

Sights and Eyes

There is a lot of misunderstanding on the effects of different sights and the way one uses them on the performance (the ability to produce a tight group) in shooting. This is demonstrated by the comment made by club members and the various attachments fitted to guns. The study of the optical processes involve in sighting is complex involving reflection, refraction, the opties of the eyes and the ability of the brain to resolve the detail and respond in the required time.

The Russians undertook a carefully controlled experiment to studied this problem by training a number of shooters with different equipment and techniques and comparing the size of group obtained. A large number of shooters were used to average out difference between individual people. Also individuals several used several techniques to judge any improvement possible. The tests were based on the group size obtained when shooting at 50m and the ability to resolve small changes. The result of this study to achieve best results is summarised below

Foresights

- 1 Ring foresight's give better results than blade sights (1.6 points better average)
- 2 Best ring aperture hole size 4mm diameter
- 3 Pink or orange translucent disc foresight with plain hole (no dark surround) gave the best results, much better than the metal elements used by most marksmen

Rear sights

- 4 Optimum rear sight aperture lies in the range 1.1mm to 1.3mm
For older people it is recommended that the lower value is used 1.1mm
- 5 Filters in rear sights best followed others in order of superiority
Cloudy summer days blue (mid yellow, dark yellow, greens, oranges, no filters)
Bright summer days Yellow (Green, dark yellow, no filter)
Never use red
All filters except red gave better results than no filter in the ability to rapidly respond to changes in sighting picture, blue being the best.

Left Eye

- 6 The best technique for dealing with the left eye in order of superiority (group size at 50m)
 - (1) Keep both eyes open (8.8mm)
 - (2) Opaque Lens for left eye (9.45mm)
 - (3) Plastic translucent patch in from of left eye (9.7mm)
 - (4) Dark patch (10.6mm)
 - (5) Closing left eye (10.97mm)

Aiming time of 4 -8 sees should be followed by 20 -30 sees rest to allow visual acuity to return. Do not score with left eye, only do a fleeting glance to find shot position.