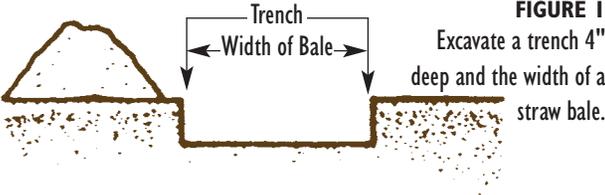


# SILT FENCING & HAY BALE BARRIERS

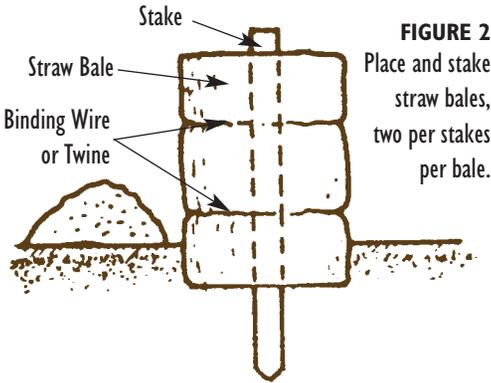
## HOW TO INSTALL A HAY BALE BARRIER

- 1 Dig a trench the width of the bales and 4 inches deep.
- 2 Place the bales in a row with the ends tightly together. The bales will be embedded. Gaps between bales should be chinked with straw to prevent water from escaping from between them.
- 3 Drive stakes or re-bars through the bales (two per bale). The first stake in each bale should be angled toward the previously laid bale to force the two bales together.
- 4 Sprinkle loose hay over the area immediately uphill from the barrier. This will increase barrier efficiency.

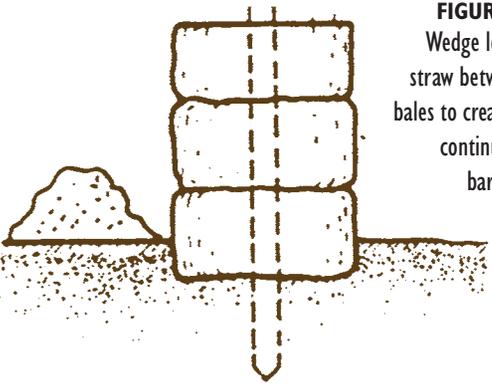
## CONSTRUCTION OF A HAY BALE BARRIER



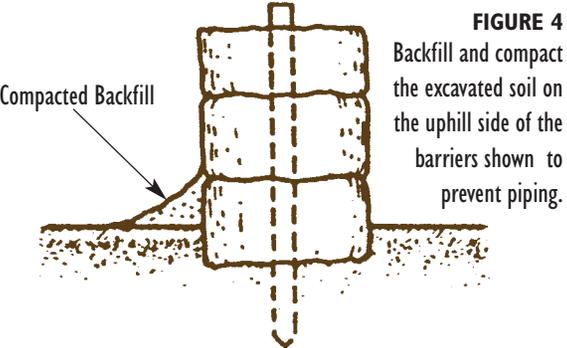
**FIGURE 1**  
Excavate a trench 4" deep and the width of a straw bale.



**FIGURE 2**  
Place and stake straw bales, two per stakes per bale.



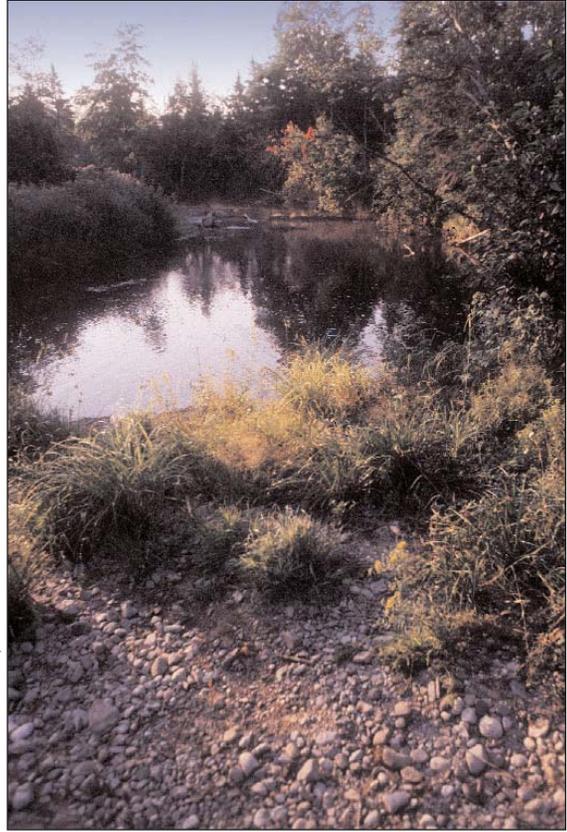
**FIGURE 3**  
Wedge loose straw between bales to create a continuous barrier.



**FIGURE 4**  
Backfill and compact the excavated soil on the uphill side of the barriers shown to prevent piping.

## SEDIMENT BARRIER MAINTENANCE

- 1 Inspect barriers after each rainfall and repair any damage.
- 2 Remove sediment deposits once they reach 1/2 the height of the barrier. Dispose of the sediment wisely (in a location far away from sensitive areas on the property).
- 3 Replace sections of the barrier that decompose or no longer filter properly.



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# SILT FENCING & HAY BALE BARRIERS

## WHAT ARE THEY?

Silt fencing and hay bale barriers are two types of sediment barriers. They are temporary structures that are installed across or at the toe of a slope. They are used to control sheet flow - a very thin film of water. They are not suitable for use in areas of concentrated flows such as ditches or waterways.

## WHICH IS BETTER?

Although silt fencing and hay bale barriers are considered interchangeable, in reality they perform very differently in the field. Silt fencing is much better at filtering fine soil particles out of dirty water, much as a coffee filter holds back ground coffee from the pot. They are not very sturdy when compared to hay bales, and heavy machinery can readily run them over rendering them useless.

Hay bale barriers do a poorer job at filtering dirty water. They are however, readily available. Once they are installed properly, they are very resistant to being moved.

If the soil on your property is very fine textured (fine sands, silts or clays), you should definitely consider using a silt fence. If your soils are very coarse and sandy, a hay bale barrier would be adequate.

You can have the best of both worlds if you reinforce the silt fence by backing it up with hay bales – you get a more sturdy structure with good filtering ability.

## WHERE SHOULD THEY BE LOCATED?

Install filter barriers along the down-slope side of any construction area to catch the sediment. They can also be used along the perimeter of any sensitive area – perennial and intermittent streams, ponds, lakes, or wetlands for example. The total drainage area above a filter barrier should not

exceed 1/4 an acre per 100 feet of barrier.

## WHERE SHOULDN'T THEY BE LOCATED?

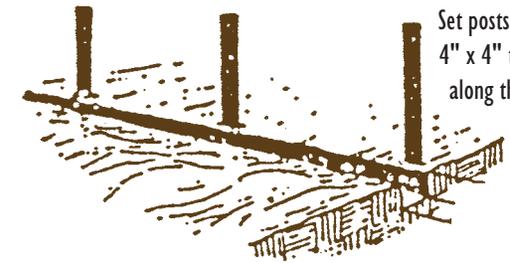
Don't put silt fencing or hay bales across big ditches or across streams! If they are correctly installed, they become small dams. Water cuts around the edges and makes a worse erosion problem! If they are not correctly installed, they blow out and block downstream areas.

## HOW TO INSTALL A SILT FENCE

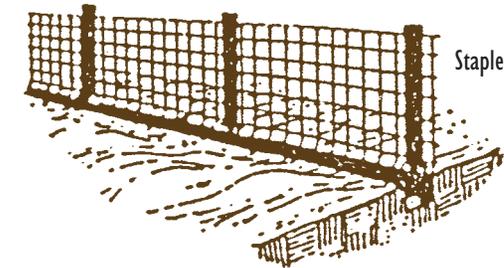
These instructions are general. Follow the manufacturer's instructions if they are available.

- 1 Dig a trench about 4 inches wide and 4 inches deep across the slopes where you wish to install the fencing.
- 2 Place the base of the silt fencing in the trench. Be sure that the posts are positioned on the down-slope side.
- 3 Backfill the trench being sure to compact the soil over the base of the silt fence.
- 4 If fabric with support fence (wire or plastic) is used, posts should be spaced 10 feet apart at the most. If no support fence is used, the spacing should be reduced to 6 feet apart. Posts should be driven at least a foot into the ground.
- 5 Silt fencing should be no higher than 3 feet.
- 6 If you have to join two pieces of silt fencing, splice the fabric at a support post and overlap the fabric a minimum of 6 inches. Seal it as securely as possible.

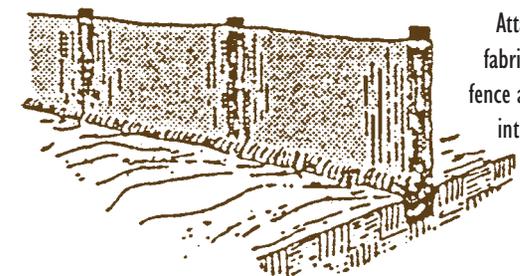
## CONSTRUCTION OF A SILT FENCE



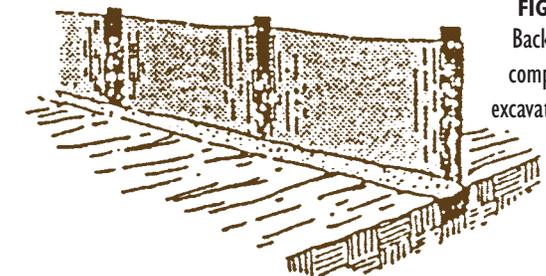
**FIGURE 1**  
Set posts and excavate a 4" x 4" trench up-slope along the line of posts.



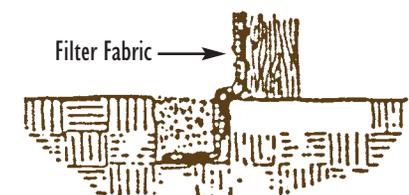
**FIGURE 2**  
Staple wire fencing to the posts.



**FIGURE 3**  
Attach the filter fabric to the wire fence and extend it into the trench.



**FIGURE 4**  
Backfill and compact the excavated soil.



**FIGURE 5**  
Trench detail, Side View