Breeder Management & Fertility

Obviously, copulation is necessary for fertilisation, but it also doesn't guarantee it. One often overlooked practice that improves our birds chances of fertilising eggs is trimming the vent feathers on the cock and the hen. This is especially true of birds, which are of intermediate feather, buff feather or double buff feathering. There is, by the way, no truth to the notion that birds have guide feathers, which `guide' the sperm to the cloaca of the hen. If you don't have apposition of the cloacas, you don't have passing of sperm from the cock to the hen!

**One Cock with Multiple Hens**
Budgerigar hens, as is common among a number of species of birds, have the ability to store semen for a limited period of time. Some evidence suggests that this period is up to 20 days long. Biologically, this is quite adaptive as it insures fertilisation of a clutch of eggs if for some reason, such as death by predator, the cock is unavailable.
Some knowledgeable breeders, taking advantage of this, have used a single outstanding cock bird to fertilise a number of hens during the same time frame. This is not a particularly difficult procedure and there are several variations used by different breeders, all of which have been effective. One of these methods is, once having selected three complimentary hens for the cock that is to be used, set them up in breeding cages one above the other. This arrangement is used so that:
   1.  They are out of sight of each other.
   2.  It keeps one from getting confused as to which breeding cage the cock will be rotated to next.
Next take the cock bird and place him in one of the cages and watch for signs of acceptance by the hen, if they are present then leave him with her for one half of a day. The rest of the day do the same in the next cage and on the second day move him to the third hen. If any of the hens reject him, try several others until all three hens find him suitable. For the rest of the second day, place him back in cage one where he stays until the next morning. Then rotate him to cage two for one day and then cage three for one day. From this point on he should be rotated from one hen to the next on a daily basis until the last egg is laid.
If you wish you may leave him with the hen that finishes egg laying last. In this case, the other two hens are left to raise their clutches on their own. These hens cannot be used for a second round as it is too taxing on them, to both lay eggs and feed chicks by themselves.
Alternatively, remove the eggs as they are laid from all three hens, to be fostered to pairs specifically for this purpose or to other nests where there are clear eggs. In this way, you can get the equivalent of two rounds of eggs from each hen without putting any of them in a position of having to raise chicks on their own. This also allows time to rest the hens for a month and then mate them to different cocks. This alternative method is preferable but circumstances do not always favour it.

**Sawdust**
In the wild, small amounts of wood dust/shavings and feathers are often found in the nest. It is common practice for Budgerigar breeders to do the same. While some believe that the purpose of providing sawdust is to simulate a natural nesting site, a more practical purpose is that it cushions the eggs from contact with the hard surface of the concave when the hen rotates them. As well, sawdust helps keep the eggs from being scattered and accidentally broken if the hen is startled off the nest. Once chicks are hatched, it also absorbs the moisture from droppings, helping the nest box environment remain clean.
What should be remembered is that new sawdust/wood shavings can have a drying effect on the nest box atmosphere if put in a box with existing eggs. This drying effect, by absorbing humidity in the box, can have a disastrous effect on the developing eggs. In light of this, new sawdust and shavings should be left exposed for several days before being used so that they may pick up humidity from the air in the breeding room.

**Nest Box**
Nest box design, size, shape, and material of construction have been a matter of preference. A standard box is approximately 9" (h) X 6" to 8" (w) X 6" to 7"(d) with an entry hole of 2 inches diameter. The depth of the box is one of preference but should be no less than 9 inches high as shallow boxes encourage chicks to leave the nest early. Generally nothing of consequence will happen to these early exiting chicks other than you have to keep putting them back in. However, this exposes them unnecessarily to attacks by the parents or to extremes in temperatures while partially fledged and quite vulnerable.

**Step-down Blocks and Double Compartments**
Some nest boxes are provided with a step-down block, which is nothing more than a block of wood placed in the nest box next to the entry hole. A number of fanciers believe that the purpose of the step-down block is that they allow entering and exiting adults access to the nest box without the danger of damaging eggs in the process. However, in reality seldom is there a problem with hens or cocks damaging eggs when not provided with a step-down block. This is true even in box designs where the concave is directly below the entry hole. The primary function of the block is to protect second round eggs from the still unweaned chicks from round one.
Developing fledglings will move to the higher location next to the nest hole where they are fed by the cock. In doing this, they abandon the nest hollow, decreasing the chance that they will damage or soil newly laid eggs.
A very interesting design is a nest box divided into two compartments. When the hen enters this nest box, she is in a holding chamber that is higher than and partitioned off from the concave. To get to the concave, she has to enter another entry hole into the breeding chamber. As chicks mature, they are lured by the light of the nest box entry hole and climb through the divider hole into the holding chamber where they are fed by the cock. This removes them from the vicinity of the nest hollow and also allows the hen to proceed with incubation of a second round with little interference.

**Factors Affecting Nest Box Entry**
There is no evidence supporting the belief that there is an increase in nesting behaviour or readiness to mate by blocking off the nest box hole with cardboard and making a hen chew her way into the box. There is also no evidence that using two nest boxes on a breeding unit stimulates the natural breeding process by offering the hen a choice of nesting sites. The factors most significantly influencing early nest box entry are:
1. The stimulus of loud warbling by the cock bird during the first few days of breeding cage occupancy.
2. The position of the nest box entry hole in relation to the perch position.
Hens do not show early nest box oriented behaviour when the hole of the nest box is 5cm above or below the perch. They do, however, show almost immediate exploration of the nest box when the nest box hole is 15cm (5 to 6 inches) above the perch. Once having entered the nest box, it is the soft warble of the cock bird coupled with the relative darkness that the nest box provides that initially stimulates the hens ovarian and oviduct development. Contrary to the common practice of providing air holes or breathing holes during nest box construction, a properly built and positioned nest box should provide as much darkness as possible. Mounting position of the nest box, whether internal or external, is of little consequence as long as it is securely mounted and the nest hole faces in a direction that minimises the amount of external light that enters the box.

**Concaves**
In nest boxes provided without a nest hollow, but supplied instead with a soft pulp paper nest bottom, hens showed 2-3 times more gnawing activity than hens in nest boxes with a nest hollow. The peak duration of gnawing occurs 4-6 days prior to egg laying but never exceeds 30% of the total time a hen spends in the nest box. It is believed that this gnawing activity is a remnant of nest building behaviour but ultimately it is of little consequence to ovarian development. There are no differences in latency of laying the first egg between groups supplied with a nest hollow or without a nest hollow. As nest hollow gnawing behaviour is exhibited whether a nest box is provided with or without a nest hollow, it would suggest that nest hollows (concaves) are optional in nest box construction. However, they help keep eggs from scattering whenever a hen leaves the nest.