Drone Method

The drone is efficient and easy to control, the controller is designed to be as much easy as we can. The drone is small and fast that can fly everywhere, sheep can only wander off around 5km, so using drones to find where they are is much easier for owners to drive cars to each one’s house. Drones can also be used as monitors, both check the actions of shepherds and chase for missing sheep at the first second they wander off, this increases the efficiency for the owner to find back their sheep since they know exactly where to go.

The drone can be also used to monitor situations of sheep in the crowd, for example, the new birth is produced, the owner can know the message immediately as they can see all the scenes of his sheep. Thermal imaging is another key feature to monitor the health of sheep.

Sensors can be used to identify belong of the sheep, the paint on sheep will affect the wool production, so I think an induction device placed on sheep’s ear that can produce certain signals can solve the problem of identifying sheep. All families on this land can select their signals for drones to identify the owner of lost sheep.

tracker:

**Electronic ID**  
**The number of animals being identified with radio frequency identification (RFID) technology is rapidly growing and may soon be required. Electronic ear tags are the most common form of electronic ID. A microchip and coiled copper antenna is encapsulated in a standard plastic ear tag. A rumen bolus is administered using a balling gun and resides in the reticulum of the animal. It is easily removed by the packer and can be recycled.**  
  
**Microchips are a form of identification that involves the implanting of an electronic chip with a miniature radio transponder and antenna, under the skin of an animal. The most common implant site is between the shoulder blades or near the base of the ear. The transponder can also come in a form that can be ingested by the animal.**

Problem is that they said collar and bells do not work, due to number of the sheep? Reusability?

* **Ear tagging**  
  **Ear tags should be placed between the middle and lower cartilage ribs in the ear and far enough out on the ear to allow for later wool growth. In addition to identifying an individual animal, ear tags can contain other useful information about the animal. The first number on an ear tag can be used to denote the animal's birth year.**  
    
  **Different colored tags can be used for different birth years, breed types, sires, or owners. The name or registration prefix of the producer or farm can be written or imprinted on the tag. Ear tags can be inserted in different ears (right or left) to denote birth type, sex of the lamb, breed type, or sire.**

Prevent from lost

Sheep are hesitant to move towards the dark or into an enclosed are, if we can create a dark place around the sheep and only produce slight light in the front and since the wonderful eyesight of sheep, they can easily see the light and only go stright ahead to the light.

Place an opaque cover on the top of the sheep, this is led by a robot that can produce light, wheels will be added under the cover so that the whole equipment can move with the crowd.