Insemination Technique of the Queen

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The valvefold, a flexible flap of tissue covering the median oviduct, must be bypassed to allow semen deposition. This is achieved by maneuvering the syringe tip beneath the valvefold and lifting it ventrally. A slight curve combined with the correct syringe angle, helps guide the tip around the valvefold without resistance.

After placing the queen in the holder and anesthetizing her with carbon dioxide, gently insert the ventral hook just enough to secure her in the correct position. Ensure that the hook does not exert downward pressure on the queen's abdomen.

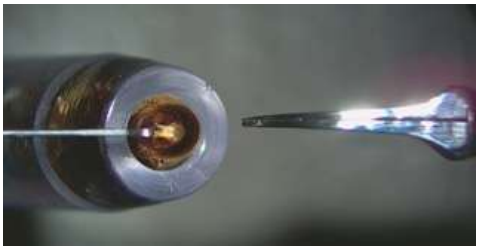

Figure 1.

To access the queen's vaginal orifice, gently separate the abdominal plates using a pair of hooks or fine pressure-forceps. Carefully lift the large sting structure dorsally to expose the sting chamber.

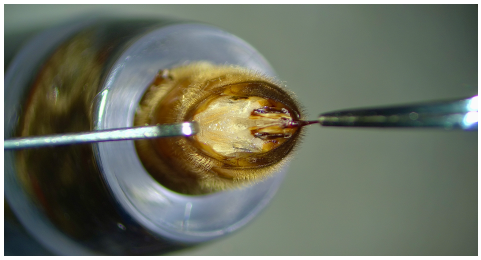

Figure 2.

Position the syringe tip dorsally, just above the "V" that defines the vaginal orifice. Insert the tip approximately 0.5 mm, slightly forward of the apex of the "V." When correctly positioned, the tip should pass smoothly past the valvefold. Advance the tip an additional 1.0 mm into the median oviduct.

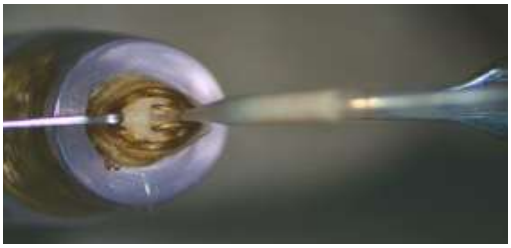

Figure 3.

To ensure correct placement, begin the insemination process by introducing a small drop of saline. Once positioning is confirmed, administer a precise dose of semen, typically 10 to 12 µl per queen. With experience, this procedure can be performed swiftly and accurately, often requiring only seconds per queen.

Figure 4.