

TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

TN - Agronomy - 19

Berkeley, California
July 1970

MINIMUM PROGRAMS FOR MAINTAINING GRASS AND LEGUME VEGETATIVE COVER ON CHANNEL BANKS

The attached (1) "Minimum program for maintaining perennial grasses on PL-566 channel banks" and (2) "Minimum program for maintaining annual grasses and legumes on PL-566 channel banks" were written to serve as guides in preparing maintenance programs for vegetated PL-566 channels.

The programs may need modification to fit local conditions. For example, grazing channel banks may not be desirable because of low rainfall or problem soils. In such cases the statements on grazing should be modified accordingly.

It should be noted that the programs have been prepared in such a manner that they may be conveniently machine copied where local personnel find them suitable for use without modification.

The programs should be useful for preparing maintenance instructions for other critical area grass and legume plantings in addition to their use for channel banks.

Recognition is given to Robert S. MacLauchlan, Clarence U. Finch, Jr., Thomas W. Holmes, Jr., and Herman C. Cohen for assistance in preparing the programs.

Marvin F. Hollingshead
State Conservation Agronomist

Attachments

MINIMUM PROGRAM FOR MAINTAINING PERENNIAL GRASS
ON PL-566 CHANNEL BANKS

There are many advantages to using adapted perennial grasses for stabilizing watershed works of improvement. Perennial grasses provide a more dependable protection against erosion, are more tolerant of some herbicides, can reduce fire hazard, and by selection of materials used, can enhance the attractiveness of structures. The following items describe a minimum program for maintaining protective vegetative cover on channel banks that have been planted to perennial grasses.

Fertilization

Periodically broadcast 200 pounds of 16-20-0 per acre uniformly over the vegetated areas. Fertilizer should be applied in October for cool season grasses such as Reed canarygrass or Tall fescue and in the early spring for warm season grasses such as bermudagrass and Kikuyugrass. If accessibility in the spring will be a problem, warm season grasses should also be fertilized in October. Fertilizer should be applied if the density of ground cover is less than complete or when the vegetation appears to lack vigor and is pale green or yellowish in color.

Protection from Grazing

Perennial grasses on channel banks should be protected from grazing during the entire year of establishment and the fall and winter of all years. Light managed grazing on forage type perennial plants may be permitted in the late spring or summer after the danger of high water is past. Managed grazing when the banks are dry can be beneficial by reducing tall unsightly vegetation, reducing fire hazard, and helping to control rodents. Grazing should be controlled with livestock removed when there is at least a four-inch stubble height remaining.

Protection from Fire

Install any measures needed to protect channel bank vegetation from fire. Effective control measures include managed grazing, spraying, access roads and mowing. These practices can also reduce weeds and unsightly tall vegetation and enhance the attractiveness of the channel.

Use of Herbicides

Vegetation protecting channel banks will be considered susceptible to all herbicides and every precaution taken to avoid spills, drift, or improper use of herbicides on the channel banks.

Access Roads - Frequently it is desirable to apply a herbicide to control weeds on access roads. Care should be taken to determine that only the minimum amount of herbicides needed for control is used. Great caution should be used in applying the herbicide to be sure the boom does not extend to the top edge of the protected slope. If this happens, the herbicide may move down the slope and damage the protective vegetation. A

Access roads, continued

good rule is to leave a strip unsprayed between the road and the channel bank. Vegetation in this strip may be controlled by managed grazing or mowing to keep the area attractive and reduce fire hazard.

Cattail and Tule Control - At times it is necessary to use selective herbicides to control cattails and tules in the channel bottom. Careful consideration should be given to selecting herbicides. Insofar as possible, use only contact herbicides. Application of herbicides should be limited to the clumps of cattails or tules. Do not apply a blanket application. Great caution must be used to avoid spraying any portions of the channel banks.

Broadleaf Weed Control - Channel banks are occasionally sprayed for broadleaf weed control. If needed, selective broadleaf weed killers can be applied in recommended amounts at any time on established perennial grass.

Miscellaneous Problems

Problems may arise in maintaining vegetation on small isolated areas of channel banks because of repair work, infertile soil, intense shading, sand pockets, bank slips, rodents or other causes. Failure to treat such an area can result in its expansion into a more difficult and costly problem.

Assistance

If channel bank vegetation is damaged by overgrazing, herbicides, fire, or other causes, consult the SCS district conservationist regarding needed treatment to assure adequate protection to the channel banks.

MINIMUM PROGRAM FOR MAINTAINING ANNUAL GRASS AND LEGUME
ON PL-566 CHANNEL BANKS

The following items describe a minimum program for maintaining vegetative cover to protect channel banks that have been seeded to annual grasses and legumes.

Fertilization

Periodically broadcast 200 pound of 16-20-0 per acre uniformly over the vegetated areas between September 15 and November 1. On some sites this may be needed annually. Generally, a fertilizer application every second or third year will help maintain a good protective vegetative cover.

Protection from Grazing

Provide protection from grazing during the fall and winter and prior to maturity of the annuals each spring. Light managed grazing can be beneficial after seed maturity. This removes some old residue and opens the stand to give better reseeding of annuals. It is also a help in controlling rodents. Grazing should always be controlled and livestock removed with at least a three to four inch stubble height remaining. If grazing is permitted, an annual application of 200 pounds per acre of 16-20-0 will be needed for erosion control.

Protection from Fire

Install any measures needed to protect channel bank vegetation from fire. Effective control measures include timely controlled grazing, careful use of herbicides on access roads and mowing. Mowing also controls weeds and greatly enhances the attractiveness of the channel.

Use of Herbicides

Vegetation protecting channel banks will be considered susceptible to all herbicides and every precaution taken to avoid spills, drift or improper use of herbicides on the channel banks.

Access Roads - Frequently it is desirable to apply a herbicide to control vegetation on access roads. Care should be taken to determine that only the minimum amount of herbicides needed for control is used. Great caution should be used to keep the boom from extending to the top edge of the protected slope. If the top edge is sprayed, herbicide will move down the slope killing the protective vegetation. A good rule is to leave a strip unsprayed between the road and the channel bank. Vegetation in this strip may be controlled by managed grazing or mowing to keep the area attractive and reduce fire hazard.

Cattail and Tule Control - At times it is necessary to use selective herbicides to control cattails and tules in the channel bottom. Careful consideration should be given to selecting herbicides. Insofar as possible, use only contact herbicides. Application of herbicides should be limited to the clumps of cattails or tules. Do not apply a blanket application. Great caution must be used to avoid spraying any portion of the channel banks. Apply herbicides during the summer months after the channel bank cover has set seed.

Broadleaf Weed Control - Channel banks are occasionally sprayed for broadleaf weed control. Herbicides used to control broadleaf weeds will also kill Lana vetch and other annual legumes. Where possible, defer spraying broadleaf weeds until after the legume has set seed.

Miscellaneous Problems

Problems may arise in maintaining vegetation on small isolated areas of channel banks because of repair work, infertile soils, intense shading, sand pockets, bank slips, rodents, or other causes. Failure to treat a small disturbed area can result in its expansion into a more difficult problem.

Assistance

If channel bank vegetation is damaged by overgrazing, herbicides, fire, or other causes, consult the SCS district conservationist regarding treatment needed to assure adequate protection of the channel bank.