also helps control expansion and prevents bullet blow up at close ranges. The Power Point produces fast killing on medium game at close ranges, creating free bleeding exit wounds on cross body shots. Nevertheless, this load suffers in open country at ranges beyond 100 yards due to the low velocity resulting in narrow wounds.

Olin's semi premium Supreme load features the130 grain Nosler Ballistic Tip for a true 3050fps.

Marketed under the brand name Ballistic Silvertip CT (Winchester Nosler Combined Technologies), the Nosler is dressed with a Grey colored polymer tip to symbolize the traditional Silvertip bullet. The Ballistic Silvertip is coated in black colored Lubalox which decreases bore friction allowing loads to easily reach advertised velocities within industry pressure specifications.

Ballistically superior to the original Silvertip, the BST is designed purely for long range open country work on medium game. Terminal performance is very similar to the original Silvertip and identical to the 130 grain Sierra GameKing where velocity is equal. At close ranges, energy transfer occurs incredibly fast, creating large internal wounds which peter out quickly. On animals over 40kg (80 lb) cross body shots result in either a small exit wound or none as the remainder of the projectile comes to rest under the skin. The BST will either disintegrate or shed its core when striking pelvic bone at close range, a clue as to why Nosler developed the Partition Bullet many years ago. At longer ranges, the BST comes into its own, simply due to higher BC's than traditional .270 offerings which translates into higher downrange velocity for wider wounding. The BST remains above 2400fps out to 325 yards.

During the mid 1990's Winchester released the 140 grain Failsafe at 2920fps. With its Lubalox coating and four expanding, blender blade like petals, the Failsafe was marketed quite aptly as the Black Talon along with an eagle claw emblem. The front of the Failsafe is similar to the Barnes X while the rear features a lead insert similar to the Partition. The Failsafe is an extremely stout bullet, out penetrating all .270 hunting bullets on the market. The Failsafe produces the smallest frontal area of all .270 projectiles and likewise can produce equally small wound channels. On lighter animals the Failsafe gives slow kills, even at close range, when shots strike behind the shoulder into the rear lungs. If shoulder bones are struck, an extremely violent wound channel is created which momentarily bells out the offside skin. If the gut is breached during the projectile's travel, gut fiber follows the path of the bullet and becomes trapped in large clumps under the skin where it was temporarily belled (similar to the 300 magnums). This bullet is best suited to animals weighing in excess of 150 kg (330 lbs) and an optimum choice - though at its absolute limit - if using the .270 for neck shooting heavy game.

A recent addition to the Winchester supreme line is the Nosler 140 grain Accubond (Lubalox coated) producing a mild 2950fps in 24" barrels and 2880fps in 22" barrels. As an all-round medium game bullet for the .270, the Accubond is one of the best on the market. While higher muzzle velocities would be useful, the Accubond performs well out to 300 yards on a variety of game and produces broad wounding for fast kills.

One of the more commonly used brands of ammunition because of its economy, is PMC ammunition. Standard loads in the Bronze line include the 130 grain soft point at an advertised 2950fps and 150 grain at 2750fps. The 130 grain load is regularly used by budget minded hunters, and at realistic muzzle velocities of 2900fps, is a lower recoiling, modest performing load giving best performance inside 250 yards.

PMC Silver brand loads include the Sierra 130 grain GameKing at 3050fps and the 150 grain GameKing at 2850fps. The 130 grain GK works well at the true muzzle velocities of 2900fps, producing fast, uniform kills with ordinary cross body and slightly quartering shots on medium

game inside 250 yards. The 150 grain bullet is definitely different. On lean animals, kills can be delayed due to a lack of energy transfer. The 150 grain GK is best used on game weighing above 80kg (180lb) as a safe minimum. At 2750-2800fps, this load is again best used out to moderate, rather than longer ranges. That said, penetration of the GK launched at 2750-2800fps is much better than the typical jacket core separation that occurs when this bullet is hand loaded to 2950fps and driven into vitals from raking angles.

The PMC Gold line features the 130 grain Barnes TSX at 2910fps and 150 grain TSX at 2700fps. Although these are both good projectiles, the velocities of PMC ammunition in sporting rifles are far too low for optimum performance.

Current light weight loadings from the Hornady Custom line include the 130 grain SST and 130 grain Interlock bullets at an advertised 3060fps. Both loads produce over 3000fps in 24" barrels and 2920fps in 22" barrels. Neither of these loads are as good as one might come to expect from Hornady.

The Interlock soft point is prone to total disintegration at close ranges when striking bone while the SST is prone to suffer early jacket core separation under the same conditions. In some cases, penetration of the SST may be as little as 6". Nevertheless, both projectiles produce wide wounds and fast killing when matched to light framed game. No doubt both bullets have been used to take most North American game however for best performance, limiting as it may seem, both loads are best suited to game weighing less than 60kg. The SST produces fast killing out to 325 yards, the Interlock soft point producing best performance inside 275 yards.

The 130 grain SST is also offered as a Superformance loading at 3200fps. Along with this, Hornady now manufacture the 130 grain GMX bullet at 3190fps for around 3120fps in 22" barreled sporters. This homogenous copper bullet, like the Barnes TSX, does its best work at either close range / high impact velocities or on tougher animals. The GMX is ideally suited to game weighing above 90kg (200lb) and up to 320kg (700lb).

Medium weights from Hornady include the 140 grain Interlock BTSP at an advertised velocity of 2940fps for just over 2900fps and 2830fps respectively along with the 140 grain SST Superformance load at 3090fps giving around 3020fps in 22" barrels. Of these, the SST is the more spectacular killer on medium game and even though it is only 10 grains heavier than the often shallow penetrating 130 grain SST, the 140 grain version is a better bullet. Neither of the 140 grain bullets are totally reliable for close range raking shots on Whitetail sized deer however wounds created by the SST are usually severe enough to slow animals down and allow for fast follow up shots. The 140 grain SST SF load is extremely violent and fast killing out to 275 yards, retaining its ability to produce broad wounding out to 400 yards.

The heavy weight of the Hornady line is the 150 grain Interlock at 2840fps for realistic velocities of 2770fps. This soft bullet opens up quickly on impact, even at low velocities. Penetration is usually excellent on cross body and quartering shots but poor with tail on shots. Unfortunately, approximately one bullet in one hundred will suffer bullet blow up on the shoulder bones of game weighing as light as 60kg (130lb). The lower velocities of this load do help minimize occurrences of bullet blow up but also dictate that the 150 grain Interlock is best suited to closer

ranges if high shock and broad wounding is to be maximized.

Remington's traditional .270 130 grain loadings are the Bronze point and Core-Lokt at an advertised at 3060fps. The Bronze point performs similarly to Winchester's Silvertip, an explosive design for open country hunting while the Core-Lokt utilizes controlled expansion.

From current true velocities of around 3030fps in 24" barreled sporting rifles, the Core-Lokt does its best work inside 250 yards while the Bronze point is superior out at the 300 yard mark due to its ability to create wider wounds. As much as the Core-Lokt projectile is a good performer on game, there is a definite change from fast killing inside 250 yards to very slow killing at 275 yards with rear lung shots. For fast kills at longer ranges, the Core-Lokt must be driven through shoulder bones. The Bronze point has a more aerodynamic shape in comparison to the flat tip design of the Core-Lokt but it does not have a greatly superior BC. Performance is instead, enhanced through the use of the more explosive bullet design.

Remington's heavyweight standard loading consists of the 150 grain round nose Core-Lokt at an advertised 2850fps for true velocities of 2800fps. This is a well designed projectile and while it would have been nice to have a pointed 150 grain Core-Lokt at 2950fps, the factory 150 grain loading is sufficient for bush/woods hunting large medium game.

Remington have in the past, made several attempts to produce high grade ammunition. For many years, performance was retarded by low velocities. The 135 grain and 140 grain Remington Extended Range loadings are prime examples, neither achieved over 2800fps in 22" barreled sporters. Next came the 130 grain Nosler Ballistic tip but again, fairly mild at around 2850fps. With competition being centered around high velocity loadings, Remington finally made more effective changes.

The latest .270 offering under the brand name Remington Accutip is similar, if not identical to the Hornady 130 grain SST (it may well be). The Accutip is colored bronze in line with Remington's original Bronze Point ammunition. The 130 grain Accutip loading produces 3060fps in 24" barreled sporters and 2990fps in 22" barrels. Performance is identical to the SST.

Remington now offer 3 core bonded loadings in their premier range. These include the 130 grain Swift Scirocco at 3060fps, the 140 grain Core-Lokt Ultra at 2925fps and finally the 140 Swift A-Frame, also at 2925fps. The 130 grain Scirocco is a fast expanding, fast killing bullet suitable for all around work on medium game. Like the InterBond, penetration is excellent on medium game with all but tail on shots. The 140 grain Ultra is similar to the Scirocco in terminal performance but lacks the high BC of the sleek Swift bullet. The A-Frame, which has a very similar shape to the Core-Lokt, is the stoutest of the three, offering deeper penetration and optimum performance on Elk sized game.

Update 2013: During ongoing research, I have come across low velocity Remington 130 grain Corelokt ammunition yet again. To some extent, I believe that in older 22" barreled rifles, perhaps due to powder choice, these loads do not hold a high enough or long enough peak pressure wave in older (eg 1990's), well used, loose dimensioned 22" bores. In some instances, velocities of the 130 grain Core-Lokt load can be as low as 2800fps, just as I had found in the

past. Performance is obviously limited with regard to extended range shooting. The only upside to this low velocity is that at close ranges, both wounding and penetration is adequate for game up to the size of red/Mule deer.

Federal's traditional standard .270 loads include the 130 grain Hi-Shok at 3060fps and 150 grain Hi-Shok round nosed at 2850fps. These loads are also branded as Vital-Shok and more recently - American Eagle. Construction of the Hi-Shok is near identical to the Remington Core-Lokt however the Federal projectiles are somewhat more brittle and prone to lose vast amounts of weight when striking bone. Like the Core-Lokt, the 130 grain Hi-Shok has a low BC and loses a great amount of velocity over a moderate range, resulting in very slow kills beyond 250 yards with rear long shots. This load is usually extremely accurate in a wide variety of rifles - providing the rifle itself is an accurate platform. It therefore goes without saying that at 300 yards, using an accurate rifle, the Hi-Shok load can produce fast kills with extra care to shot placement.

The Federal Premium branded ammunition features both standard and enhanced velocity (HE) loadings for bolt action rifles. Loads include the 130 grain Sierra GameKing, the 130 grain Nosler Ballistic Tip and 130 grain Partition, the 130 grain Barnes TSX, the 130 grain Fusion (core bonded), the 140 grain Trophy Bonded Bear Claw, 140 grain Accubond, 145 grain Fusion, 150 grain GameKing, 150 grain Partition and finally, the 150 grain Fusion.

Unfortunately, Federal's attempts to try and cover all bases has a tendency to cause more confusion rather than offering solutions. Furthermore, most gun store owners simply cannot afford to carry such a vast range of stock. Several of these loads duplicate the performance of others within the line and are ultimately, counter productive.

The 130 grain Sierra GameKing and Ballistic Tip bullets at 3060fps produce identical results on game. Explosive wounding and adequate penetration for cross body and quartering shots on lighter medium game are the hallmarks of these bullets. It is somewhat unfair that the GameKing is listed as a premium projectile because as a reloading component, the GK is a basic budget cup and core style projectile. Realistically, Federal could or should replace the Hi-Shok bullet with this very fast killing and accurate offering.

The 130 grain Partition was, as mentioned, a favorite of Jack O'Connor's. Although O'Connor used this bullet on all game, the 130 grain bullet is better suited to lighter animals and on game weighing less than 80kg, the 130 grain Partition really shines. The Partition is always at its best when correctly matched to the job at hand. The 130 grain projectile has a low SD and simply cannot be expected to give the same deep penetration that the 150 grain Partition is capable of.

The 130 grain TSX at 3060fps is best suited to use on larger animals, weighing above 80kg (180lb), up to the size of Elk with ordinary chest shots. On lighter animals, as velocity falls below 2600fps (225 yards), the TSX does not meet enough resistance to impart shock within the first half inch of penetration. Kills on light game can slow regardless of the usually good internal wounding. This can however be avoided by ensuring shots are aimed to strike major shoulder bones and the forwards section of the lungs.

The 130 grain Fusion bullet at 3060fps is a fast killing bullet on lighter medium game inside 250 yards. Penetration is on par with the Partition although slightly better where heavy bone is encountered. Apart from this, the Fusion offers nothing that cannot be done with the Barnes 130 grain TSX.

The 140 grain TBBC is offered at a velocity of 3100fps. Why Federal felt the need to offer both the 130 grain Barnes and the similar 140 grain TBBC is anyone's guess. Performance of the TBBC duplicates that of the TSX.

The 140 grain Accubond at 2950 is, as already mentioned, a very good load. The Accubond is somewhat faster expanding and faster killing than the 130 grain Fusion at longer ranges or the 150 grain Fusion at all ranges.

The 150 grain Sierra GameKing advertised at 3000fps, gives around 2950fps in 24" barreled sporters and around 2880fps in 22" barrels. The 150 grain GameKing is an odd projectile; too stout for fast kills on light game with rear lung shots but too soft to be useful on larger medium game. This load is perhaps best suited to game weighing right around the 80kg (180lb) mark at extended ranges of 200 to 350 yards - a very narrow range of performance.

The 150 grain Partition is an excellent projectile, one of the very best. Ironically, Federal load this projectile to 2850fps for a realistic 2800fps rather than the much more useful velocity of 2950fps (from 24" barrels).

Hand Loading

The most suitable powders for use in the .270 are the medium slow burners in the 4350 range through to slow burning 4831. Powder choice is very much dependent on throat length. Short throated .270 caliber rifles simply cannot obtain optimum results with slower burning 4831 type powders.

Because the .270 is one of the world's most common/popular chamberings, this also means that more errors of machining are found within this caliber - a simple but unfortunate matter of statistics. Throat lengths of factory rifles do vary considerably, making it imperative that reloader's pay heed to reloading manual guidelines during initial load development. A small number of rifles cannot handle maximum listed loads, others, like the old Sako Finnbear, take up to 7 grains more powder than listed maximums to achieve full pressures.

The ideal barrel length for the .270 is 24" (600mm). This length will typically give 3150fps with 130 grain bullets, 3050fps with 140 grain bullets and 2950fps with the 150 grain weights. The standard 22" sporters which dominated the market place during the 1980's and 1990's will normally achieve 3100fps, 3000fps and 2900fps respectively.

Hornady produce a comprehensive range of projectiles for the .270. Varmint bullets include the 100 grain soft point, 110 grain hollow point and 110 grain V-Max. None of these are particularly

spectacular performers on light medium game and are best utilized in their primary role. Medium game projectiles include the 130 grain Interlock (flat base), the 130 grain SST and 130 grain InterBond, the 140 grain Interlock BTSP, 140 grain SST, the 150 grain Interlock soft point, 150 grain Interlock round nose soft point and finally, the 150 grain SST.

The 130 grain Interlock, as previously mentioned, is a very soft, fast killing bullet, best suited for use on lighter medium game. The Interlock works extremely well at reduced velocities but pushed fast, suffers bullet blow up on heavy bone, leading to poor penetration. The 130 grain SST is a more violent killer, stout but brittle and again prone to shallow penetration. The InterBond is a very good game bullet but better still, has the same form as the SST, enabling both to be utilized without any shift in POI. The InterBond is extremely violent and fast killing at impact velocities above 2600fps, the SST useful at longer ranges, down to 2400fps (400 yards) and 2200fps (500 yards) at a push. The InterBond is quite capable of taking large animals the size of Elk, regardless of its seemingly diminutive weight.

The 140 grain Interlock and SST are both adequate medium game bullets. As can be expected, the SST is the more dramatic killer. The 150 grain round nose does not really achieve anything that cannot be done better with a pointed bullet - the .277 caliber simply isn't wide enough to make use of a wide meplat. The 150 grain pointed bullet is also a violent medium game bullet but is certainly not tough enough for large medium game. The 150 grain SST is however, a different animal altogether.

For best results, the 150 grain SST should be annealed in candle flame (see 7mm Rem mag). Once softened, the reloader has in his or her possession, an excellent all round bullet. Wounding is outstanding, penetration is outstanding (for a conventional cup and core design) and performance on game is uniform from point blank out to around 450 yards. The annealed 150 grain SST is suitable for a wide range of animals from the lightest and leanest of game through to heavily shielded Boar. This really is a go-to load for the .270 but for best results, needs to be loaded to 2900fps and above, which in most cases requires a chronograph to monitor performance.

Sierra projectiles include the 90 grain hollow point, 110 grain spire point, 115 grain MatchKing, 130 grain BTSP GameKing, 130 grain Pro-Hunter, 135 grain MatchKing, 140 grain HPBT GameKing, 140 grain SPBT GameKing, 150 grain SPBT GameKing and the 150 grain round nose Pro-Hunter.

The 110 grain Sierra spire point is a reasonably good light game bullet. This projectile can either be driven at 3300fps for explosive performance or down loaded to 2900fps, producing desirable results as a youth load. When downloaded, the 110 grain Sierra is fast killing out to around 100 yards with ordinary shot placement however beyond this range, care must be taken to place bullets into the shoulder bones of lighter medium game. Used this way, the Sierra is quite adequate at producing clean kills out to ranges exceeding 300 yards.

The 130 grain GameKing and Pro-Hunter are both useful projectiles, especially for hunters on a limited budget. The PH is a stout, flat base design for deep penetration on medium game, the GK is also rather stout but very explosive, even at lower velocities. The PH tends to lose versatility

out at 275 yards and becomes heavily reliant on exact shot placement. The GK is much more forgiving at longer ranges. Bullet blow up is almost guaranteed inside 275 yards giving best performance on game weighing less than 80kg (180lb). Neither of these projectiles are optimum choices for large bodied game at any range considering other bullet choices currently available today.

The 140 grain HPBT is another violent bullet, in the same class as the 130gr GK. This projectile seems to have little merit considering its very low BC of .337. Nevertheless, on lighter game and out to 300 yards, the HPBT is a wicked, wide wounding projectile.

The 150 grain Pro-Hunter and GameKing are both to some extent best suited to specialized applications. The GK is best utilized on game weighing around 80gk (180lb) at ranges of between 200 and 400 yards, the PH best suited to similar body weights at close ranges.

Speer .270 caliber projectiles have found favor with hunters for several decades. The Speer designs are on the one hand, very old technology, but even today these projectiles have great strengths. The two main bullet types are the BTSP which is an incredibly soft bullet and the Hotcor, a stouter, partially core bonded projectile. Both designs open up extremely well on impact, the BTSP prone to gradual disintegration, the Hotcor a much deeper penetrating projectile.

For lighter medium game, the Speer 130 grain Hotcor exhibits a vast amount of shock and wound trauma. Penetration on light game is good but on game weighing 80kg (180lb) and heavier, full cross body penetration can not be expected. This bullet is best suited to lighter game at ranges less than 275 yards. At ranges beyond 275 yards, the Hotcor is affected by wind and sheds a lot of velocity with a resulting loss in wounding. This bullet often gives extremely good accuracy in rifles with finicky bores.

The 130 grain BTSP is, like the 130 grain Hotcor, somewhat limited in performance. Out to 250 yards or more, this projectile is prone to total disintegration. At longer ranges, the BTSP really comes into its own. Nevertheless, the low SD and light bullet weight are still limiting factors and for best results, this projectile should be limited to game weighing less than 60kg (130lb) at close ranges and 80kg (180lb) at ranges between 250 and 400 plus yards.

The 150 grain Speer BTSP and Hotcor cannot be described as being either more versatile or able to tackle heavier game than their lighter 130 grain counterparts. Instead, the 150 grain bullets are simply more consistent in performance. The 150 grain BTSP is best suited to game weighing no more than 60kg (130lb) at close ranges if full cross body penetration is to be expected. This bullet is a good performer on heavier game weighing around 80kg (180lb) at ranges of between 250 and 400 yards (to 2200fps). The 150 grain Hotcor is much tougher but is a very good bullet for light game producing very fast kills and deep penetration from all angles. The 150 grain Hotcor reaches its limits on game weighing 100kg and at close ranges can be prone to bullet blow up. That said, wounding is severe enough to anchor game in such a manner as to allow for follow up shots. Incidences of bullet blow up could easily be eliminated with the addition of a roll crimp (as can be found on some Federal/Hotcor factory loadings). This seems to produce major beneficial results to the Hotcor, totally arresting expansion at the crimp.

It is very easy to find fault with the Speer projectiles and witness disappointing results. Nevertheless, when a Speer bullet is matched to the job at hand, results are quite the opposite and can be very spectacular. For hunters who target game weighing between 40 and 80kg (90-180lb), both bullet styles can be put to great use.

Nosler projectiles include the 130 grain Ballistic Tip, Accubond and Partition, the 140 grain Ballistic Tip, Accubond and Partition, the 150 grain Ballistic Tip and Partition and finally, the 160 grain Partition-semi pointed.

The 130 grain bullets each have their forte, the 130 grain BT is much the same in terminal performance as the 130 grain Sierra. The 130 grain Partition is a good lighter medium game bullet, the Accubond slightly more reliable at close ranges and retains a lot more energy and velocity down range, again very good on medium game weighing nup to 80kg (180lb).

The 140 grain Nosler projectiles are good all-rounders but it is the Accubond that really stands out for its balance of high velocity versus high wounding potential on a wide variety of game weighing up to 120 kg (250lb).

The 150 grain Ballistic Tip is a good medium game, longer range bullet. This projectile is slightly softer than the 150 grain GameKing and somewhat stouter than the Speer BTSP. The 150 grain BT is a good open country bullet for use on light, lean framed game weighing up to 80kg as a safe maximum.

The 150 grain Partition is a truly outstanding bullet. A key factor to extracting this performance is to ensure hand loads are running at muzzle velocities of 2900fps or higher. This projectile is spectacular when used on light game, absolutely emphatic on heavier animals of up to 150kg. On heavier animals up to the size of Elk, the 150 grain Partition is one of the best bullets available in .270 caliber. For a long time I have debated this internally. The .270 is in some ways a light cartridge for large bodied game, it is certainly lighter than a 7mm Remington Magnum loaded with the 160-175 grain Partition or a .30-06 loaded with a 180 grain bullet. For many years, I preferred to ere on the side of caution and recommend the Barnes in the .270 for use on tough game. Yet after many years and having seen many tough animals downed with the violent wounding Partition, this bullet still proves its merit with an ability to produce wide wounding and deep penetration on large bodied deer and tough wild boar with armor plated shoulder shields. Furthermore, this performance can be pushed out to considerable ranges, down to impact velocities of 1800fps although wounding is at its most violent at 2200fps and above.

My one concern with the Nosler 150 grain Partition is that it can be so good, that it can lead to over confidence in the .270 cartridge. Similar notes of this nature can be found in the 6.5x55 text. Sometimes, when a bullet performs extremely well, there is a risk of eventually pushing a cartridge beyond its limitations. Therefore, it is recommended that while great performance can be expected from the 150 grain Partition on large bodied medium game, hunters should exercise circumspection.

Nosler's heaviest bullet is the 160 grain semi point Partition. This is a very good bullet for larger

medium game, capable of the same level of wide, violent wounding as its 150 grain counterpart. Although the semi pointed form reduces the BC of the 160 grain Partition to .434, from muzzle velocities of 2800fps or higher, the 160 grain bullet still yields 1800fps at 530 yards. Wind drift is a concern but in the field, this bullet works exceptionally well. Nosler's semi point is often overlooked but it is a hard hitting, highly effective bullet. As can be expected, the 160 grain semi point also excels in the magnum .270's.

Barnes produce four TSX style projectiles in the weights 110, 130, 140 and 150 grains. Of the four, the 110 grain bullet is an excellent choice for certain applications. Driven at 3350fps, the TSX stays above 2600fps out to 260 yards. The light weight of this projectile helps ensure that when impacting medium game, enough resistance is met to initiate full expansion. This a particularly good projectile for mid weight medium game of 80 to 150kg (180-330lb) within traditional hunting ranges of out to 300 yards requiring extra care to shot placement beyond this range.

The 130 grain TSX produces excellent shock out to 200 yards (2600fps) on both light and medium weight animals but beyond this range, rear lung shots on medium game often result in slow kills. To this end, as with the 110 grain TSX, shot placement is critical for best results at longer ranges. The 130 grain TSX is vastly superior to the 150 grain Partition with regard to penetration on larger heavier animals weighing around 200kg (440lb) and heavier. The 140 and 150 grain TSX are best suited to heavier game. Generally speaking, if the animal has a chest width of over 18 inches, the Barnes 130 to 150 grain TSX projectiles come into their own. Again, high muzzle velocities are key factors in success, the higher the velocity and closer the range, the wider the wounds. The 150 grain TSX is a good match for chest shooting Elk sized animals weighing around 320kg (700lb).

A last mention must go to Berger who now produce three VLD projectiles for the .270 in the typical 130,140 and 150 grain weights. BC’s are .432, .487 and .531. Of the three, the 150 grain bullet produces the most consistent results across a wider range of body weights but as velocities approach 2000fps, bullet expansion becomes dependent on target resistance and bone encountered. Annealing the VLD helps a great deal (see annealing tutorial). One may think that choosing a lighter VLD bullet would solve all problems but lighter bullets can lack sufficient energy to initiate fragmentation at long ranges. The 150 grain VLD is best suited to game weighing up to 90kg through to 150kg (330lb) at extended ranges.

Closing Comments

Through our guided hunting services, I am able to gain a great deal of statistics. Without a doubt, the .270 Winchester has proven to be the most effective cartridge carried by clients in comparison to other non magnum, small bore cartridges. This cartridge is also one of my wife’s favorites, the others being the 7mm Remington Magnum and .35 Whelen. Steph took over 900 head of game with the .270 loaded with 150 grain projectiles (mostly the 150 grain Hotcor) before moving to the 7mm RM - purely for longer range experimentation.

The excellent performance of 150 grain .277 bullets hand loaded to high velocity cannot be emphasized enough. Both the annealed SST and Partition are effective and spectacular killers on a wide range of game, being neither too stout for game weighing as light as 20kg (45lb) nor too soft for larger medium game. Debate will always be rife as to how large an animal the .270 is adequate for. Physically, the .270 is "adequate" for just about any animal that walks the planet. It is no big feat to drop a large bovine in its tracks with one shot to the neck or head, using Barnes style bullets. However; for ordinary chest shots, the .270 is really at is best when used on light to large medium game including Elk or Sambar as a sensible upper limit within the expectations of consistently good performance.

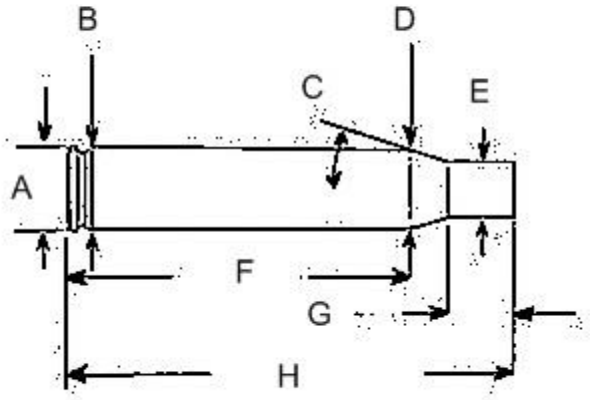
The .270 really is a very straight forwards, reliable and often spectacular cartridge, suitable for well over 90% of the worlds game species.

Suggested loads: .270 Winchester					Barrel length: 24"	
No	ID		Sectional Density	Ballistic Coefficient	Observed MV Fps	ME Ft-lb's
1	FL	Generic 130gr SP	.242	.372	3030	2685
2	FL	Win 130gr BST	.242	.435	3050	2685
3	FL	Fed 130gr TSX	.242	.431	3060	2702
4	FL	Win 140gr Accubond	.261	.496	2950	2705
5	HL	130grNP/AB/GK/BT/TSX	.242	.436	3150	2864
6	HL	140gr Accubond	.261	.496	3050	2891
7	HL	150gr SST/VLD	.279	.525	2950	2898
8	HL	150gr Partition/TSX	.279	.465/.491	2950	2898

Suggested sight settings and bullet paths									
1	Yards	100	150	274	312	350	375	400	
	Bt. path	+3	+3.7	0	-3	-7	-9.7	-13.2	
2	Yards	100	150	277	317	350	375	400	425
	Bt. path	+3	+3.8	0	-3	-6.2	-9.1	-12.4	-16.2
3	Yards	100	150	278	317	350	375	400	425
	Bt. path	+3	+3.7	0	-3	-6	-8.9	-12.2	-16
4	Yards	100	150	270	310	350	375	400	425
	Bt. path	+3	+3.7	0	-3	-7	-10	-13.6	-17.5
5	Yards	100	150	288	328	350	375	400	425
	Bt. path	+3	+3.8	0	-3	-5	-7.7	-10.8	-14.2
6	Yards	100	150	283	322	350	375	400	425
	Bt. path	+3	+3.7	0	-3	-5.4	-8	-11.3	-14.8
7	Yards	100	150	270	-310	350	375	400	425
	Bt. path	+3	+3.7	0	-3	-6.6	-9.5	12.8	16.6
8	Yards	100	150	268	307	350	375	400	425
	Bt. path	+3	+3.7	0	-3	-7.3	-10.3	-13.9	-17.8

No	At yards	10mphXwind	Velocity	Ft-lb’s
1	300	7.2	2358	1604
2	350	8.9	2319	1552
3	350	8.9	2325	1559
4	350	8.5	2289	1629
5	350	8.9	2376	1629
6	350	7.7	2406	1799
7	350	7.5	2352	1842
8	350	8.7	2280	1731

.270 Winchester



	Imperial	Metric
A	.473	12.01
B	.470	11.94
C	17deg 30’	
D	.441	11.20
E	.308	7.82
F	1.94	49.48
G	.384	9.76
H	2.540	64.52
Max Case	2.540	64.52
Trim length	2.530	64.2

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