Choose the Power of Your Gun Wisely -As It Restricts Your Pellet/Slug Options

Considerations, for midrange shooting (30+ yards) and beyond:

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- (1) To avoid extreme levels of drag and instability at transsonic speeds pellets/slugs should have a max. velocity of c. 950fps.*
- (2) To avoid unreasonably steep trajectories and instability pellets should have a min. velocity of c. 650fps slugs preferably higher like 800fps.**

Trophy Power

Hollow Point:

C Hollow Point

14.30gr, 0.023BC

14.66gr, 0.026BC

Muzzle right pellet that the gun likes (best precision) – it is better to have more pellets to choose from rather than less. (3) In order to find just the (4) To have a flatter trajectory for mid range and especially long range shooting – it is better for **Energy** pellets/slugs to have a higher velocity. Also, hollow points have a better expansion at higher velocities.

.22 cal Slugs in FPE with a Muzzle **Velocity Between** 650/800fps and 950fps – for the Given **Muzzle Energy Range**

S2

NSA 19gr, 0.065BC; [+20gr]

●NSA 21gr, 0.073BC; ●H 21gr; [+22gr]

•H 23gr; 「

23gr, 0.075BC;

•NSA

S3

S4

S5

S6

[+29gr]

0.083BC;

29.94gr, (

NSA 30gr, 0.078BC; ●H 30gr; ●H Piledriver

•NSA 32gr, 0.090BC; [+31gr]

NSA 33gr, 0.089BC; [=32gr]

•NSA 27gr, 0.078BC; •H 27gr; •NSA 28gr, 0.090BC

S7

S8

25.31gr, 0.036B¢; ●H Rabbitt Magnum Power 25.31gr, 0.039BC; [+26gr]

.22 cal Pellets with a Muzzle Velocity Tin/Zinc/Alloy: J Lead •C Domed 14 Free (J P GTO) 14.30gr, 0.024BC [\$] 11.75gr C Domed Copper 0.023BC 14.40gr, 0.023BC SIG Zero •J RS J Express Point Allov 13.43gr 14.35gr [\$\$] 11.81gr 0.023BC 0.035BC ???BC Baracuda H Sniper H Field Target Light Green Trophy 14.66gr 14.04gr 0.020BC [\$] 12.35gr 0.030BC H Field Target

J Domed 15.89gr 0.031BC •H Sniper Mag-**Hollow Point:** num 17.90gr J Hades 0.036BC 15.89ar SIG Zero ???BC Point [\$]

18.06gr, ???BC

J Heavy 18.13gr

•C Domed 19

Hollow Point:

H Crow Mag-

num 18.21gr

• H Baracuda

0.020BC

19.00gr, ???BC

0.032BC

J P Polymag

Short 15.89gr

J P Polymag

0.023BC

16.00gr

0.024BC

16.20gr

H Hornet

[\$] 0.024BC

J P Metalmag

Example #1:

0.023BC

Say I wanted to have the most amount of pellets to **choose** from to increase the chances of finding the pellet that my gun likes. → For that I go to the red numbers (muzzle energy in FPE)

Even at 17FPE, I still have 19 pellets to choose from.

17.00ar 0.028BC and find the number that is abeam of the highest amount of gray boxes and pellets to its right. In this case. 24FPE is abeam of almost all the pellet boxes (P1 through P8 = 22 pellets not counting tin/zinc alloy pellets).

0.033BC Hunter 18.21gr 0.025BC •H Bara-• H Baracuda cuda **Hunter Extreme** Power 18.52gr 21.14gr 0.026BC 0.034BC

Between 650fps and 950fps -

for the Given Muzzle Energy Range

P7

P8

J Jumbo

Monster V.1

25.39gr

0.036BC

Monster

25.39gr

???BC

Hollow

Point:

Shock

Heavy

25.39gr

0.022BC

J Ultra

P9

J Beast

33.95ar

0.046BC

P6

•H Bara-

(+B. Match)

21.14ar

cuda

J Jumbo RWS Monster Power Redesigned Bolt [\$\$] 25.39gr 24.70gr 0.039BC ???BC J Straton

Example #2:

Say I wanted to have the most amount of slugs to choose from to increase the chances of finding the slug that my gun likes. Note that the slug boxes have a aray portion that shows the muzzle energy for 800fps through 950fps. Separated by a red line is the white portion that goes all the way down to 650fps, which many find is too low for slugs. Here we only consider the gray part 800-950fps

→ If I wanted to have many slugs to choose from, but wanted to save air, or my gun isn't that powerful, I find the red muzzle energy number 39FPE which is abeam of slug boxes S1 through S5. If I wanted to use very high power, but still have many slugs to choose from, I could go with 47FPE, which is abeam of boxes S3 through S8.

Example #3:

Say I wanted to be able to shoot hollow points, but also shoot long distance with the gun, and therefore would like rather heavier pellets than lighter pellets (because domed heavier pellets tend to have a higher BC).*** -> For that I would find where the bulk of the hollow points is, and they are in boxes P3 and P4. For P3 I can go up to 33FPE, for P4 up to 36FPE. Both of these muzzle

energies allow me to use even the heaviest of the pellets from P8. Now, if high power (for hunting or a flatter trajectory at longer distances) was important, I might go with the 36FPE and the three hollow points in P4, and forego the use of the five in P3.

Limitations:

- For at least a mediocre level of wind drift resistance and energy retention at the target (hunting!) - this diagram only has pellets with at least a BC of 0.020 (source of BC, cf. ***).
- For better precision/ accuracy this diagram only has pellets from high quality brands. Note a lot of rebranding, e.g.: JSB is rebranded as: Air Arms, Cometa, FX, Hatsan, etc. H&N is rebranded as: SIG Sauer, Remington, Stoeger. Crosman as: Brocock, SILCO, Webley.
- For the sake of comparison the power of a particular gun is assumed to be the same for all pellets/ slugs. Of course, that is usually not true, differences of 2 to 4FPE are guite common, and even much more. And springers often develop higher power with lighter pellets, PCPs with heavier pellets.

FPE = Foot-Pounds of Energy | gr = Grain

Abbreviations: J = JSB | J P = JSB Predator | H = H&N | C = Crosman Premier | [\$] indicates a fairly high price. | BC = Ballistic Coefficient | fps = Feet per Second | *Bob Sterne at https://www.gatewaytoairguns.org/GTA/index.php?topic=25008.0

- https://www.gatewaytoairguns.org/GTA/index.php?topic=70230.0 **Nielsen Specialty Ammo (NSA) | https://nielsenspecialtyammo.com
- ***BC table at https://www.gatewaytoairguns.org/GTA/index.php?topic=149053

tative commercial AG slug brands: NSA (Nielsen Specialty Ammo), and H&N (shown at IWA 2019). Slugs written in gray have shown poor precision

This diagram

includes represen-

in many barrels not made for slugs. | MrHollowPoint offers the following weights:

26, 28, 30, 35, 38, 40, 45, 46, 50, 51gr.