

Portable livestock shelters

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Abstract

Portable livestock shelters are made of durable, lightweight materials that can be moved from place to place and easily installed by farmers. Animals such as cattle, goats and pigs can be accommodated in these shelters. The specification of materials may vary depending on the type and number of animals intended for shelter. Other benefits include easy conversion of shelters to another species, animal-friendly nature of materials, separate collection of excrement and urine, etc. The change in atmospheric temperature does not affect the materials. The shelter can be directly connected to biogas factories without exposing the waste to the environment, thereby preventing pollution, which is considered a major problem of livestock. The easy-to-clean nature of the shelter keeps animals in a more hygienic state avoiding stress. The convertible nature allows the shelter to be used for animals of various ages and stages of gestation.

DEFINITION: A permanent or portable structure with fewer than four walls and / or a roof to allow better use of pastures and rangelands and to shelter livestock from negative environmental factors. This structure should not be interpreted as a building.

PURPOSE

- To provide protection for livestock from excessive heat, wind, cold, or snow.
- Protect surface waters from nutrient and pathogen loading.
- Protect wooded areas from accelerated erosion and excessive nutrient deposition by providing alternative livestock shelter/shade location.
- Improve the distribution of grazing livestock to enhance wildlife habitat, reduce overused areas, or correct other resource concerns resulting from improper livestock distribution.

CONDITIONS WHERE PRACTICE APPLIES

This practice is applied to protect sensitive areas by providing a source of shade or shelter away from shade or shelter existing in wooded areas and on the banks or depressions of watercourses. This practice should be used in conjunction with the exclusion of animals from the sensitive area. Use a livestock exclusion practice Enclosure of NRCS conservation practices (CPS) (Code 382). This practice is applicable when the productivity and welfare of animals are affected by negative environmental conditions such as direct and unhindered sun, wind or snow

This practice can facilitate the management of livestock under prescribed pasture to protect water quality and soil health. This practice can be used to provide protection on rangelands or pastures; cultivated land or hay used for pasture; winter feeding areas; or in an area of intensive livestock use.

CRITERIA

General Criteria Applicable to All Purposes and Structure Types

Transport of Portable Structure.

Equip the portable structure with runners or wheels or other means to facilitate transport. Provide lateral support to vertical and horizontal structural members to prevent twisting and/or buckling.

Location.

Locate the structure to avoid harmful effects on cultural resources and endangered, threatened and candidate species and their habitat. Select upland locations away from riparian areas and concentrated flow areas to avoid degradation of water quality. Locate structures a minimum of 100 feet from any surface water bodies, 150 feet from an upgradient well and 300 feet from a down-gradient well. Select location(s) that will not have surface water flow through the structure.

Erosion Protection.

Provide erosion protection from roof runoff.

Materials.

Build the structure from durable materials that are proportionate to a minimum lifespan of 10 years. The fabric or other non-structural material may need to be replaced in accordance with its expected life (generally no more than 5 years). Discard or recycle used fabric or other non-structural material, as appropriate.

Waste Management.

Design the structure to facilitate the distribution of manure across grazing lands in accordance with a nutrient management plan.

Prescribed Grazing.

When the livestock protection structure is installed to improve the distribution of livestock to address resource concerns, grazing prescribed by NRC VCC (code 528) must also be included in the resource management plan.

Orientation.

Orient the longest axis in a north to south direction to maximize the amount of shade and to allow sunlight to dry the area under the structure.

Shade cover.

Design the top of the structure so that it is relatively flat so that the wind exerts a minimum load on the structural supports. Allow a minimum pitch of 1:25 for the roof of the structure to allow runoff. Anchor the four corners of the shade structure with fasteners of adequate size and strength to meet local wind conditions during the season of use.

Size.

The minimum size requirements for a shade structure are shown in Table 1. Limit the maximum size for individual shade structure units to 25 feet wide by 50 feet long (1250 square feet). Portable structures can be made smaller to facilitate movement. Several structures may be necessary depending on the number of animals to be housed. In grazing systems prescribed for high production livestock, provide shade for at least 75% of the herd,

especially for dairy or beef cows.

Biography :

Biju P has completed his Graduation and Post-graduation from Kerala Agricultural University, (Presently Kerala Veterinary and Animal Sciences University) and joined The Department of Animal Husbandry as Veterinary Surgeon under Government of Kerala.

In addition to the duties of Veterinary Surgeon, he also writes articles in Malayalam agricultural journals and scientific journals. He has done various innovative works like cultivation of Azolla in poly house, user-friendly poultry cages etc. He regularly handles classes for livestock farmers and he is a consultant to various commercial farms.

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