



### **General information: Handmating**

Handmating involves mating specific ewes with specific rams under supervision.

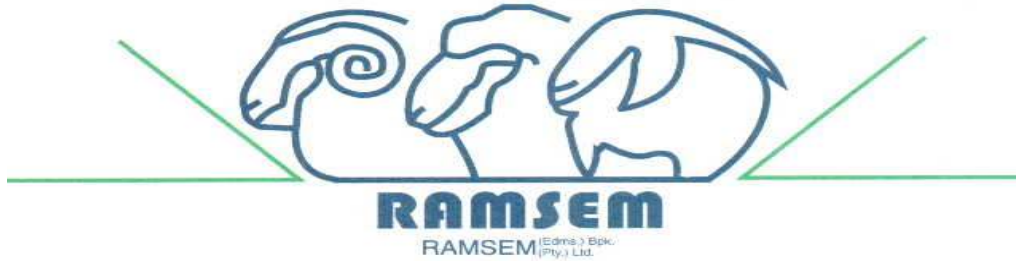
The natural heat of ewes may be identified on a daily basis by means of teaser rams, or ewes may be prepared on specific days for handmating by means of synchronisation aids. The latter eases and simplifies management.

#### **Advantages:**

- Fewer rams are required. A breeder may thus purchase better quality rams, which increases genetic progress.
- Purchasing, feeding, and caring for fewer rams lowers the total cost per lamb.
- Fewer rams simplifies management.
- Rams with poor libido and mating incompetence are identified and eliminated.
- Injury amongst rams is minimal as handmating occurs under supervision.
- Offspring of individual rams may be compared in order to identify the best sires.
- Eases record-keeping.

#### **Disadvantages:**

- If a ram/rams is/are temporarily infertile or his/their quality of semen is of inferior quality, ewes will not fall pregnant. It is thus of utmost importance that the semen quality of rams be tested in advance. It should also be ascertained that rams are competent in mating.
- If unproven rams are utilised lambs of inferior quality may result.
- Responsible people should supervise and be on the scene.
- Guard against inbreeding.



### Handmating by means of teasers

Teasers should be placed with ewes early in the morning or during late afternoon in order to identify those ewes that are on heat. An efficient method is by utilising **ram harnesses** or **marking-blocks** (available at RAMSEM). Different colours are available so that groups may be easily identified.

It is standard practice to have ewes served by rams as soon as they had been identified through teasers, for instance in the morning or afternoon group. Ewes have to be served by rams, again 12 hours later (if still showing standing heat). A ratio of 5 ewes per ram daily must be applied. It is however possible that some rams may serve up to 10 ewes.

Teasers rams may also be used to synchronise ewes. In this case it is imperative to keep ewes out of sight and smell of rams for at least 1 month or longer. Teasers with marking blocks are then placed among the flock of ewes 9-14 days before the date of mating. Accurate observation and or mating harnesses and marking-blocks are necessary in order that the ewes may be served as soon as they have been marked by the teasers. It is to be followed up by a second serving 12 hours later.

### Handmating by means of synchronisation aids (available at RAMSEM)

Ewes are sponged for 13-14 days with Ovakron sponges or Cidr's. With removal of sponges or Cidr's, PMSG is applied intramuscularly. For the appropriate dosage qualified staff at RAMSEM may be contacted.

Synchronised ewes will come on heat from approximately 36 hours after removal of sponges and injection with PMSG. It is important to bear in mind that variation is possible as a result of the age of ewes, season and breed. One mating is usually adequate, but if preferred it may be followed by a second mating. If you want to do a single, fixed time mating then there are different times for mating between the different breeds and different seasons of the year. This varies from 40 hours up to 54 hours after sponge withdrawal. Consult RAMSEM for details. A ratio of one ram per 5 ewes is also applicable in this case. If the same group of rams is utilised repeatedly they should preferably be allowed to serve every second day. The reason for this is that their semen volume and density may begin to decrease, which inevitably leads to a lower sperm count. Teasers may be utilised to mark ewes that come on heat first.



It is possible to apply handmating within the breeding-season on ewes that were merely sponged and not injected with PMSG. In this case it is important to note that ewes will come on heat over a considerably longer period (few days) which may complicate management. The multiple twinning percentage will probably also be lower than in cases where PMSG had actually been applied. In this case it is strongly recommended that ewes be served twice.

If handmating occurs under supervision it is recommended that ewes be removed as soon as they had been served by the ram. This will ensure that all the ewes are served instead of a ram following 1 or 2 ewes. As soon as all the ewes had been served the ram may be placed among them again in order to ensure a second mating.

Most ewes (sponged and injected with PMSG) are served within 36 to 48 hours. When only a few ewes have to be served it may be done closer to 48 hours. After 54 hours ewes start to come off heat.

Young ewes come on heat earlier than mature ewes, from 30 – 32 hours after withdrawal.

When handmating is not practised under supervision, i.e. ewes are only synchronised and rams are placed among them, the principle of ram per 5 ewes must still be applied. Groups must also not be too large.

It is important that young rams should serve older ewes and older rams younger ewes.

During very hot months the handmating program may be adapted in such a way that rams serve during the cooler times of the day.

14 Days after handmating ewes should be served by follow-up rams for 34 days (2 cycles of 17 days). In this way each ewe has 3 opportunities to fall pregnant. If she fails to comply it is advisable to get rid of her!

Attached: 2 examples of a handmating program.



## PROGRAM FOR HANDMATING

Example 1

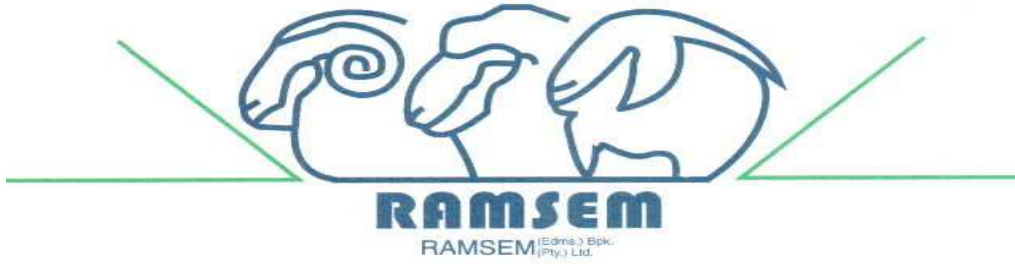
### ***START PREPARATION AND FLUSH FEEDING OF EWES***

**FLUSH FEEDING:** Physical condition of ewes should start improving 3 – 4 weeks prior to handmating. Chocolatemealies 150 – 400 g/ewe/day recommended or Maxiwol 300 – 400 g/ewe/day.

**ALTERNATIVE:** Remove ewes to best grazing camp and supply balanced lick. Inject with Vitamin A, as well as Multimin + Se.

**MANAGEMENT:** Shearing, dosing and vaccination – Complete in advance.

DAY OF PROGRAM	DAY OF WEEK AND DATE	TIME	TASK
0	Monday 2011/03/28	am	SPONGE _____ 20 _____ ewes
14	Monday Afternoon  2011/04/11	6 pm (18:00)	WITHDRAW __ 20 __ SPONGES and INJECT __ 2,5 __ ml PMSG INTRAMUSCULAR  i.e. ____ 300 ____ i.u. PMSG
16	Wednesday 2011/04/13	From 6 / 7 am	START HANDMATING / ADD RAMS
30	Wednesday 2011/04/27		ADD FOLLOW-UP RAMS
	2011/09/10 150 ± 5 days (145 – 155 days)		LAMBING



**Mixing of PMSG:**

Dissolve 1 x PMSG in 50 ml sterile water; or dissolve 2 x PMSG in 100 ml sterile water.

**APPLICATION IS INTRAMUSCULARLY WITH ACCURATE SYRINGE.**

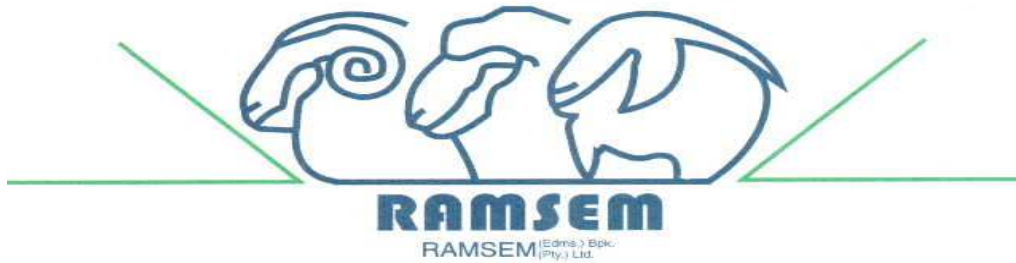
i.u. = International Units (concentration)

300 i.u. = 2,5 ml of solution

420 i.u. = 3,5 ml of solution

360 i.u. = 3,0 ml of solution

480 i.u. = 4,0 ml of solution



## PROGRAM FOR HANDMATING

### Example 2

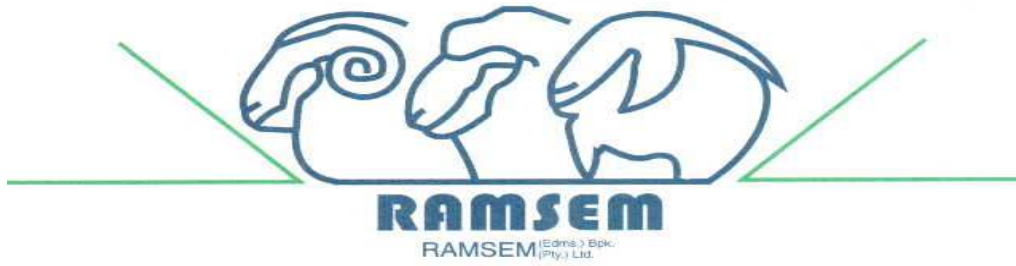
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**ALTERNATIVE:** Remove ewes to best grazing camp and supply balanced lick. Inject with Vitamin A, as well as Multimin + Se.

**MANAGEMENT:** Shearing, dosing and vaccination – Complete in advance.

DAY OF PROGRAM	DAY OF WEEK AND DATE	TIME	TASK
0	Monday 2011/03/28	am	SPONGE _____ 20 _____ ewes
14	Monday Morning 2011/04/11	6 am (06:00)	WITHDRAW __ 20 __ SPONGES and INJECT __ 2,5 __ ml PMSG INTRAMUSCULAR i.e. ____ 300 ____ i.u. PMSG
15	Tuesday 2011/04/12	From 4 pm	ADD RAMS
29	Tuesday 2011/04/27		ADD FOLLOW-UP RAMS
	2011/09/09 150 ± 5 days (145 – 155 days)		LAMBING



**Mixing of PMSG:**

Dissolve 1 x PMSG in 50 ml sterile water; or dissolve 2 x PMSG in 100 ml sterile water.

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