

## SOIL CAPABILITY CLASS VI - 15 TO 25 PERCENT SLOPES

BEFORE CONDITION - CONTINUOUS SILAGE CORN PLANTED IN MAY, NO COVER, UP AND DOWN THE SLOPE DIRECTION, CHARLTON/PAXTON/WOODBRIDGE SOILS, MAXIMUM SLOPE OF 25 PERCENT AND SLOPE LENGTH OF 200 FEET.

BEFORE SOIL LOSS - A = RKLSCP

$A = 150 \times .24 \times 8.3 \times .46 \times 1 = 137$  tons per acre.

To produce occasional row crops on slopes of 15 to 20 percent, land users need to have an acceptable conservation system to reduce soil loss to not more than 12 tons per acre. This is to be achieved with the following constraint: LSC-max = 0.33, and NO ROW CROPS ARE ALLOWED ON ANY SLOPES GREATER THAN 20 PERCENT. Slopes greater than 20 percent need to plant to hay, pasture or other protective land uses.

If slope is at maximum of 20 percent for LCC #4 before conditions, then slope length maximum must be reduced to no more than 100 feet for the following ACS conditions:

ACS #10 - Rotation of silage corn for one year, conventional plant in May, up and down slope tillage, fall cover established by October 1, annually, and hay planted for two years.

AFTER SOIL LOSS (ACS #10)

$A = RKLSCP = 150 \times .24 \times 4.1 \times .08 \times 1 = 12$  tons per acre.

ACS #11 - Rotation of silage corn for two years, conventional plant in May, up and down slope tillage, fall cover established by October 1, annually, and hay planted for five years.

AFTER SOIL LOSS (ACS #11)

$A = RKLSCP = 150 \times .24 \times 4.1 \times .08 \times 1 = 12$  tons per acre.

ACS #12 - Rotation of silage corn for three years, conventional plant in May, up and down slope tillage, fall cover established by October 1, annually, and hay planted for eight yearsl

AFTER SOIL LOSS (ACS #12)

$A = RKLSCP = 150 \times .24 \times 4.1 \times .08 \times 1 = 12$  tons per acre.

\* \* \*

SITUATION 4: Continuous corn for silage, no cover, up and down slope farming. Slopes is 15% for 200 feet. Soil is Newport. (ALTERNATIVE #8)

A = RKLSCP

A = 150 X 0.28 X 3.6 X 0.46 X 1

A = 70 tons per acre per year.

ACS #13 - Crop Rotation of corn 3 years, hay 5 years, conventional tillage, cover crop (mid-October), contour farming, reduce slope (diversion/terrace).

A = RKLSCP

A = 150 X 0.28 X 2.57 X 0.11 X 0.8

A = 9.5 tons per acre per year.

THE FOLLOWING ALTERNATIVE IS ACCEPTABLE ONLY FOR FIELDS OF 8% SLOPES OR LESS (OR MAXIMUM LS = 1.21), 5 ACRES SIZE OR LESS, AND LENGTH OF FIELD IS GREATER THAN TWICE THE WIDTH.

ACS #14 - Crop Rotation of corn 5 years, hay 5 years, conventional tillage, cover crop (mid-October), up and down slope farming.

A = RKLSCP

A = 150 X 0.28 X 1.21 X 0.20 X 1

A = 10.2 tons per acre per year.

SITUATION: Continuous vegetables or flowers, no cover, up and down slopes farming. Slope is 6% for 140 feet. Soil is Charlton (ALTERNATIVE #1)

A = RKLSCP

A = 150 X 0.24 X 0.8 X 0.64 X 1

A = 18 tons per acre per year.

ACS #15 - Continuous vegetables or flowers, conventional tillage, cover crop (early September), cross slope farming.

A = RKLSCP

A = 150 X 0.24 X 0.8 X 0.31 X 0.75

A = 6.7 tons per acre per year.

## NOTES

If actual, onsite slope lengths are greater than those given in the listed ACS's, either adjust the crop C-max factor downward through less intensive cropping sequences, or reduce the slopes length mechanically through installation of conservation practices to stay within the maximum LSC constraints for each land capability class.

If actual, onsite slope lengths are less than those given in the listed ACS's, it is permissible to adjust the crop C-max factor upward through more intensive cropping sequences, yet not exceed the maximum LSC constraints for each land capability class.

If 15 to 20 tons of as-produced manure (i.e. free stall with little bedding) is added in the fall and spring tilled, reduce the overall C-factor by 0.02.

If 15 to 20 tons of manure with bedding (i.e. young stock or stanchion barns with hay or straw) is added in the fall and spring tilled, reduce the overall C-factor by 10 percent.

Substitute ACS's may be used so long as they do not exceed the land capability class constraints or raise the soil loss above that of the ACS being substituted.

A conservation system on a long slope length may be acceptable for treating sheet and rill erosion yet may have ephemeral gullies. If so, plan to treat this erosion separately.