

种公猪饲养管理的关键技术

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种公猪饲养管理的关键技术

主要内容

种猪管理是猪场管理容易忽视的环节

种公猪的繁殖机理

种公猪的配种管理

猪公猪的饲养管理

一、种猪管理是猪场管理容易忽视的环节

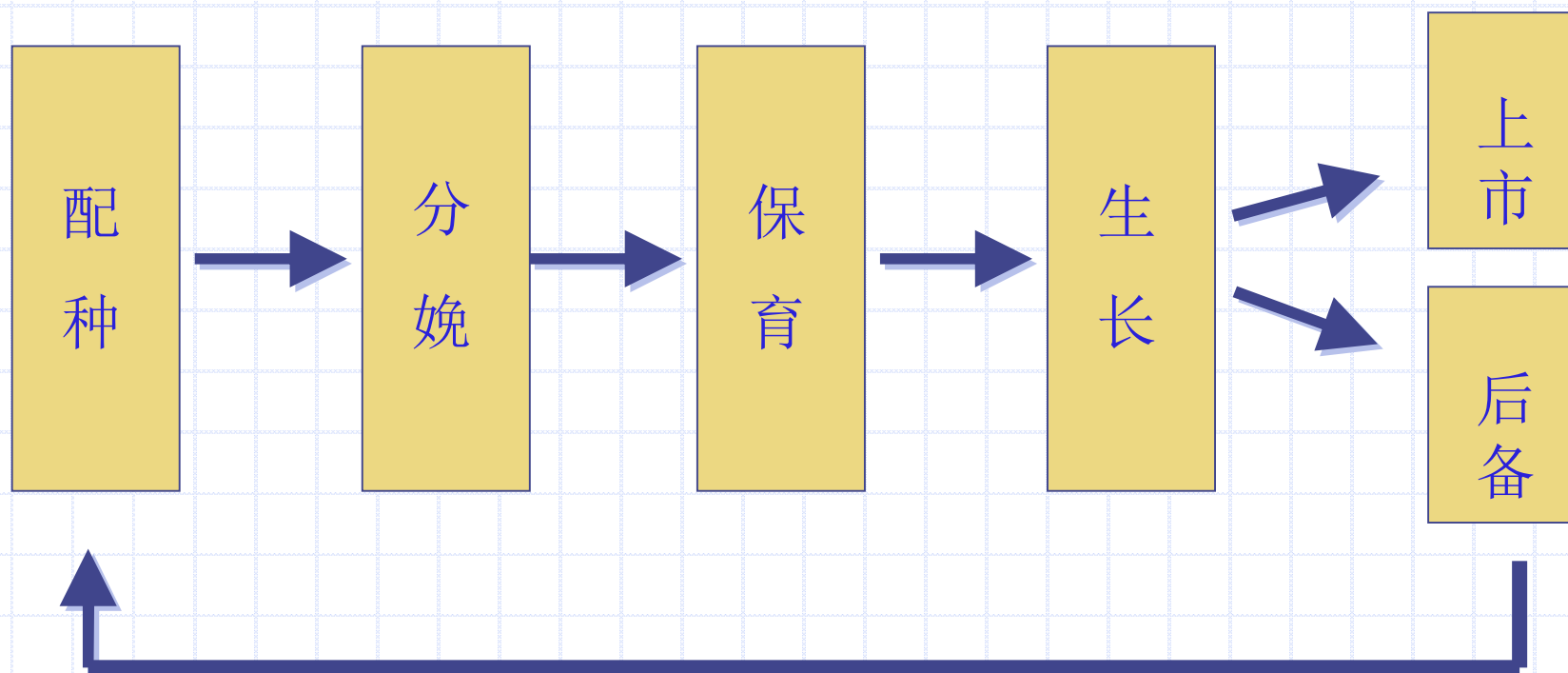


图1: 现代养猪生产工艺流程

二、种公猪的繁殖机理

r 公猪每次的射精量 150 to 200 ml

Semen volume/ejaculate = 150 to 200 ml

r 精子的数量300-600亿

Total sperm/ejaculate = 30-60 billion

r 每周生产的精子数量1200-1500亿

Total sperm/week = 120-150 billion

r 公猪性成熟年龄 约9月龄

Boars reach puberty at approximately 9 months of age

三、种公猪的配种管理措施

1、合理的使用频率

r 公猪的使用频率，每天2次或每周10次

Actually the number of services per week is a better guide to boar usage (2X/d or 10X/wk)

r 公母猪的性比例，最高为1:20，最低为1:4-5。

Ratios as high as 20:1 and as low as 4-5:1 are encountered in the swine industry.

r 人工授精可以大大提高公母猪的性比例 Certainly the use of AI will greatly increase the number of females bred/boar.

三、种公猪的配种管理措施

1、合理的使用频率

Age of Boar	Hand Mating	Pen Mating
Young boar	20-30 females	10-15 females
Aged boar	35-40 females	15-20 females

三、种公猪的配种管理措施

2、公猪的调教

r 选择适宜的配种员

Select a person who is patient and enjoys working with animals.

r 建立配种员与公猪的相互信任关系

Begin training during the isolation process by building a trust between you and the boar. Spend a few minutes each day scratching, rubbing and talking with the boar.

r 训练始于7月龄，持续时间约4 – 6周

Boars vary in their rate of sexual development. Some 7 mo old boars are ready to be trained and others require 4 - 6 wks longer.

三、种公猪的配种管理措施

2、公猪的调教

r 适宜的交配场所

Provide a clean, dry, well lighted area free of distractions. A breeding mat helps provide footing. A boar that slips during mounting may be shy about attempting it again.

r 交配场所的适宜大小

Keep the area about 8 x 10 ft, so that the boar is focused.

r 尽可能先采有经验的公猪

If possible, collect a previously trained boar first. The odor and sound may stimulate the “rookie” if he is located next to the collection area.

三、种公猪的配种管理措施

2、公猪的调教

r 台畜适宜的高度

Adjust the dummy so that it is equal to or slightly lower than the boar being trained.

r 公猪的适应过程

Plan for short training sessions (15 -20 min). Some boars may mount the dummy immediately but others may want to explore the pen and dummy for several session.

三、种公猪的配种管理措施

2、公猪的调教

r 公猪对台畜的适应

Some boars require coaxing. Crouch down near the dummy, allow the boar to smell your hand and clothes and talk in a reassuring tone. Try pouring semen from a previous collection on the dummy.

r 让公猪专注台畜

Keep the boar focused on the dummy. If needed, use winged gates to keep him in front of the dummy.

三、种公猪的配种管理措施

3、发情鉴定

<u>Stimulation</u>	<u>% estrous sows standing</u>
Boar	100
Boar + back pressure	97
Boar (hidden) + back pressure	90
No boar (NB) + back pressure (BP)	48
NB + BP + boar “courting” sounds	75
NB + BP + preputial secretion	80
NB + BP + 5 alpha androstene	81

三、种公猪的配种管理措施

3、发情鉴定

r 了解发情母猪的生理变化

You must have a good understanding of the physiological events occurring inside the female during estrus and breeding.

r 增加母猪的

Sow – Increased estradiol levels maximize the receptive state of the female and the ability to elicit a standing reflex.

三、种公猪的配种管理措施

3、发情鉴定

r 公猪的唾液非常重要

Boar – produces male pheromone (saliva), 5-alpha androsterone(5- α -雄甾酮) that is the initiator of the standing response.

r 若没有公猪的刺激，或雌二醇水平比较低，母猪压背反应表现会不太明显

Failure to exhibit an intense standing reflex can be due to sub-optimal levels of estradiol and/or boar exposure.

三、种公猪的配种管理措施

4、配种的适宜时间

r 每天发情2次检查

Based upon 2X/d estrus detection:

- n 母猪在断奶后3-4天发情，24小时后配种，12小时第二次配种

If sows are in estrus 3 -4 d PW, wait 24 h to inseminate, then inseminate 12 h later.

- n 母猪在断奶后第5天发情，12小时后配种，12小时第二次配种

If sows are in estrus on d 5 PW, wait 12 h to inseminate, then inseminate 12 h later.

- n 母猪在断奶后6-7天发情，立刻配种，12小时第二次配种

If sows are in estrus 6 -7 d PW, inseminate immediately, then inseminate 12 h later.

三、种公猪的配种管理措施

5、配种应该注意的事项

r 配种时，应该有公猪在现场

Move the boar in front of 2 -3 estrus females to be inseminated. Make sure the female is exposed to the boar before beginning the insemination. Or “Boar Stink Stick” ~ Stimulates standing Releases oxytocin and enhances sperm transport

r 清洁母猪的外阴

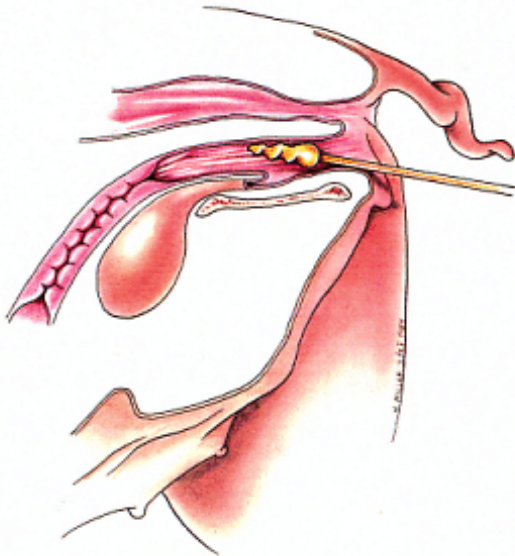
Clean the vulva with a clean dry paper towel.

r 正确插入输精管

Part the lips of the vuvla with one hand and gently insert the catheter into the vagina pushing forwards and upwards for the first 6 -8 inches. Advance until resistance is felt.

三、种公猪的配种管理措施

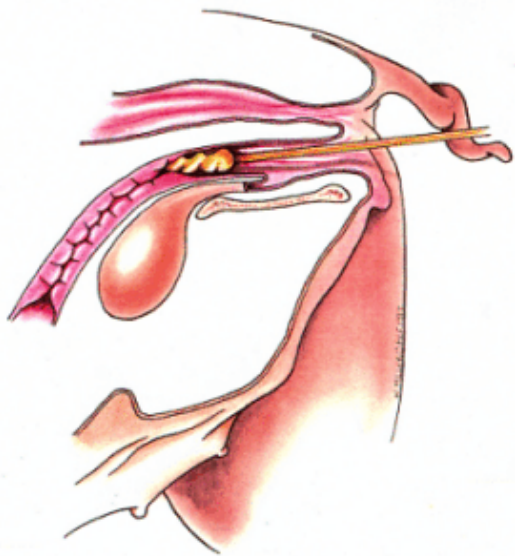
5、配种应该注意的事项



- r If Put pressure on back to stimulate mounting
- r Lubricate catheter
- r Insert catheter at a 30-45 degree angle following vulva
- r Push in about 4-6 inches

三、种公猪的配种管理措施

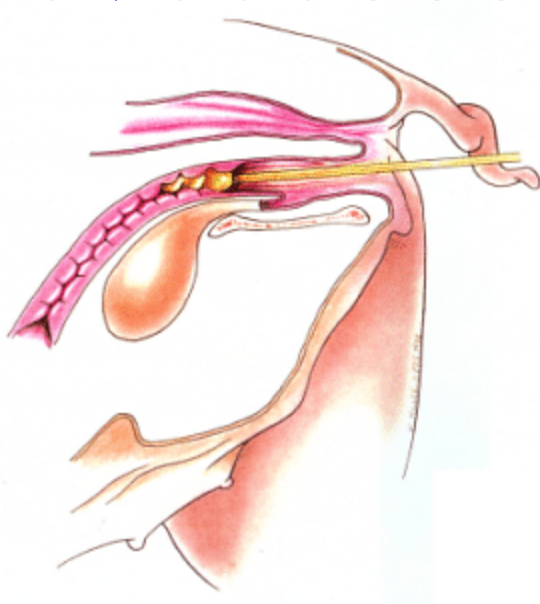
5、配种应该注意的事项



- r Move catheter to horizontal position and gently move forward until resistance is felt
- r Rotate counterclockwise once you have hit resistance
- r Feel for pressure from cervix (see if holds pipette)
 - n Will pulsate up and down

三、种公猪的配种管理措施

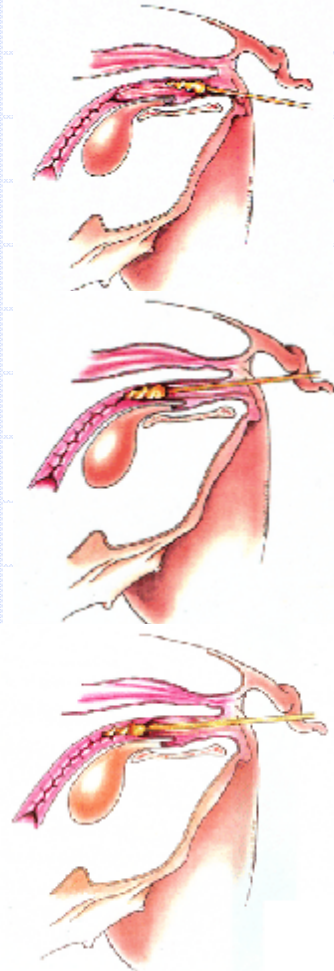
5、配种应该注意的事项



- r Connect semen onto catheter
- r Give small squeeze to initiate flow of semen
 - n Should suck in herself
- r DO NOT RUSH
- r After semen is gone give a five count
- r Rotate catheter clockwise and gently pull out

三、种公猪的配种管理措施

5、配种应该注意的事项

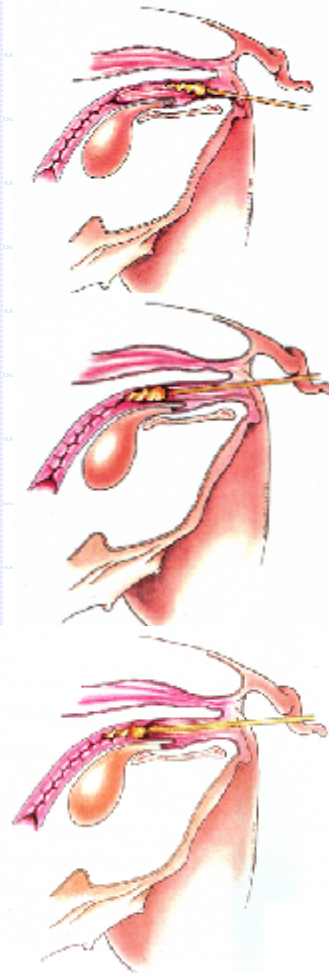


r Get the semen from the storage container and resuspend by gently rotating the bottle or cochette.

r Cut off the tip of the bottle or open the cochette and place on the catheter. Lift the catheter and apply gentle pressure to fill the catheter and begin the insemination.

三、种公猪的配种管理措施

5、配种应该注意的事项



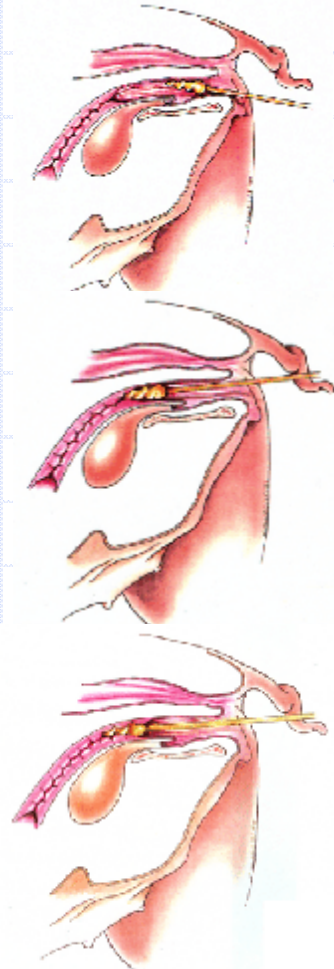
r Begin rubbing the underline to stimulate uterine contractions.

r Normal services take 5 - 10 min; gilts may take longer. You may have to tip the bottle down to slow the insemination.

r Once the container is empty it can be removed. Don't force air down the catheter.

三、种公猪的配种管理措施

5、配种应该注意的事项



- r The catheter can be removed by clockwise rotation of the spirette or by gently pulling on the foam tip type.
- r Check the tip of the catheter for blood and record if found.

三、种公猪的配种管理措施

6、精液保存的注意事项

- r Rotate semen bottles twice per day.
- r Take sufficient semen from the cooler for one hours worth of inseminations.
- r Transport in an insulated container with gel packs.
- r Water, soap, alcohol, petroleum products, and other residues can be harmful to semen.

三、种公猪的配种管理措施

6、精液保存的注意事项

- r Semen is preserved in extender and has the ability to support the semen for 5+ days post collection.
- r Semen must be stored at recommended temperature and avoid fluctuations. (61 to 63°F)
- r Warm temperatures may activate sperm.
- r Sperm should not be activated before insemination.
- r Always store semen in a dark area.

三、种公猪的配种管理措施

6、精液保存的注意事项

Check Semen quality

- **Morphology**

 - Less than 20% abnormal

- **Bacteria (Temperature)**

 - Check for aerobic and anaerobic

- **Mixed semen**

 - Majority of combinations are okay

- **Sperm cells per dose**

 - 3 to 5 billion per dose

四、种公猪的饲养管理

1、饲养需要

- r 营养需要
- r 饲养方式：配种季节加强饲养
- r 饲料与饲喂技术：定时定量饲喂

四、种公猪的饲养管理

1、饲养需要

- 总的原则:全价的平衡日粮,粗蛋白为14%。
- 饲喂量:年青公猪5-6磅/天,成熟公猪4-5磅/天
- 配种繁忙的季节增加营养,给量为高限,平时为低限
- 理论上,应该专门生产公猪料,实际操作上,妊娠母猪料可以满足要求

四、种公猪的饲养管理

2、管理措施

- r 单圈饲养**
- 建议公猪采用单栏饲养，除非是混养的生产方式
 - 原因：避免公猪间的争斗、爬跨、争饲，增加公猪的种用年限
 - 最好的方式：单栏的公猪在一起，最好在上一栋猪舍饲养有母猪

四、种公猪的饲养管理

2、管理措施

r 单圈饲养

- 公猪最好有室外的运动场所，运动场所长度要求有75-100英尺。

r 合理的运动

- 若高度集约化的饲养方式，公猪栏要求足够的空间：8×8英尺

四、种公猪的饲养管理

2、管理措施

r 单圈饲养

r 合理的运动

r 防暑降温

- 高温对公猪繁殖性能的影响非常大，如返情率高，窝产仔数少。
- 高温对公猪影响的持续时间也比较长，如3天的高温，公猪在未来4-6周，繁殖性能都比较差。
- 在夏天采用适当的降温措施，如喷雾、水帘。

小结

- 1、公猪尽早准备，无论外购，或自留
- 2、公猪一定符合种用的要求，纯种繁育/商品猪生产
- 3、配种以前一定对公猪配种能力有全面的认识（Boar power）。
- 4、公猪管理水平，是猪场提高生产性能重要手段