



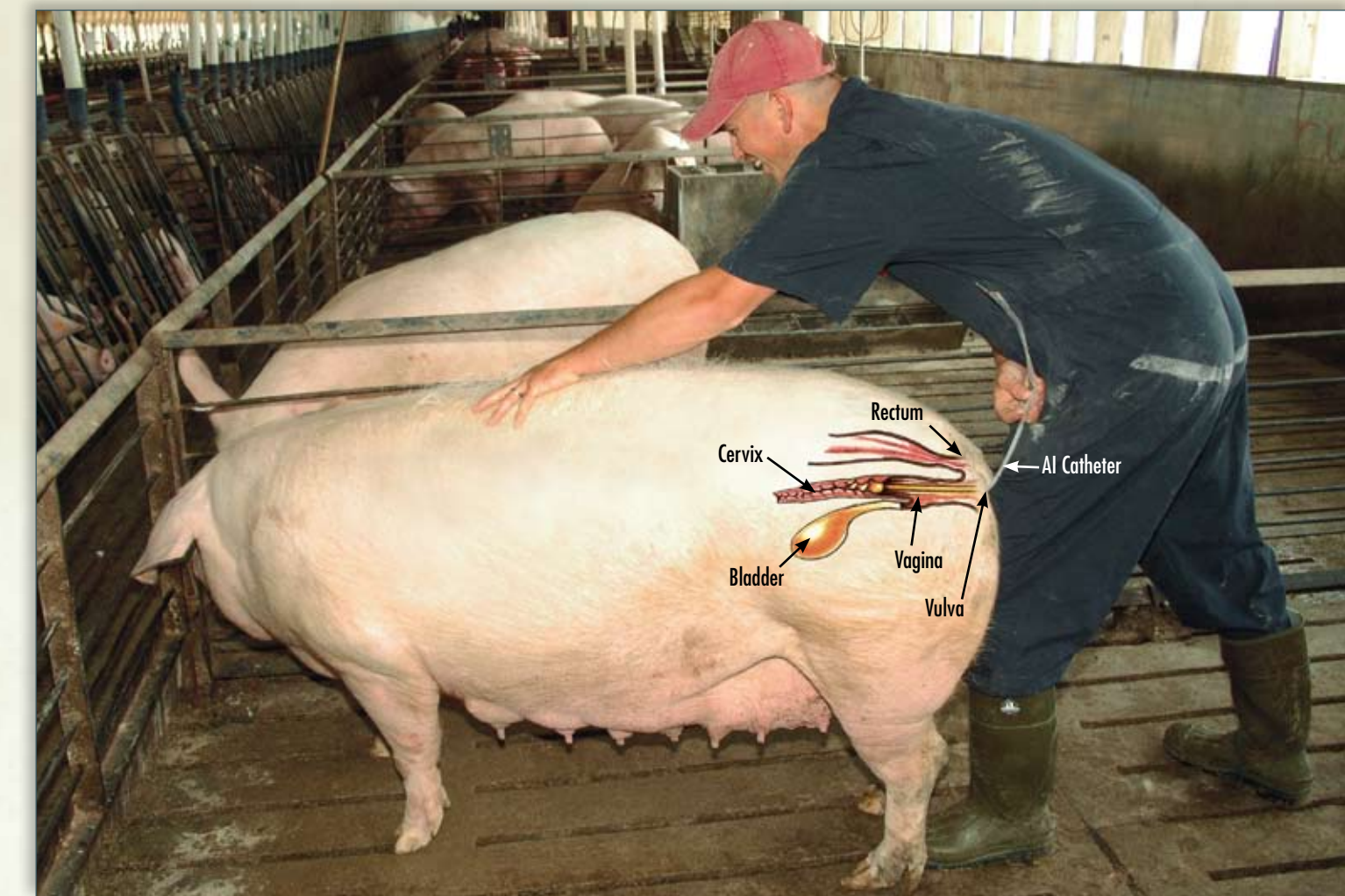
Successful heat detection is vital to accurately identifying the onset of estrus (standing heat). Effective heat detection requires controlled boar exposure, stockpersons who are able to provide active stimulation in the boar's presence and accurate recording of estrus.

Heat Detection

In the natural mating environment, the boar has free access to the sow or gilt, which allows him to stimulate her with sight, sound, smell and touch. The boar's role is to elicit a standing response whether she is artificially inseminated or bred by natural service. Early in the stimulation process, the boar secretes pheromones (a chemical secretion; scent), which stimulates the release of oxytocin in the estrus female. The oxytocin release causes surging contractions in the female's uterus, which aids in semen transport, and strong muscle contractions expressed as a standing reflex.

When artificial insemination is used, it is imperative that the stockperson learn to simulate the actions of the boar. The more the boar is allowed to stimulate the female, the greater the chances of producing a standing response. When stimulation is provided effectively, estrus lasts longer and ovulation is greater.

The expression and duration of estrus is affected by many factors, including age/parity of females, season of the year, genetic composition, body condition, nutrition and previous exposure to a boar. The display of estrus typically lasts no more than 48 hours in gilts, 38-64 hours in sows, although there is variation between farms. The "locked up" periods of standing heat last 5 to 15 minutes, depending on the level of stimulation received, the energy reserves of the female, and the time elapsed since last standing heat and the subsequent refractory period. Ovulation will occur from 36 to 42 hours after the onset of estrus – sooner in gilts than sows. The best time to inseminate is 12-24 hours after first standing heat.



When estrus is confirmed, continue full stimulation of the female to increase oxytocin release, which is responsible for the wave-like contractions of the uterus that aids in semen transport. Note the location of the cervix, which is where the semen is deposited.

Natural Mating



As the boar noses the sow or gilt, he releases pheromones bound in his saliva, which stimulate a female in heat.



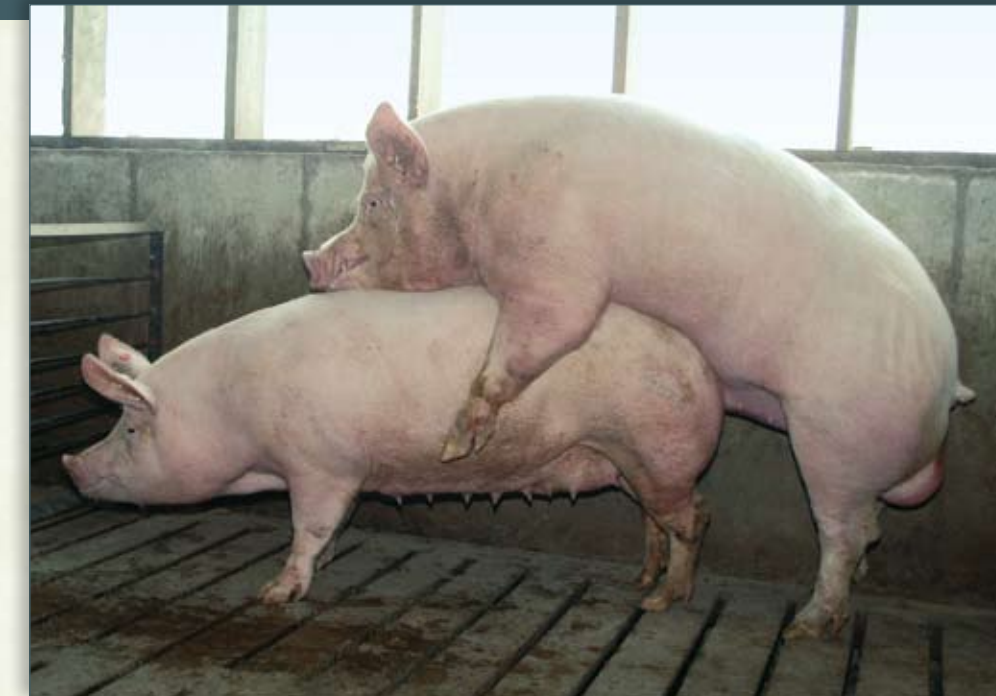
The boar nudges and roots the female's side and flank to encourage a standing response.



As the boar noses the vulva, he can detect the elevated temperature and secretions of a female in estrus.



The boar shoves, roots and lifts the female, focusing on the flank area to check for a rigid, standing response.



The boar may make several attempts to mount. When successful, his feet will clutch the female's sides and he will thrust to enter the vulva and cervix.

Simulated for Artificial Insemination



Manage active boar exposure, providing nose-to-nose contact with female.



Stockperson rubs the female's side and applies slight back pressure.



Stockperson presses fist below the vulva and "thumb checks" the vulva for a sticky, viscous secretion.



Stockperson tugs or lifts the female's flank, rubs the underline. As oxytocin is released naturally, she will stand rigid or "lock up."



Grip female's loins and increase back pressure or sit astride to confirm standing response.