

CONSERVATION PROGRAM

for

Ole Meland

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Silver Creek
SOIL CONSERVATION DISTRICT

Assisted by

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
ROBERT M. SALTER, Chief

PACIFIC REGION
J. H. CHRIST, Director

"HOW TO USE YOUR GUIDE
and
HOW TO DEVELOP IT INTO A COMPLETE PLAN."

This is your guide to conservation farming. It contains the latest and best information known about using the kind of land you have. By developing a conservation plan for your farm based on this guide, you and your neighbors can use your land without fear of erosion, loss of fertility, water logging, or any other kind of damage. At the same time, you will get the most out of every acre when you use it in accordance with what it can do.

Your land has been carefully mapped by a conservation surveyor. Based on his work, a map of the soil treatment differences (called capability units) of your land has been made up and put into this guide. It is the key to the most successful farming you can practice. You will note that it is colored in different colors. What these mean is shown on the attached sheet that is labeled "The Standard Land Capability Classification." You will probably want to study the map to start with, to get an idea of the various kinds of land you have, where they are, and the problems of each kind of land (three of the biggest problems in this district are soil fertility, proper land use, and erosion).

You will then wish to study the capability unit sheets. For each capability unit found on your map you will find a capability unit sheet. The best kind of farming to practice for each kind of land is shown on these sheets. These sheets give a brief description of the soil and the treatments that are needed to maintain or improve your soil. You should use your map with the capability unit sheets so that you can see where the different practices belong. In addition to the specific conservation practices listed on these sheets, some general conservation practices that apply to all of your land, your cropland, and your pasture are listed on separate general sheets.

The district will help you in working out the details of your complete conservation plan when you are ready to develop it. It will send out a soil conservationist to work with you on the ground. He will help you and your neighbors to get started and show you how to keep going. You choose your own enterprises, but you work them out so they fit the land you have. The district doesn't have too many men so you are asked to be sure you and your neighbors are ready for help before you ask for it. The district agrees to do this when a member of the board signs the agreement sheet, but you still must ask for help when you want it.

As a result of the help you are given, you are expected to carry out a conservation program on your land, keeping within the general limits listed in your guide. You are expected to start using your land the conservation way to the best of your ability.

This farm is operated as a General farm, the most important conservation practices needed to improve & protect these soils are as follows,

(1) Woodland Mgt, As recommended in the Guide sheets on woodlands.

(2) Tree planting is discussed in the woodland Guide sheet.

(3) Sub soiling of old fields will improve yields as this operation will break up plow-pan & improve water intake.

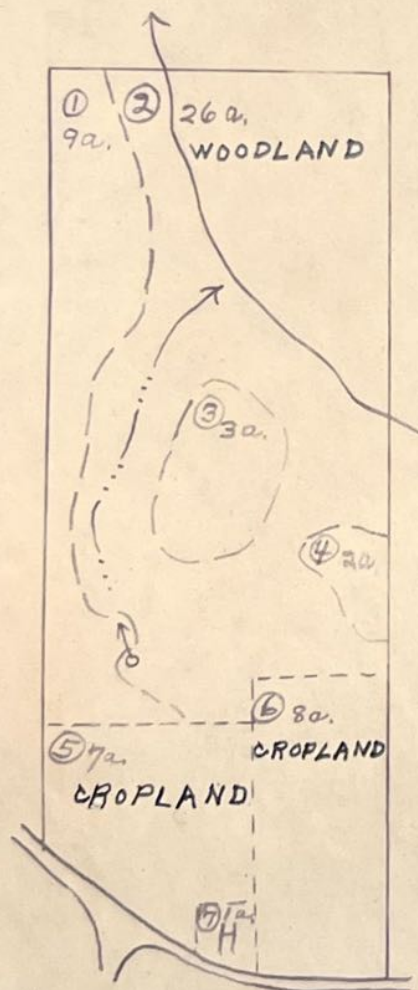
(4) Crop residue Mgt. is necessary to increase the organic matter content of the soil which will improve fertility & yields, This practice also protects against erosion.

(5) Crop rotation as set out in the conservation Guide sheets are needed & will improve crop yields by building fertility & improving soil balance.

(6) Cross slope farming of syeoper areas will help prevent erosion as explained in the conservation Guide sheets.

(7) An extensive fertilizer program should be developed as suggested in the general conservation sheets to maintain high yields & improve crop quality.

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LAND USE MAP DFN-10-121

OPERATOR Ole Meland FARM No. 86 ACRES 56 DATE 7
Silver Creek SOIL CONSERVATION DISTRICT 29 SCALE 8" = 1 Mile

R-1-W

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LAND CAPABILITY MAP DEN-1D-121

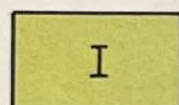
OPERATOR Ole Meland FARM No. 86 ACRES 56 DATE 3/22/50
Silver Creek SOIL CONSERVATION DISTRICT 29 SCALE 8" = 1 Mile

THE STANDARD LAND CAPABILITY CLASSIFICATION

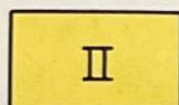
The first step in making a conservation farm plan is a careful survey of the land itself. Experienced soil scientists make a conservation survey of soils, slopes, erosion and other physical features. This information is plotted on an aerial photograph or map of the farm. Standard symbols are used to supply the details needed by professional men.

This information is reduced to a simple classification of land, according to its suitability for use and its need for special treatment. In this "Land Capability Classification" all land falls in eight broad classes. The first four are suitable for cultivation. The next three are limited to range or woodland use. The eighth class is suited only for wildlife, recreational or similar purpose. Each is shown by a standard color and/or Roman numeral.

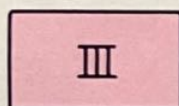
LAND SUITED FOR CULTIVATION:



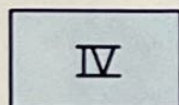
CLASS I: Very good land with little or no limitation in use. It is nearly level, deep and commonly without erosion. Some of it may need drainage, clearing or other conditioning treatment.



CLASS II: Good land with minor physical limitations, as gentle slopes, less deep soils or slight erosion. Choice in crops is reduced or special practices as water management, contour operations, cover cropping or longer rotations are needed.

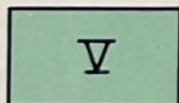


CLASS III: Moderately good land with major physical limitations, as relatively steep slopes, shallow soils or severe erosion. Choice in crops is further reduced and more protective measures are required, as terracing, strip cropping and careful water management.

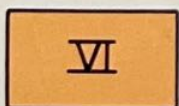


CLASS IV: Fairly good land that is best suited to pasture and hay but can be cultivated occasionally -- usually not for more than 1 year in 6. When plowed careful erosion prevention practices must be used.

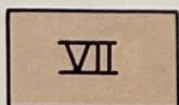
LAND NOT SUITED FOR CULTIVATION:



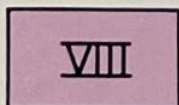
CLASS V: Land very good for grazing or forestry. It has slight or no physical limitations and needs only good management.



CLASS VI: Land good for grazing or forestry. It has minor physical limitations and needs some protective measures.



CLASS VII: Land moderately good for grazing or forestry. It has major physical limitations and needs extreme care to prevent erosion or destructive burning, or to overcome other hazards.

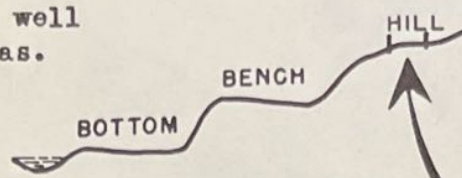


CLASS VIII: Suited only for wildlife or recreation. This land usually is steep, rough, stony, sandy, wet, or highly erodible.

LAND CONDITION

Willamette Valley

- * Medium to heavy textured red hill soil, well drained except for small wet areas.
- * Depth - Over 36 inches.
Slope - 0-3%
- * Original fertility - Moderate -
Phosphate deficiency.
- * Reaction - Strongly acid
- * Available water holding capacity - Moderate



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CONSERVATION TREATMENT

Use only those shallow and medium rooted crops. Choice in crops reduced by strong acidity, moderate fertility, soil depth, and occasional wet areas.

Apply 2 tons of lime. Repeat as needed to maintain favorable soil reaction. On run-down soils the use of lime, manure, phosphate, nitrogen, and soil building crops is especially important.

Natural waterways should be sodded and maintained as grassed waterways.

Use recommended applications of manure, phosphate, and nitrogen fertilizers and green manure crops regularly.

Livestock farming is needed to maintain soil fertility.

CROP ROTATIONS: Grow close seeded soil building crops (legumes or legume-grass mixture) at least half the time, and not more than three successive years in cultivated crops. Use tap rooted legumes frequently for soil aeration.

SAMPLE ROTATIONS: 1st, 2nd and 3rd year - row crop or grain
4th, 5th and 6th year - grass and legumes

PASTURE AND HAY SEEDINGS: Non-Irrigated - Use hill land mixture) See sheet on
Irrigated - Use irrigated mixture) Seeding Mixtures.

DRAINAGE: Tile drains about 3 feet deep should be used to intercept seepage from higher land and as random lines to follow low, wet draws.

IRRIGATION: (If sprinkler irrigated). Maximum water use during hot dry periods is shown in the following table for system design only. Actual amounts and days between water applications to be determined by the farmer by soil moisture inspection.

		AMOUNT TO	HOURS PER	DAYS
	MAX. RATE	APPLY INCL.	SETTING	BETWEEN
CROPS	TO APPLY	LOSSES	(MAX. RATE	IRRIGATIONS
Shallow-Rooted	0.3 in/hr.	4½ in.	15 hrs.	15 days
(1)				
Deep-Rooted	0.3 in/hr	6 in.	20 hrs.	20 days
(2)				

(1) Shallow-rooted crops: Examples: Grass and clover.

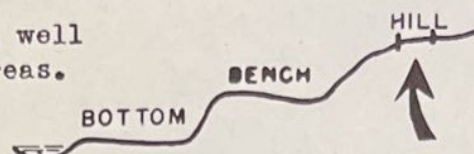
(2) Deep-rooted crops: Examples: Cane fruits, corn.

* Limiting factors

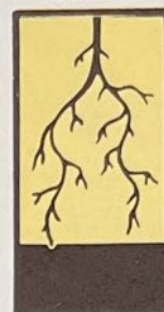
LAND CONDITION

Willamette Valley

- * Medium to heavy textured red hill soil, well drained, except for small wet areas.
- * Depth - Over 36 inches.
- * Slope - 4-7%
- * Original fertility - Moderate - Phosphate deficiency.
- * Reaction - Strongly acid
- Water holding capacity - Moderate



Ile3



CONSERVATION TREATMENT

Use only those crops that provide winter protection by crop stubble or enable a cover crop to become well established. Choice in crops reduced by strong acidity, moderate to low fertility, and on run-down soils and in wet areas.

Apply two tons of lime. Repeat as needed to maintain favorable soil reaction. In run down soils the use of lime, manure, phosphate, nitrogen, and soil building crops is especially important for establishment of certain crops. Livestock farming is needed to maintain soil fertility.

Sub-surface till to break up plow sole or to prevent erosion.

Terraces or diversions may be needed on long slopes or for special protection.

Natural waterways should be sodded and maintained as grassed waterways.

Use recommended applications of manure, phosphate, and nitrogen fertilizers and green manure crops regularly.

CROP ROTATIONS: Grow close seeded soil building crops (legumes and grass) at least half the time, but not more than three successive years in cultivated crops.

SAMPLE ROTATIONS: 1st, 2nd and 3rd year - row crops or grain
4th, 5th and 6th year - grass and legumes

PASTURE AND HAY SEEDINGS: Non-Irrigated - Use hill land mixture } See sheet on
Irrigated - Use irrigated mixture } seeding mixtures.

DRAINAGE: Tile drains 3 feet deep should be placed to intercept seepage from higher land and as random lines to follow low, wet draws.

IRRIGATION: (If sprinkler irrigated). Maximum water use during hot dry periods is shown in the following table for system design only. Actual amounts and days between water applications to be determined by the farmer by soil moisture inspection.

		AMOUNT TO	HOURS PER	DAYS	
	MAX. RATE	APPLY INCL.	SETTING	BETWEEN	
CROPS	TO APPLY	LOSSES	(MAX. RATE)	IRRIGATIONS	
Shallow-rooted	.25 in/hr	4½ in.	18 hrs.	15 days	
(1)					
Deep-Rooted	.25 in/hr	6 in.	24 hrs.	20 days	
(2)					

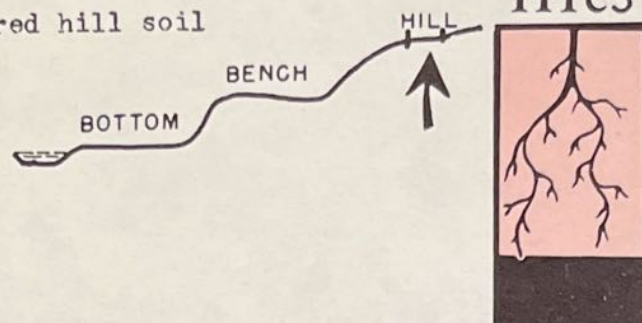
- (1) Shallow-rooted crops: Examples: Truck crops, grass, clover.
(2) Deep-rooted crops: Examples: Cane fruits, corn.

*Limiting factors

LAND CONDITION

Willamette Valley

- Medium to heavy textured, well drained red hill soil
- * Depth - Over 36 inches
 - * Slope - 8-12%
 - * Original fertility - Moderate,
Phosphate deficiency
 - Water holding capacity - Moderate
 - * Reaction - Strongly acid



CONSERVATION TREATMENT

Use only those crops that provide winter erosion protection by crop stubble or by the growing of a cover crop. Choice of crops reduced by soil fertility and acidity.

Apply 2 tons of lime. Repeat as needed to maintain favorable soil reactions.

Use recommended applications of manure, nitrogen and phosphate and green manure crops regularly. On run down soils the use of lime, manure, phosphate, nitrogen, and soil building crops is especially important.

Use terraces, diversion ditches, and surface interception ditches where practical.

Natural waterways should be sodded and maintained as grassed waterways.

Use subsurface tillage on contour to break up plow sole or to prevent erosion.

Fertilization and clipping should be used to control ferns on pasture land. Livestock farming is needed to maintain soil fertility.

CROP ROTATION: Grow close seeded soil building crops (legumes or legume-grass mixture) at least 75% of the time, and not more than two successive years in cultivated crops. Use tap rooted legumes frequently for soil aeration.

SAMPLE ROTATION: 1st year - Grain or row crop
2nd, 3rd and 4th year - grass and legumes

PASTURE AND HAY SEEDINGS: Non-Irrigated - Use hill land mixture) See sheet on
Irrigated - Use irrigated mixture) "Seeding Mixtures."

IRRIGATION: (If sprinkler irrigated). Maximum water use during hot dry periods is shown in the following table for system design only. Actual amounts and days between water applications to be determined by the farmer by soil moisture inspection.

CROPS	MAX. RATE TO APPLY	AMOUNT TO APPLY INCL. LOSSES	HOURS PER SETTING (MAX. RATE)	DAYS BETWEEN IRRIGATIONS
Shallow-Rooted (1)	0.2 in/hr	5 in.	25 hrs.	15 days
Deep-Rooted (2)	0.2 in/hr	7 in.	36 hrs.	20 days

(1) Shallow-rooted crops: Examples: Strawberries, grass and clover.

(2) Deep-rooted crops: Example: Cane fruits.

* Limiting factors.

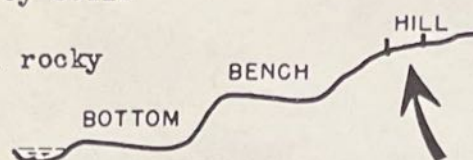
LAND CONDITION

Willamette Valley

Medium and heavy textured hill and valley soils
(with occasional wet areas).

Depth - Over 20 inches (with occasional rocky
areas).

- * Slope - 8-20%
- * Original fertility - Low
- * Available water holding capacity - Low
- * Reaction - Strongly acid



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CONSERVATION TREATMENT

This land should be used primarily for Hay, Pasture, or a long lived seed crop. Row crops should not be grown. Choice in crops greatly reduced by low fertility, shallow depth, low water holding capacity, and strong acidity. Livestock farming provides best land use and is needed to maintain or improve soil fertility.

Apply 2 tons of lime. Repeat as needed to maintain favorable soil reaction.

Use manure, nitrogen and phosphate to aid in establishing and maintaining stands of grasses and legumes. On run down soils the use of lime, manure, phosphate, nitrogen, and soil building crops is especially important.

Use contour strips where practical when reseeding on slopes over 3%.

Diversions may be needed on some fields.

Surface interception ditches should be used where needed.

Natural drainage ways should be sodded and maintained as grassed waterways.

Protect fields and waterways from over grazing.

Fertilization and clipping should be used to control ferns on pasture land.

CROP ROTATION: Land should be in sod crops eight years out of nine. It should contain soil building crops (legumes or legume-grass mixture) at least 90% of the time. Use tap rooted legumes frequently for soil aeration.

PASTURE AND HAY SEEDING: Non-Irrigated - Use hill land mixture) See sheet on
Irrigated - Use irrigated mixture)"Seeding Mixtures."

DRAINAGE: Tile drains 3 feet deep, where possible, should be used to intercept seepage from higher land and as random lines to follow low wet areas.

IRRIGATION: A source of irrigation water is not generally available on these soils.

* Limiting factors

LAND CONDITION

Moderately deep, medium textured hill soil.
Slope - 21 to 30%

Due to slope and high erosion hazard, this land is best suited for woodland use, but may be used for grassland if cleared. Annual and cultivated crops should not be grown.

V1e2



WOODLAND CONSERVATION TREATMENT

This is moderately productive land for woodland use (Site Class III). Between 50 and 60 years of age, a well stocked stand of Douglas fir will produce 1300 board feet or 2 cords per acre per year.

Adapted species: Douglas fir, hemlock, lowland white fir, red cedar, maple, and alder.

Place roads and "cat" trails along ridge tops and benches. Keep gradients low. Provide adequate cross-drains, and divert drainage water at short intervals. Log away from streams.

Windthrow hazards are moderate to high. Avoid removing large dominant trees during periods of thinning unless they are considerably distant from each other in the stand.

These soils are slow to restock naturally to forest trees. Plant in one year if natural restocking fails.

Log during dry seasons only. Adapted to "cat" or horse logging.

GRASSLAND CONSERVATION TREATMENT

If the land is cleared and is to be used for grassland farming, the following conservation practices are recommended:

Limit tilling of ground to establishment of stands. Maintain and protect natural waterways when reseeding.

On these soils the use of lime and phosphate is especially important.

Land in sod crops should be conditioned often enough to maintain high production.

For seedings on cleared land, use recommended "Hill Land Mixture."

Refer to General Conservation Treatment sheets for details.

LAND CONDITION

Silver Creek S.C.D.

VIIe2

Deep, medium to heavy textured hill soil - May contain stones.

Southerly exposures - 31% +

Moderately deep, medium to heavy textured hill soil - May contain stones.

Northerly exposures - 31% +

Due to very severe slopes and erosion hazard, this land is best suited for woodland, and should not be cleared for any other purpose. This land, in addition to timber production, should be kept in woodland to provide watershed protection, assist in flood control, and prolong stream flow.



WOODLAND CONSERVATION TREATMENT

This is forest land of moderate productivity (Site Class III). Between 50 and 60 years of age, a well stocked stand of Douglas fir will produce 1300 board feet or 2 cords per acre per year.

Adapted species: Douglas fir.

Windthrow hazards are moderate to high. Avoid removing large dominant trees during periods of thinning unless they are considerably distant from each other in the stand.

These soils are slow to restock naturally to forest trees. Plant in one year if natural restocking fails.

Log during dry seasons only. Adapted to horse or high-lead logging. "Cat" logging is not recommended on these steep slopes due to erosion hazards.

Place roads and trails along ridge tops and benches. Keep gradients low. Provide adequate cross-drains, and divert drainage water at short intervals. Log away from streams. Mulch, stake, or seed raw slopes to reduce erosion. Leave buffer strips along stream channels. Yard uphill only when using high-lead logging methods.

GRASSLAND CONSERVATION TREATMENT

If the land is already cleared and is being used for grassland, keep it in permanent grassland until it is economically feasible to replant to adapted trees. Meanwhile, the following conservation practices are recommended pending the conversion of this land to woodland:

Limit tilling of ground to establishment of stands. Maintain and protect natural waterways when reseeding.

On these soils the use of lime and phosphate is especially important.

Land in sod crops should be conditioned often enough to maintain high production.

For seedings on cleared land, use recommended "Hill Land Mixture."

Refer to General Conservation Treatment sheets for details.

VII e 3

Medium and heavy textured hill soils
Depth - over 20 inches on South slope
 over 10 inches on North slope
Slope - 31% plus.

SPECIAL CONSERVATION TREATMENT

Due to very severe slopes this land is best suited for woodland and should not be used for any other purpose. It is a fair tree growing area. It may be used for Cascara or Christmas Tree growing.

WOODLAND PRACTICES

For woodland practices refer to the attached sheet on "Woodland Conservation."

SEED PRODUCTION AND PASTURE PRACTICES

If the land is cleared and must be used for seed production or pasture use to make an economic farming unit, the following practices are recommended:

The tilling of the ground should be limited to the establishment of stands.

This land should not be row cropped as it will deteriorate very rapidly in that use, although it may originally be fairly productive.

Livestock farming is needed to maintain or improve soil fertility.

The use of lime, manure, nitrogen and phosphate is needed to establish and maintain stands of grasses and legumes. This is especially important on run down soils.

Rotation graze to avoid overgrazing.

Ferns can be controlled by clipping and heavy fertilization.

Natural grassed waterways maintained and protected.

Special rotation for sod seed crops should be developed on this land by a district technician.

Pasture and Hay Seedings: Cleared Land - Use hill land mixture.
 Uncleared Land - Use cut over land mixture.

CONSERVATION PRACTICES THAT APPLY TO ALL LAND

Willamette Valley

1. Crop Adaptability: The adaptability of crops is governed chiefly by soil depth, fertility, wetness, texture, droughtthiness, slope, altitude, exposure and erosion. The low fertility of run down soils decreases crop choice, unless heavy amounts of fertilizer are used. Use only those crops that provide winter protection by crop stubble or enable a cover crop to become well established.
2. All crop residues should be returned to the soil by plowing, disking, or mulching, and leaving a major portion on or near the surface. Crop residues should not be burned, as burning destroys valuable organic matter and depletes soil fertility very rapidly. To overcome annual burning of disease or insect infected crop residues of certain crops, it is well to change to another kind of crop.
3. Contour Farming should be practiced on all land having a slope over 3%.
4. Terraces and Diversions should be used to meet special water disposal needs on sloping land and for the interception of hillside seeps. They carry water to protected outlets such as grassed waterways.

Terraces can be farmed over and have a broad base of about 30 feet. They are usually carried on a grade of 0.2 to 0.8% with a horizontal spacing of 100 to 250 feet. They are not adapted to slopes over 12%.

Diversions are seeded down and not farmed. They have a much narrower base than a terrace. They are usually carried on a grade of 0 to 2% with a maximum horizontal spacing of 300 feet. They are not generally adapted to slopes over 20%.
5. Grassed Waterways are natural draws or depressions that carry water during storms to streams or rivers. They should be seeded to long lived and dense growing grasses. Seed heavier rates than usual. Seeding should not interfere with growing of certified grass seed in adjoining fields. Alta Fescue at the rate of 25 lbs. per acre or Creeping Red Fescue at the rate of 15 lbs. per acre is preferred.
6. Control Weeds, Insects and Diseases by crop rotation, cultivation, or chemicals used in accordance with manufacturer's specifications.
7. Livestock Farming. Land can be kept in best condition through good livestock farming. The farmer should consider this type of farming enterprise whenever it is possible for him to do so. This is especially true of our run-down soils.
8. Wildlife. Maintain all native vegetation (weeds excepted) along creek banks, roadsides, field boundaries and other odd areas for wildlife food and cover. Protect from damage by fire or grazing.
9. Structural Conservation Works. Such works as dams, ponds, streambank control, erosion control, drainage and irrigation systems should be planned, designed and supervised by a qualified technician. They will be built when the period of construction is free of such seasonal hazards as storms, floods, excessive wetness or dryness. Arrangements for engineering or other technical assistance can be made with your Soil Conservation District office. Arrangements should be made for technical assistance on this type of conservation work at least 45 days in advance.

CONSERVATION PRACTICES THAT APPLY TO ALL CULTIVATED LAND

Willamette Valley.

1. Crop Rotation should be planned to keep the land in legumes or legumes and grasses at least half the time. Row crops (excepting grass in rows) and grain should not be grown more than two or three years in succession on any land. A tap rooted legume should be used at times to provide soil aeration. Good crop rotations do the following:

- a. Build organic matter.
- b. Improve soil structure that has been broken down under cultivation.
- c. Keep a balance of plant foods in the soil.
- d. Reduce disease, insect, and weed infestation hazards.

You can get special help from your S.C.S. technician in working out a good crop rotation that will fit your farm.

2. Fertilization:

Barnyard Manure provides mainly nitrogen, phosphorous, and potash. It also increases organic matter and helps to overcome droughtiness.

Lime improves soil structure and increases bacterial activity. Most of our land needs it. On many of our soils legumes cannot be established without liming. Rates of application should be determined by lime tests. The usual rate of application is 2 tons every 7 or 8 years.

Nitrogen at a minimum of 30 or 40 pounds per acre is very helpful in establishing plantings. It may also be used to increase production. More response is secured if nitrogen is applied through a drill. It may be utilized to decompose crop residues, cover crops and green manure.

Phosphate at the rate of 50 pounds of available $P_{2}O_{5}$ applied at seeding time is very helpful in establishing and increasing production of legumes on most lands. Whenever possible apply phosphate in band seedings or by drilling in.

Sulphur stimulates legumes. It should be used on legumes in the form of land-plaster at the rate of 150 pounds annually where ammonium sulfate, superphosphate or 16-20 fertilizers are not used.

Potash and Boron are giving some crop responses on certain crops and on some soils. Boron must be used with caution as detrimental effects will be secured by improper use. Farmers should check to see if Boron is needed and apply only in recommended amounts for a particular crop and condition.

3. Cover Crops. Annual Winter Cover Crops containing legumes should be grown on all fields that would otherwise lie bare during the winter. Either permanent or annual cover crops containing legumes should be used in orchards, vineyards, and caneberry fields.

CONSERVATION PRACTICES THAT APPLY TO ALL CULTIVATED LAND

-2-

Willamette Valley.

- | 3. <u>Annual Cover Crop</u> | <u>Irrigated Permanent Cover Crop</u> |
|--|---------------------------------------|
| Willamette Vetch - 40 lbs. | White Clover - 3 lbs. |
| Winter Barley, gray oats,
or Abruzzie Rye - 60 lbs. | Red Creeping Fescue - 8 lbs. |
| TOTAL 100 lbs. per acre | TOTAL 11 lbs.
per acre |
4. Green Manure Crops containing legumes should be grown at least every other row crop year to increase or maintain the soil organic matter and fertility.
5. Strip Cropping should be practiced on the more erodible cultivated lands on slopes over 3%. Strips should be 150 feet wide on slopes from 6 to 11%. Narrower strips should be used on steeper land. The minimum strip width should be 60 feet on the steepest cropland. These strips should be on the contour.
6. Subsoiling should be used to break up a plow-pan or hard pan. It also improves soil aeration and drainage. Land should be subsoiled when the soil is dry. Sloping land over 3% should be subsoiled on the contour. Land should be subsoiled close enough to fracture all of the plow pan.

CONSERVATION PRACTICES THAT APPLY TO ALL HAY AND PASTURE LAND

Willamette Valley.

1. Pasture Management: Rotate grazing through 3 or more pasture units of approximately equal forage production. Move stock from field to field when forage has been grazed to a minimum of 2 inches, or as irrigation will permit. Wait until ground has become firm before grazing after irrigation. Best rotation grazing is secured by the use of a number of fields. This permits a short and rapid grazing period for each field and a longer rest period.
2. Keep stock off the pastures in the winter and spring months until the ground is firm enough to prevent damage by trampling, and grass is at least 6 inches high. Stock should be removed in the fall when the soil becomes wet, leaving at least 4 inches of plant growth.

3. Fertilization:

Barnyard Manure provides mainly nitrogen, phosphorous, and potash. It also increases organic matter and helps to overcome droughtiness.

Lime improves soil structure and increases bacterial activity. Most of our land needs it and rates of application should be determined by lime tests. The usual rate of application is 2 tons every 7 or 8 years.

Annual applications of nitrogen and phosphorous should be made on established pastures to increase forage production and to maintain a desirable balance between grasses and legumes.

Nitrogen: At least two applications with a minimum total of 60 lbs. of available nitrogen per acre should be made. The first application of 40 lbs. should be made in February or March, and the second application of 20 lbs. between September 1st and October 15th. If irrigated, an additional 20 lbs. applied during the summer is recommended.

Phosphorus: Sixty pounds of available phosphate per acre should be applied in the fall.

4. Clip pastures regularly to control weeds and maintain an even growth of desirable grasses. Drag to spread old droppings and rodent mounds.
5. Seed mixtures for hay and pasture lands should be selected from the attached sheet on seeding mixture for the various kinds of land.
6. Inoculate all legumes with the proper inoculant.
7. Seedings should be made with a drill on a well-tilled, firm, moist, weed-free seedbed.
8. Stock should be kept off all new seedings until all plants are well established.

CONSERVATION AGREEMENT

between

SILVER CREEK SOIL CONSERVATION DISTRICT

and

Ole Meland

I am interested in conserving the soil of my farm and desire assistance in developing a complete soil and water conservation program.

I agree to follow the recommendations of the District to the best of my ability in establishing conservation practices on my land.

We, the supervisors of the Silver Creek Soil Conservation District, agree to help you develop a conservation plan for your land in accordance with its needs and for your farm enterprise. We also agree to assist you in carrying out your plan by providing such information and technical or other assistance as we may have available.

Ole Meland
(Farmer)

2-24-54
Date

Lois Pflaum
(District Representative)

2-24-54
Date

Watson