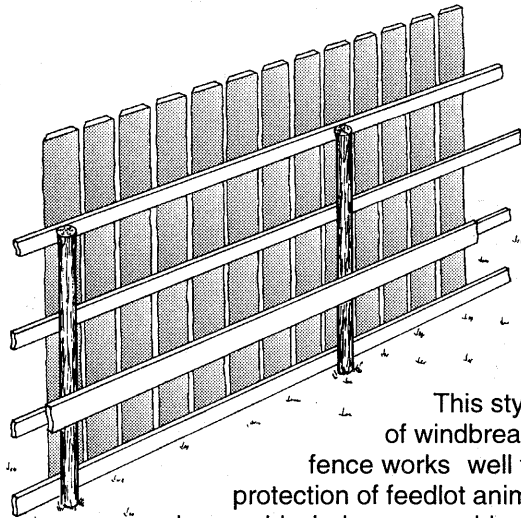




Plan S-104

Porous Windbreak Fencing

COMPLETE INSTRUCTIONS



This style of windbreak fence works well for protection of feedlot animals where cold winds are a problem.

The design uses economical 8 or 10 foot long double-cut slabs. The slabs are spaced to give approximately 20% openings. They are placed 4 to 6 inches above ground to avoid rotting.

Research has shown that a 20% porosity (80% solid) windbreak fence allows some wind to filter through, thus providing better downwind protection than a solid windbreak of the same height. An 8 foot high slab fence of 20% porosity will provide good wind protection at animal height for 75 to 100 feet downwind. Figure 1 illustrates the wind control of different porosity fences.

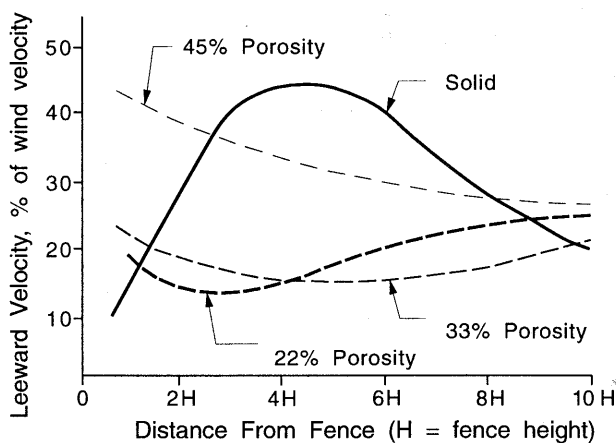


Figure 1. Velocity reduction for different porosity fences.

Besides being an excellent windbreak, this type of fence can offer good snow control. Leave about 30 feet just inside the lot windbreak fence to provide space for the resulting snow drift. Figure 2 shows snow drift patterns to be expected with different porosity fences. In heavy snowfall areas, trap snow with a conventional snow fence upwind of the windbreak fence. Snow fence is 50% porous.

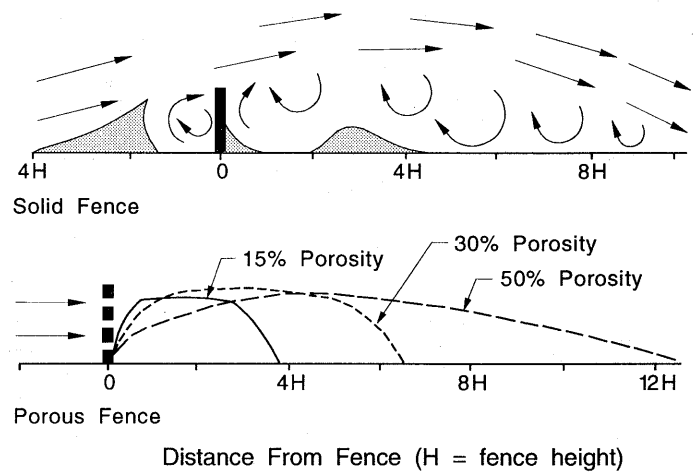


Figure 2. Snow drift patterns about solid and porous fences.

Never connect a porous windbreak fence to the front corner of an open-front shed. This tends to funnel wind and snow into the shed. Provide a snow trap as shown in Figure 3. The 20 foot dimensions given are minimums. Most producers attach the windbreak fence to the back corners of the shed.

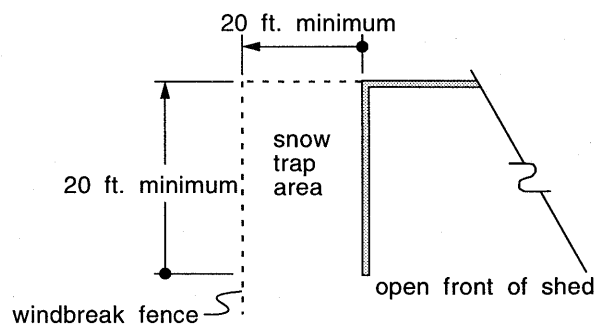
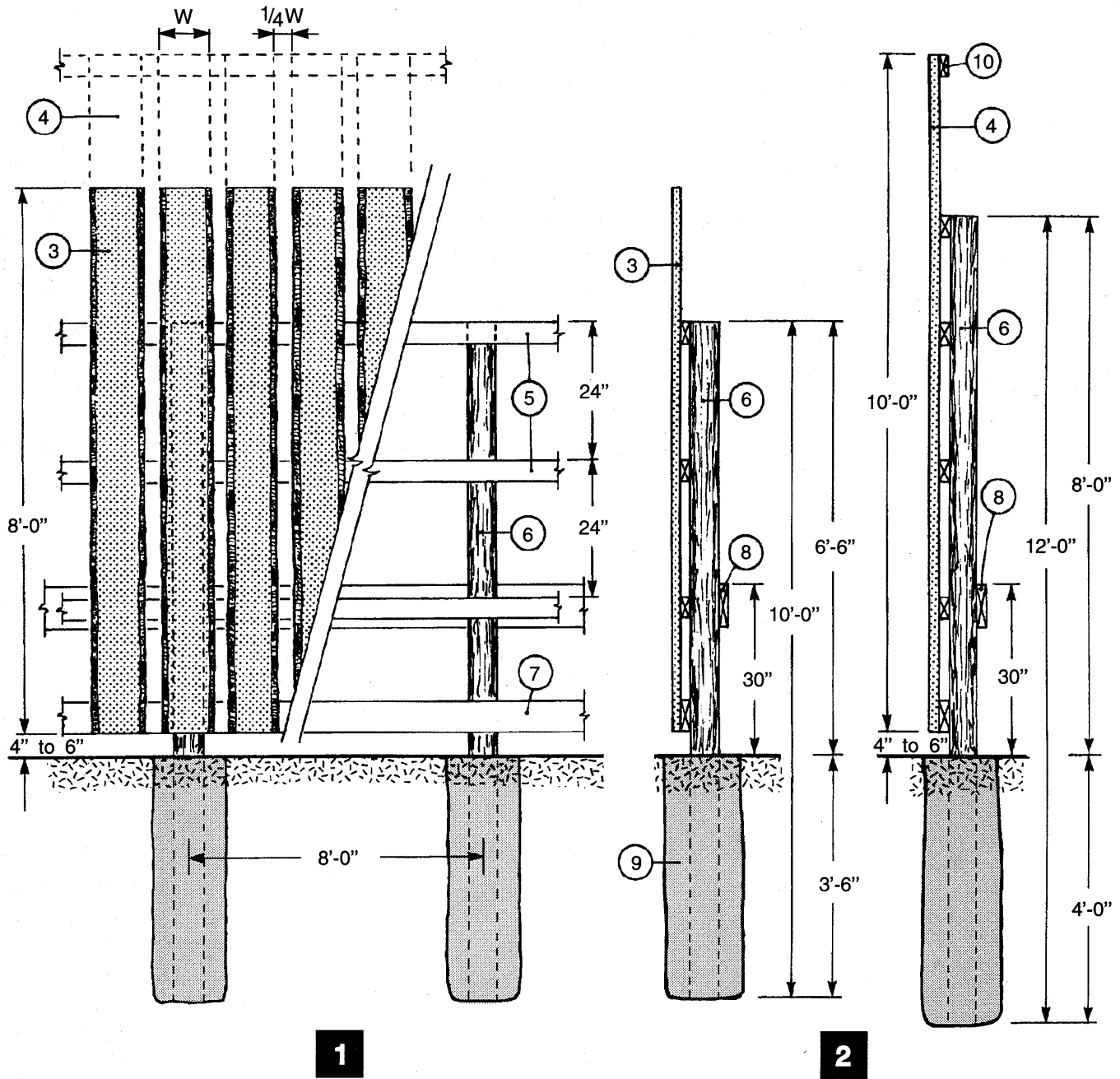


Figure 3. A snow trap reduces snow buildup inside a shed.



1. Front View
2. Side Views
3. 1" double-cut slabs - spaces are 1/4 the width of the boards
4. optional 10 ft. high fence
5. 2" x 4" full cut rough lumber
6. 6" top diameter pressure treated posts or equivalent;
10 ft. long for 8 ft. high fence; 12 ft. long for 10 ft. high fence
7. 2" x 6" full cut rough lumber
8. 2" x 8" guard rail; full cut rough lumber
9. backfill posts with gravel; in soft soils, backfill with concrete
10. 2" x 4" stiffener; full cut rough lumber