

Theme 6: Calving, Young Stock Management

USE OF EQUIPMENT AROUND CALVING

(Level 3)

Topic	Training & information Content
6.1	Selection of bulls, use of sexed semen, feeding management of dry cows
6.1.1	The calving process
6.1.2	Use of equipment around calving
6.1.3	Care of cow and calf after calving
6.1.4	Colostrum management
6.2	Milk (replacer) feeding schedule
6.3	From birth to weaning
6.4	Disease and health management
6.5	Handling of calves after difficult birth
6.6	Young stock rearing info and Key Performance Indicators



1. You will learn about (learning objectives):

- How to prepare a cow for a hygienic calving procedure
- How to use/implement all the necessities for a smooth hygienic calving process
- Hygienic measures before, during and after birth process
- Checklist for a successful/hygienic parturition process
- How to design a calving protocol



2. Background

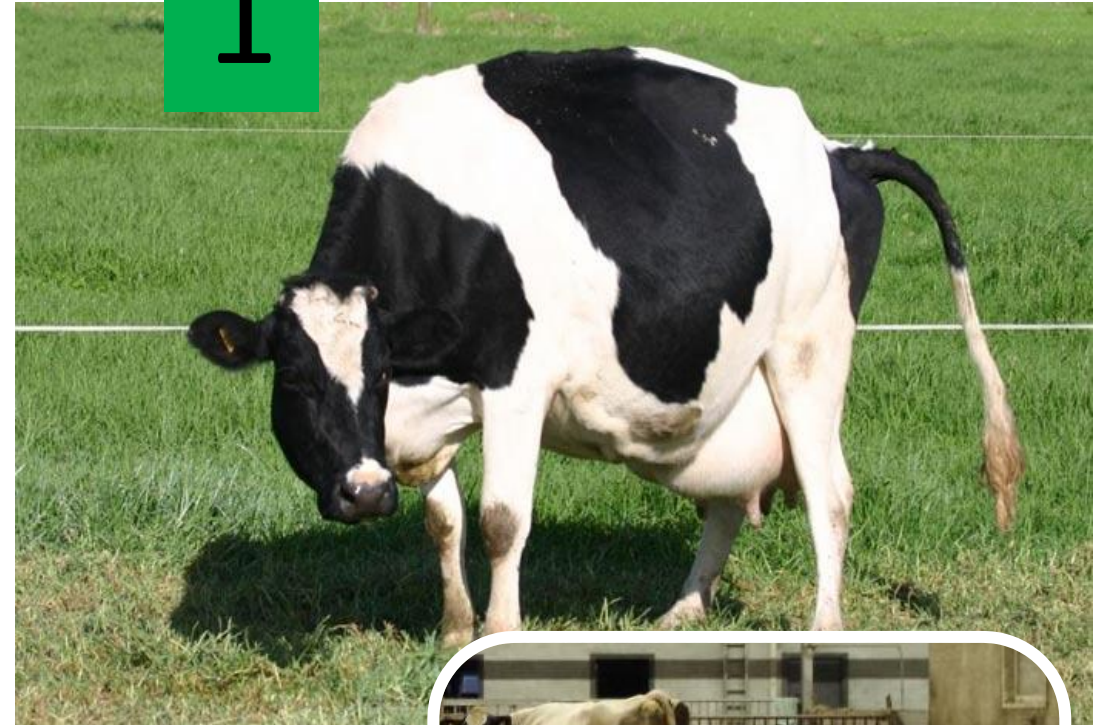
- Calving is the most important and most sensitive moment in a cow's life every year
- (Too) many calves die because of a lack of prevention measures around birth
- Farms lose most cows (either die) because of calving issues, mostly because farmers make wrong or no decisions
- Many things can go wrong, which may effect calf's health and cow's health and performance. As such, putting more emphasis on hygiene and care will have a direct effect on calf and cow performance



3. Calving: Hygienic Calving pen

- Successful calving all starts with a good preparation
- This means;
 - When the cow is close to calving, it is important to separate the cow from the herd to allow parturition process to take place quietly and undisturbed
 - Take the cow to a spacious, clean calving shed that is well-filled with straw, with ample feeding and drinking facilities

1



3.1 Protocol 1 - Parturition pen

- a) Parturition pen is only used for calving cows
- b) A parturition pen for one cow must be at least 16 square meter
- c) Parturition pen is always located near the herd, ear and eye contact is mandatory
- d) As soon as the cow is showing visible labor activity, the cow goes into the parturition pen
- e) If the cow is in the parturition pen, enough food and water must be available throughout 24/7
- f) Parturition pen needs to be cleaned and disinfected after every use

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IMPORTANT



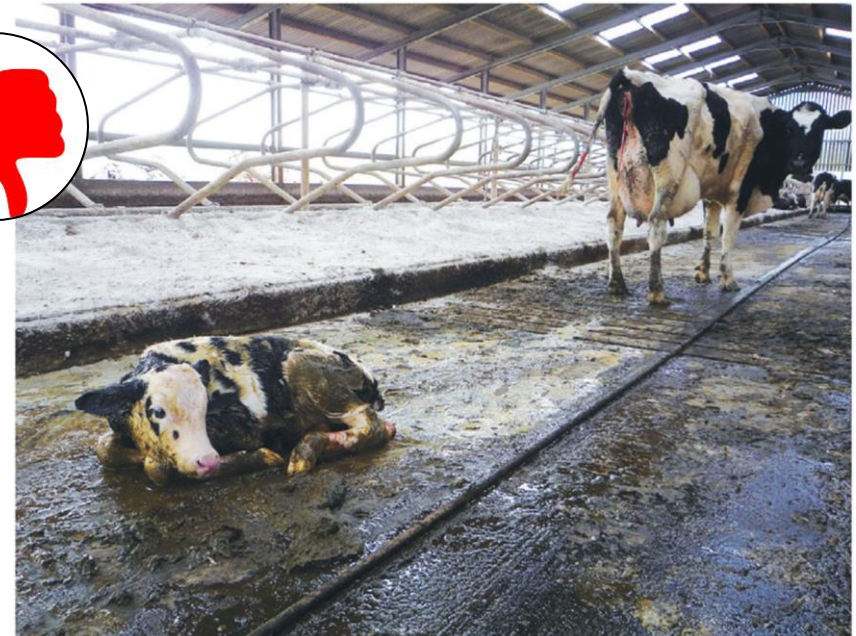
3.1.1 Protocol 1 - Parturition pen cont'd...

How it should be:

1



Unexpected:



4. Water and disinfectant soap

- As soon as the cow starts showing signs of calving, it is time to make sure that water and disinfectant soap is available



2



4.1 Disinfecting the vulva area

- Washing and disinfecting areas around the cow's vulva, tail and rump is heavily recommended to protect "the sterile calf" and the cow's vulnerable birth canal from future infections

*Wash and
disinfect
areas
around the
cow's
vulva, tail
and rump*



4.2 Protocol 2 - Washing and disinfecting the vulva area

- a) When contractions are seen it is time to act
- b) Clean the cow's vulva area, tail area and rump with lukewarm water first, to get all the dirt/manure away
- c) After cleaning, use disinfection soap to wash these areas properly
- d) During washing and cleaning, preferably wear gloves

Why is washing and disinfecting is important?

- The newborn calf comes from a sterile environment with a resistance level to diseases of zero. Therefore it is important to take all possible precautions to prevent the young calf against infections through mouth, mucus membranes and navel cord

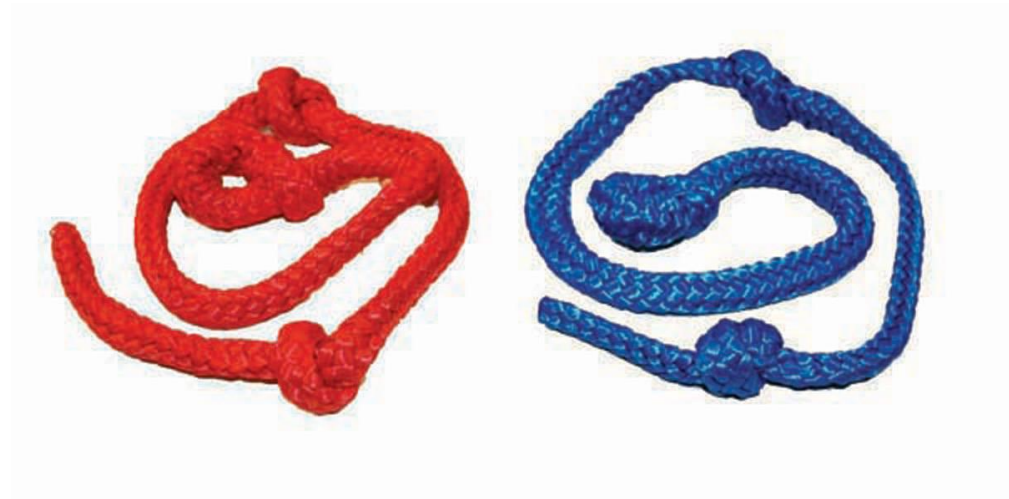


5. Special pulling chains/ropes

- Preferably dry, but for sure disinfected, special pulling chains or ropes must be around when the calving process has started



Important: Immediately wash and disinfect after use to be ready for the next calving

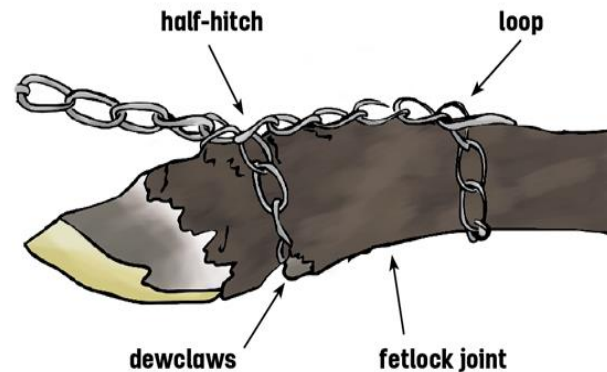


5.1 Special pulling chains/ropes cont'd...

- **Tip:** This is how to tie and pull the strings in case assistance is needed. Other ways of application/tying and pulling can lead to permanent damage to the calf



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5.2 Protocol 3 – Use of pulling chains/ropes

- a) Pulling chains/ropes are only used for assisting delivery
- b) Chains and ropes should be dry and disinfected before usage
- c) After usage chains and ropes need be properly cleaned, washed and disinfected
- d) During washing and cleaning preferably wear gloves
- e) Always keep the chains in a fixed place known to everyone

Why use pulling chains/ropes

- If the birth process does not go smoothly, we must always be well prepared to help the cow. It is important that all necessary tools are available and ready for use; in case of ropes and chains, ensure the right length, well-placed knots among others



6. Clean hands and nails

- Washing hands and cutting nails before you start rectal research is a must

4



6.1 Protocol 4 – Preparing for rectal palpation/assistance

4

- Wash your hand with water and soap for 2 minutes
- Get your nails clipped short
- Use a new (never used) long sleeved plastic glove
- Always use lubricant to enter the cow's birth canal smoothly

Why clean hands for rectal palpation?

- In order to exclude all risks of infecting the birth canal of the cow, it is recommended to follow the protocol. Not following the protocol is one of the most important reasons why cows are suffering of retained placenta or endometritis
- Dirty hands also easily can infect the calf (mouth), that may result in infectious diseases soon after the calf is born



7. Stimulating feed intake using amniotic fluids

- To stimulate feed intake immediately after calving, the amniotic fluids will help to increase the feed intake. This is in fact making use of the natural behavior of the cow

5



7.1 Protocol 5 – Collecting amniotic fluid

- a) One empty bucket must be present
- b) When calf's head and front legs are visible, you are allowed to prick the amniotic bag and collect the fluids which are in
- c) After when the calf is born and separated from the mother, pour the collected fluid on top of some high quality roughage to stimulate the cow to eat

Why Amniotic fluid?

- After the cow has calved it is very important that she starts eating and drinking to fill up the stomach. This will help to prevent all kind of (sub) clinical metabolic disorders to the cow
- Pouring the fluid on top of the feeds is to mimick the natural behavior of the cow of removing birth traces. It will help to increase the feed intake.

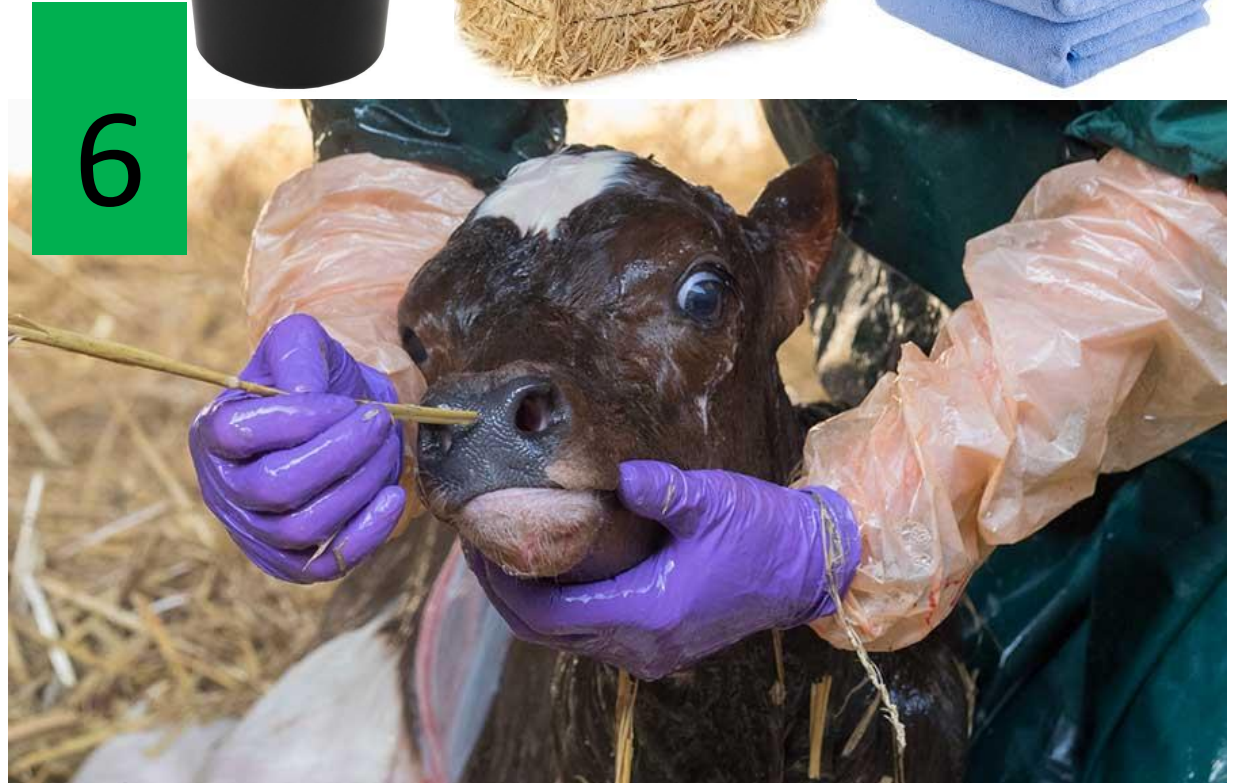
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Natural behavior.



8. First aid incase of weak respiration

- Clean cold water must be ready incase of weak respiration; cold water can act as a shock effect
- Straw is beneficial for nose tickling, causing the calf to cough
- Towels are used to dry the calf



Nose tickling causes the calf to cough

8.2 Protocol 6 – First aid incase of weak respiration

- a) Immediately the calf is born with weak respiration, pour one bucket of cold water on top of the calf's head. Most calves begin to respond immediately and no further treatment is usually required
- b) If you are not satisfied with the calf's response, get a piece of clean straw and tickle the calf's nose, coughing will start
- c) Imitate the licking behavior of the mother cow by drying the calf intensively from top/head to toe

Why assist the calf in breathing?

- Sometimes some slimy discharge comes into the calf's trachea (especially when calves are born backwards) but coughing and breathing it will dilute the discharge. The cold water, straw tickling and intensive drying will help overcome this discomfort

6



9. Umbilical/Navel cord disinfection

- Without any doubt, the most important part of a normal birthing process is to disinfect the umbilical cord as soon as the calf is born
- It is strongly advised to repeat this disinfection 2-3 times during the first 24 hours



7



9.1 Protocol 7 – Navel cord disinfection

- a) Immediately after we have positively assessed the health of the calf, navel disinfection has the highest priority
- b) The umbilical cord (navel) must be treated (rigorously) using an approved disinfectant
- c) During the first 24 hours the navel needs to be treated three times; at 0 hours, 12 hours and 24 hours after the calf is born

Why disinfect the navel cord?

- Since a calf is born without one single gram of disease resistance, it is important to eliminate all the possibilities for harmful bacteria entering the body. Straight after the calf is born, the navel cord is the open connection to the blood vessels



10. Preparations and demands for Milking and Feeding

- First milking is done to harvest colostrum for feeding the calf. A number of milking equipment are required, clean and disinfected



10.1 Protocol 8 – Preparations and demands for Milking and Feeding

- a) Washed and disinfected milking equipment must be ready when the cow has calved
- b) Cow's udder must be hairless and clean before milking starts
- c) Colostrum quality has to be checked (mastitis)
- d) In case of rotatable parts (teat bucket/bottle), be sure that everything is clean

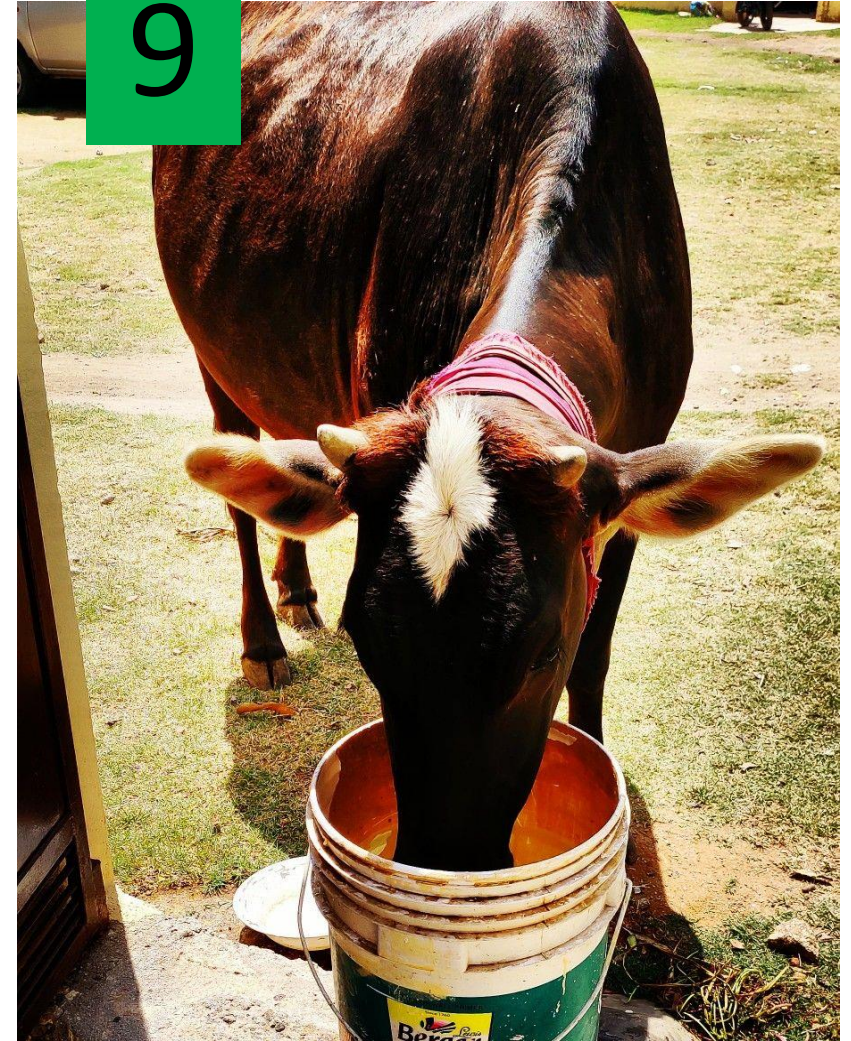
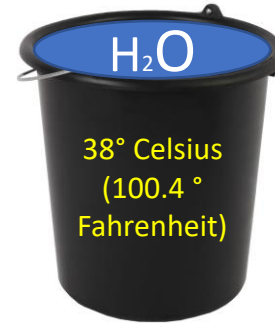
Why make preparations for milking and feeding?

- Sterile (hand) milking is impossible, but we must seize every opportunity to minimize bacterial growth in colostrum. As long as colostrum is in the cow's udder, it is safe. But as soon as it comes out it's a great place for bacteria growth



11. Disease prevention: Water and feed

- Offer the cow lukewarm water followed by high quality feed after she calves down



11.1 Protocol 9 – Disease prevention

- a) Calf out water in
- b) Prepare one bucket with 20 liters of water, temperature 38°C
- c) After calving offer the cow a bucket of lukewarm water, preferably with electrolytes/sugar
- d) When empty, give her another bucket with just water
- e) Continue till she stops drinking
- f) Enough high-quality food now must be available

Why disease prevention?

- After calving the abdominal body is empty, all of a sudden there is a huge space for belly and stomach. It is very important to fill it up quickly mainly to protect the cow from all kinds of (sub) clinical metabolic problems. These metabolic problems will have a negative impact on the cow's milk production and also fertility related problems will appear

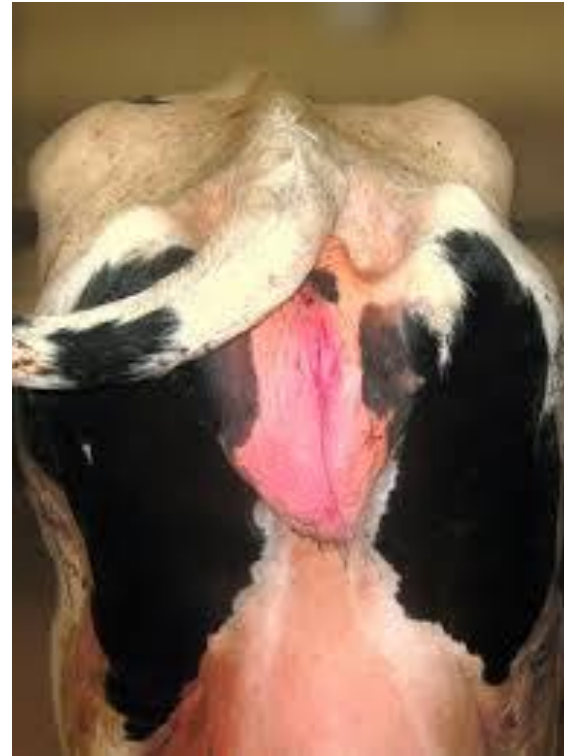
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12. Cooling the cow's vulva (in case of dystocia/heavy parturition)

- Sometimes the cow's vulva becomes slightly (or sometimes severely) swollen after assisted calving. Cooling the cow's vulva by spraying cold water will help stop the swelling process and reduce pain

10



12.1 Protocol 10 – Cooling the cow's vulva (in case of dystocia/heavy parturition)

- Use clean cold water
- Cool the vulva area with spraying cold water for at least 30 minutes
- In case of visible damage, repeating disinfection is recommended

Why disease prevention?

- After dystocia/assisted pulling, it is normal for the cow's vulva to become slightly (or sometimes severely) swollen. Spraying cold water will help stop the swelling process and reduce the pain. Doing nothing means that the cow becomes much more sensitive to vaginal infections and she may lose appetite and become more sensitive to retained placenta



13. Checklist for hygienic calving process

- Discuss the following guidelines with the farmer;
 - The farmer must become aware of the importance of all the issues mentioned in the checklist
 - Its not only a matter of having it, but also the status is as important

i.e.

Sometimes its better to have no calving pen instead of having a dirty calving pen

TOPIC	PRESENT		STATUS			REMARKS
	YES	NO	+/+	0/0	-/-	
Calving pen	x				x	dirty
Clean water		x				far away
Soap/disinfection	x		x			
Protection gloves		x				never used
Ropes/chains	x				x	
Lubricants	x		x			newly purchased
Place for hand washing		x				far away
Cold water	x				x	poor quality
Towels	x		x			washed and dry
Clean straw	x			x		bit dusty
Empty bucket	x		x			
Iodine solution	x			x		looks old
Dip cup	x		x			
Milking utensils						
Calf drinking utensils		x				only general equipment's
Luke warm water		x				
Cow feed	x			x		smelly
Water hose(pipe)		x				