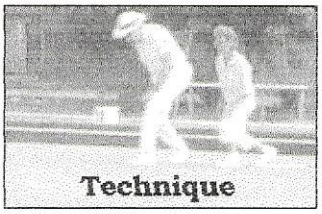
Aiming Methods



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Aiming Line

The aiming line is the required delivery direction. If bowls are to come to rest in the head bowlers must deliver them at an angle that counteracts the effect of bias. Because bowls delivered along the same line but at different speeds all finish in a straight line, bowlers should not change the aiming angle for a change in head distance. They have several preferences for selecting aiming line.

Some bowlers use patterns or marks on the mat to consistently position and align their dominant foot in the intended delivery direction. Their aiming line is the forward extension of their anchor foot alignment. An advantage of this method is that changes in mat position relative to the ditch do not affect the aiming angle. If the object position in the head is off centre, they determine the required angular adjustment and correspondingly change foot alignment relative to patterns or marks on the mat. They use the mat like a protractor with a radius of about 30 cm. A drawback to the method is that a mere 1° error in aiming angle results in a sideways error of about 0.5 M at the head.

Some bowlers use rink markers, or boundary pegs, or other reference points on or beyond the bank that correspond with the required initial direction for the visualised path of their bowls. The imaginary line from the selected reference point back to the mat is their aiming line. They tend to visualise the entire green as a large protractor. An associated disadvantage is that different mat positions relative to the ditch necessitate revised reference points. Forehand and backhand deliveries obviously have different reference points. Reversal of direction of play for each successive end also necessitates different aiming reference points.

Some bowlers are so familiar with the way their bowls turn according to the pace of green that they use intuitive skill to select a suitable aiming line. Some bowlers simply observe the amount that bowls of other players are turning, particularly during trial ends. They begin a game by allowing for a similar amount of turn, and adjusting the aiming line, if necessary, for their subsequent deliveries. Other bowlers use combinations of these methods.

An angular shift of the usual aiming line becomes necessary to correspond with any sideways movement of the jack, or with an off-centre object position in the head.

Some bowlers have a fixation on the jack. They tend to bowl 'at' the jack rather than 'to' it. Some bowlers tend not to trust the bias of their bowls. Both groups repeatedly use aiming lines that are too 'narrow'. Their bowls commonly cross the centre line before reaching the head, or displace critical bowls in the head. Narrow bowls are attacking bowls, and bowlers should not attack heads in their favour.

In the course of a game, bowlers should correct any tendency towards narrow deliveries by widening their aiming angle, and should correct wide deliveries by narrowing it. Bowlers should focus along the aiming line to avoid narrow bowling.

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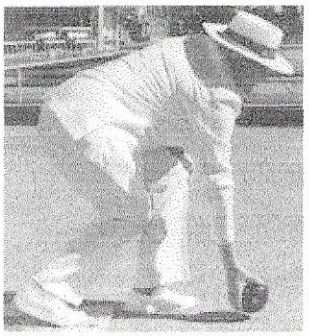
Aiming Point

A point on the aiming line that is a bowler's focus of attention for bowl delivery is the aiming point. Sometimes slight irregularities in texture or colour of the grass provide visible aiming marks on the aiming line. Indoor greens tend not to have such irregularities. Beginners sometimes benefit from temporary use of aids such as small discs or cotton wool tufts on the green, until they are able to select aiming lines without them.

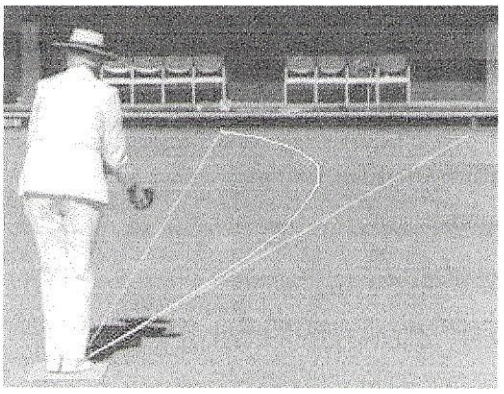
Some bowlers choose an aiming point within a few metres of the mat. The initial path of a bowl has negligible curvature. They deliver their bowls so that they travel over the aiming point. This method particularly suits bowlers who have a stooped stance, which could be the result of positioning the back knee nearer the calf than the heel of the front leg....



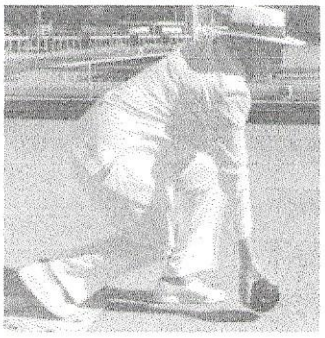
If the spine is nearly level, sighting with a more distant aiming point would cause too much neck discomfort for most bowlers. Visible aiming points close to the mat are more readily identifiable. However slight errors at an aiming point near the mat magnify as the bowl travels to the head.

Some bowlers choose an aiming point adjacent to the 'shoulder' or widest part of a bowl's path. Depending on the profile of the bowl, the shoulder is 55% to 70% of the distance to the head. A bowl will have completed about 1/5th of its total draw when it passes over the shoulder, so a bowl aimed at the shoulder will be narrow. Therefore the aiming point (and aiming line) must be (25%) wider than the true shoulder to avoid a narrow delivery.

Some bowlers choose a 'jack high' aiming point....



Just as a skip's shoe guides required line and length for jack delivery, so an aiming point level with the jack provides both line and length for bowl delivery. Adjustments of aiming line from a point level with the head can be much finer, and arguably more precise, than adjustments from an aiming point within a few metres of the mat. Bowlers who use a jack high aiming point need to position the knee of the trailing leg as low as the heel of the front foot. This posture puts the base of the spine low enough to enable focusing up the rink without uncomfortable arching of the neck....



Thus, delivery technique can affect the choice of aiming point distance. Different elite-level bowlers use a wide range of aiming point distances with comparable success. The learning curve and ultimate skill of bowlers using any of the foregoing methods appear to be about the same. Coaches or other observers can detect the aiming point distances that bowlers use by watching their eyes as they release their bowls.

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Aiming in Windy Conditions

In common with friction of the green, head winds tend to resist the motion of bowls in course. The effect of a head wind is similar to that of a green of slower pace. Conversely, the effect of a tail wind is similar to that of a faster green. Head and tail winds necessitate similar adjustments in delivery line and speed that equivalent changes in green speed would demand.

According to its direction, a cross wind force augments or diminishes the effect of a moving bowl's bias. This correspondingly affects the amount of turn of a bowl in course. Thus a cross wind produces a wide and a narrow hand. Cross winds commonly have also a head or tail wind component.

Moderate to fresh winds are rarely constant in speed or direction during the 10 or 15 seconds that a bowl is in course. Plantations or structures adjacent to the green can 'funnel' wind to increase the gusting, backing and veering already occurring. Therefore when such winds are present, heads are likely to be less compact than usual.

Attempts at compensating for windy conditions by altering normal positioning on the mat are inadvisable. Some bowlers suggest that repositioning on the mat can change the delivery line, so reducing the exposure time of bowls to strong cross winds. Changes in position on the mat can provide changes in delivery direction that would never exceed ½ of 1°. Such a change in delivery direction is insignificant in the presence of shifting, gusty winds. Any benefits would be so small and unpredictable, that such a departure from normal technique is not really worth the effort.

Bowlers who to try to fight the conditions are probably unduly distracting themselves from the task of accurate draw shot bowling. They increase stressful pressure on themselves in the process. They should assess the average speed and direction of the wind, adjust aiming line and delivery speed accordingly and hope for a fortunate result. They should watch jack and bowls during any trial ends to obtain a feel for green speed and wind effects.

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