



FARM
ADVISORY
SERVICE



The European Agricultural Fund
for Rural Development
Europe investing in rural areas



Alternative Watering Systems

Poaching of riverbanks



Alternative watering options



- Gravity feed supply
- Pumped farm supply
- Hydraulic ram pump
- Solar panel pump
- Water wheel pump
- Nose pump
- Mains water supply

Which is best ?



Every farm requirement is different

Need to take into account

- **Livestock type**
- **Grazing season**
- **Field size**
- **Stocking Density**

No one size fits all!

What every system needs



- **Water supply**
- **Pump**
- **Storage**
- **Supply pipe**

Alternative watering Options



- Gravity feed supply
- Pumped farm supply
- Hydraulic ram pump
- Solar panel pump
- Water wheel pump
- Nose pump
- Mains water supply

Gravity feed system



FARM
ADVISORY
SERVICE



The European Agricultural Fund
for Rural Development
Europe investing in rural areas



Gravity feed system



Pros

- Simple system
- Requires no power
- Runs 24 / 7

Cons

- Requires sloping ground
- Can airlock if supply pipes are undulating
- Needs good water supply or large holding tank

Pumped farm supply



Pumped farm supply



Pros

- Simple or complex system options
- No limitations on distance
- Electric, diesel, petrol, (solar, hydro options)

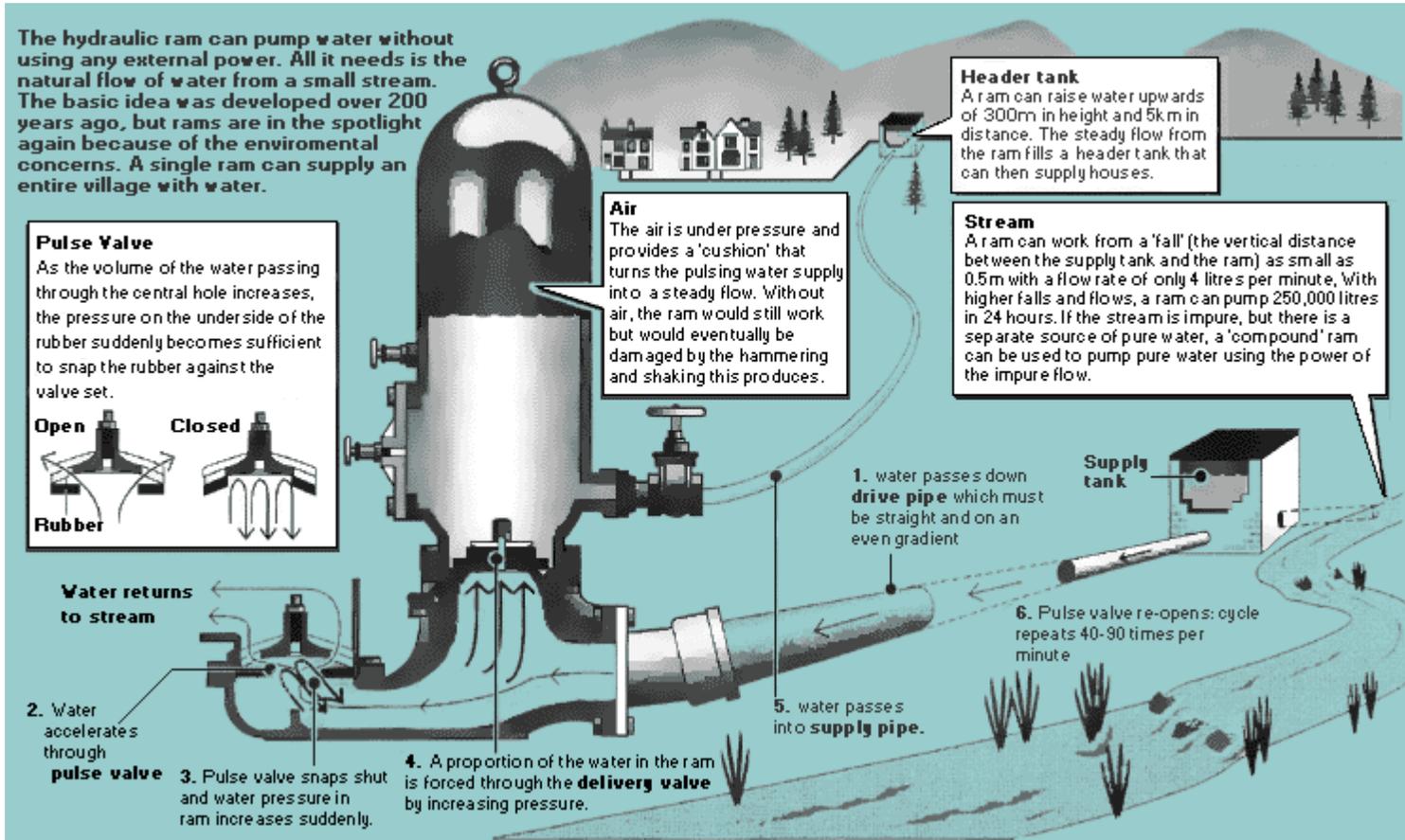
Cons

- Requires farm water supply
- Pipework and system can be expensive to install
- Needs storage holding tank (not always)
- Has ongoing running costs in power supply and pump maintenance

Hydraulic ram pump



FARM
ADVISORY
SERVICE



The European Agricultural Fund
for Rural Development
Europe investing in rural areas

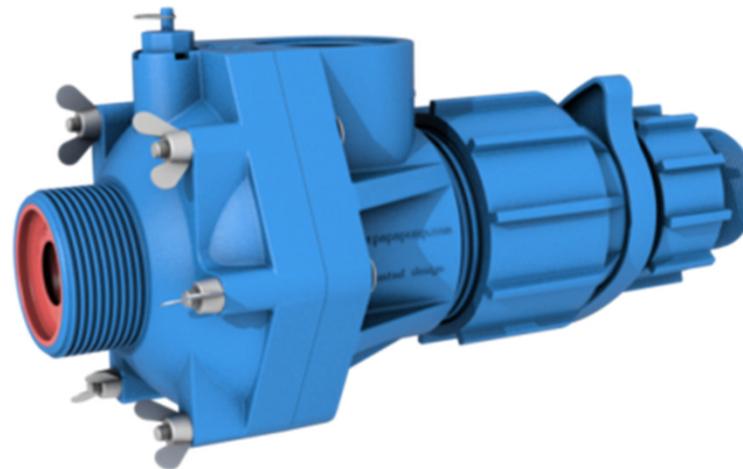


The Scottish
Government
Riaghaltas na h-Alba

Hydraulic ram pump



FARM
ADVISORY
SERVICE



The European Agricultural Fund
for Rural Development
Europe investing in rural areas



The Scottish
Government
Riaghaltas na h-Alba

Hydraulic ram pump



Hydraulic ram pump



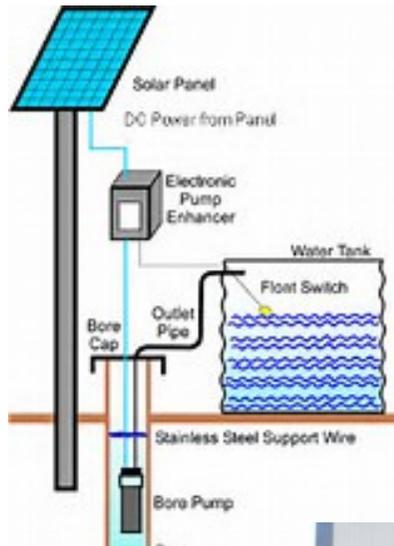
Pros

- Simple system
- Requires no power
- Runs 24 / 7

Cons

- Systems can be expensive
- Requires sloping ground a least 1.5 metre fall (height it can pump depends on fall and water flow)
- Can airlock if supply pipes are undulating
- Needs good water supply or large holding tank to balance flow requirements
- Needs consistent water supply (can fail in dry years)

Solar panel pump



Solar panel pump



Pros

- Requires no power
- Runs during daylight (can have battery backup)
- Can be made mobile

Cons

- Systems are expensive
- Needs good water supply or large holding tank to balance flow requirements
- Needs consistent water supply
- Poor operation in winter

Water wheel pump



Water wheel pump



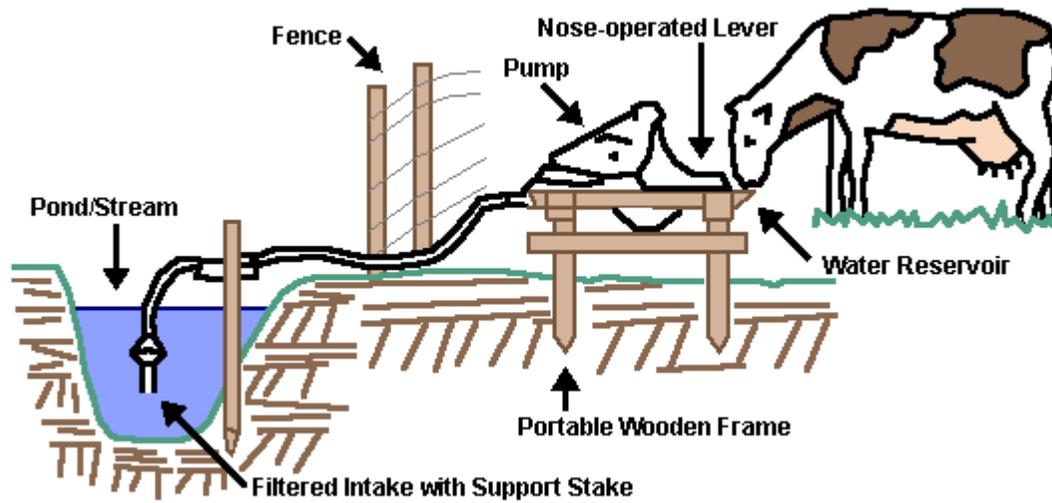
Pros

- Relatively simple system
- Requires no power
- Runs 24 / 7

Cons

- Systems can be expensive
- Requires sloping ground can work with flow of river
- Needs good water supply for power or a good head or large holding tank to balance flow requirements
- Needs consistent water supply (can fail in dry years)

Nose pump



Nose pump



Pros

- Requires no power
- Simple system
- Systems are relatively inexpensive
- Easily made into multiple units
- Runs 24 / 7
- Can be made mobile

Cons

- Needs consistent water supply
- Limited height it can suck water up
- Limited to 20 cattle per pump
- Can be susceptible to damage
- Poor operation in winter

Mains water supply



Pros

- Requires no power
- Runs 24 / 7
- Consistent flow and quality

Cons

- Expensive installation charges
- All water metered and charged for – even leaks!
- Pipe work only maintained to customers boundary.

Tanks



Tanks



Requirements

- Make sure they are big enough (at least 2 times peak daily requirement)
- Should be sealed from vermin
- On a firm base
- Locate strategically – gravity water supply when pump breaks down
- Protect and insulate supply and distribution pipes

Any Questions?

