

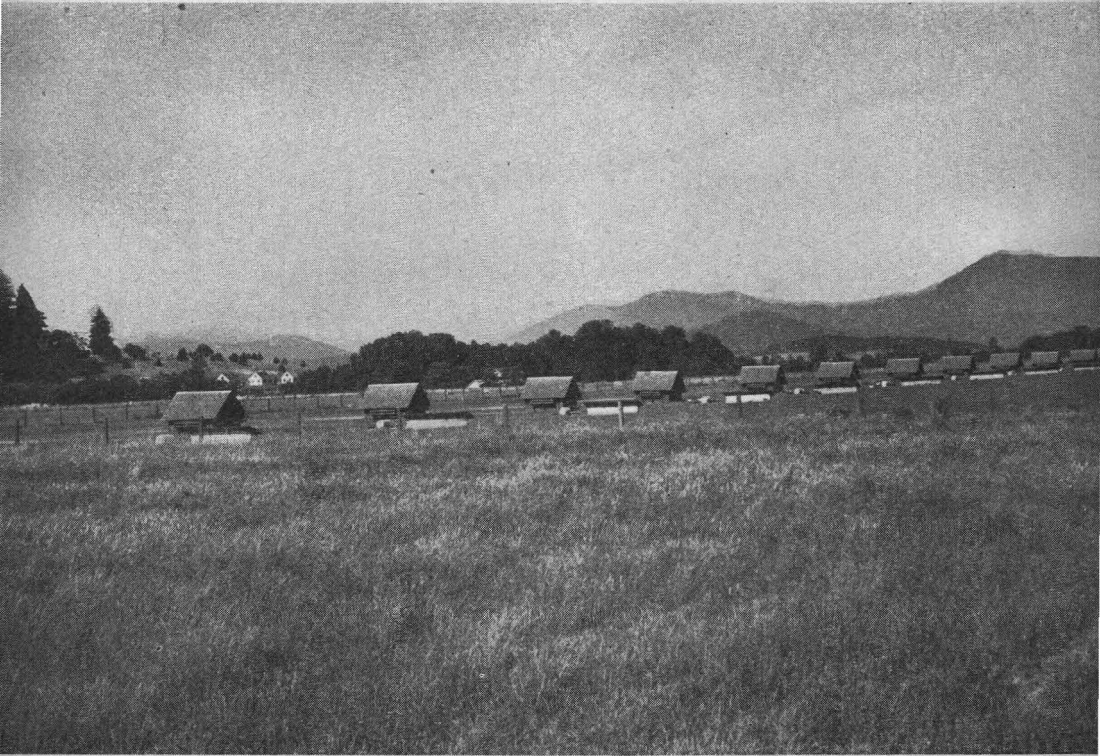
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Green Feed, Sod and Pasture for Chickens and Turkeys

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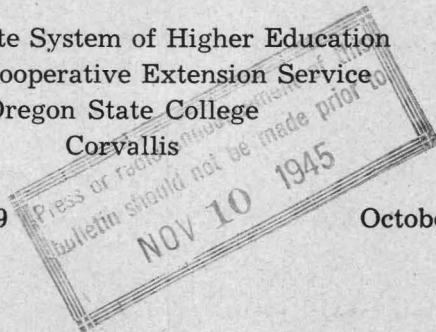
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GUIDE FOR SEEDING AND USING GREEN FEEDS AND PASTURE FOR POULTRY AND TURKEYS

Crop	Variety	Seeding			Time usable
		Pounds per acre	Time	Method	
Fall cereals	Rye or wheat	125 to 150	September	Drill or broadcast	February, March, April, May
Spring cereals	Oats, barley, or wheat	125 to 15	March or April	Drill or broadcast	May, June, July
Winter rye	Giant winter	150	April or May	Drill or broadcast	July, August & September
Sudan grass .....	.....	40 to 50	May 15 to June 15	Drill or broadcast	July, August, September
Corn .....	.....	10	May 1 to May 31	Rows spaced 36 in.	July, August, September
Sunflowers	Mammoth, Russian, or Manchurian	8 to 10	April 15 to May 15	Rows spaced 36 in.	July, August, September
2 Swiss chard	Lucullus	12	Mar. 15 to Apr. 15	Rows spaced 30 in.	June 1 to November 1
Kale	Thousand Headed	1	Seeded in April Trans. in June	Rows spaced 24 to 36 in.	October 1 to March 1
Carrots	Chantenay	3	Early June	Rows spaced 24 in.	October 15 to March 1
Common ryegrass .....	.....	50	Early fall or spring	Drill or broadcast	Year around
Alfalfa .....	.....	12 to 15	May	Drill or broadcast	May 1 to October 15
Ladino .....	.....	5	April or May	Drill or broadcast	May 1 to November 1
Creeping red fescue .....	.....	25	Early fall or spring	Drill or broadcast	Year around
Chewings fescue .....	.....	25	Early fall or spring	Drill or broadcast	Year around
Alta fescue .....	.....	15 to 25	Early fall or spring	Drill or broadcast	Year around
Perennial ryegrass .....	.....	50	Early fall or spring	Drill or broadcast	Year around
Highland bent .....	.....	10	Early fall or spring	Drill or broadcast	Year around

Green Feed, Sod, and Pasture for Chickens and Turkeys

N. L. Bennion, E. R. Jackman, O. S. Fletcher*

FEED costs of chickens or turkeys on range can be reduced from 10 to 20 per cent if an adequate supply of green feed is available. The saving in feed costs will depend upon the quantity and quality of the green feed and how the birds are rotated. Young succulent green feed is an excellent source of vitamins, minerals, and protein that are essential for health, rapid growth and gains. Green feed therefore promotes the health of the poultry and the bank account of the owner.

It is important to have a continuous supply of green feed or green feed substitutes during the entire year. Two main problems are: (1) to provide green feed for birds on range without irrigation during the months of July, August, and September, and (2) to provide some heavy sod pastures for turkeys during the fall, winter, and spring months to avoid the mud. If turkey breeders are on a good sod pasture the eggs will be cleaner, and better fertility and hatchability will be obtained.

It is the purpose of this bulletin to point out the various green feed, sod, and pasture crops that have proved successful for Oregon and to give some information on the production problems involved in establishing these crops.

Irrigated pastures

There are some objections to using irrigated crops or pastures for poultry inasmuch as wet soil provides an ideal place for many disease organisms and parasites to multiply, especially during warm weather. If irrigated crops or pastures are used, sufficient acreage should be available so the birds can be rotated to avoid contact with the soil during and immediately following irrigation. At least twice as much green feed will be produced by irrigating during summer months with most green feed crops.

Summer range

Four of the best crops to provide palatable green feed during the summer months without irrigation are winter rye

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planted in the early spring, Sudan grass seeded from May 15 to June 15, sunflowers and corn planted in May. Sunflowers and corn are used more extensively for turkeys. They provide shade if not grazed too early, as well as additional feed.

Winter rye for summer range

Winter rye makes good spring and summer pastures, but the rye must be a true winter variety, such as the Giant Winter rye, and should be seeded in April or early May. It will continue to grow and stool and will provide large quantities of green feed during July, August, and September. If winter rye is not killed out during the summer months it will continue to grow and provide green feed until March. It requires about 150 pounds of seed per acre to establish a good, thick stand.



Figure 1. Sudan grass will continue to grow, stay green and produce an abundance of green feed during July, August, and September, if a good stand is obtained without irrigation.

Sudan grass for summer range

Sudan grass will continue to grow, stay green, and produce an abundance of green feed during July, August, and September if a good stand is obtained. It should be seeded from May 15 to June 15. It requires 40 to 50 pounds of seed per acre to obtain a thick stand. If it gets too tall and rank it should be cut, whereupon it will come right back and the young succulent growth is more palatable. The only difficulty with this grass is that it must be seeded late in the spring and it may be hard

to obtain a good stand if the season is dry. Therefore, the field should be cultivated early to keep down weed growth and the seedbed should be very firm. Most failures with Sudan grass are due to loss of moisture through weed growth in the early spring, or too loose a seedbed.

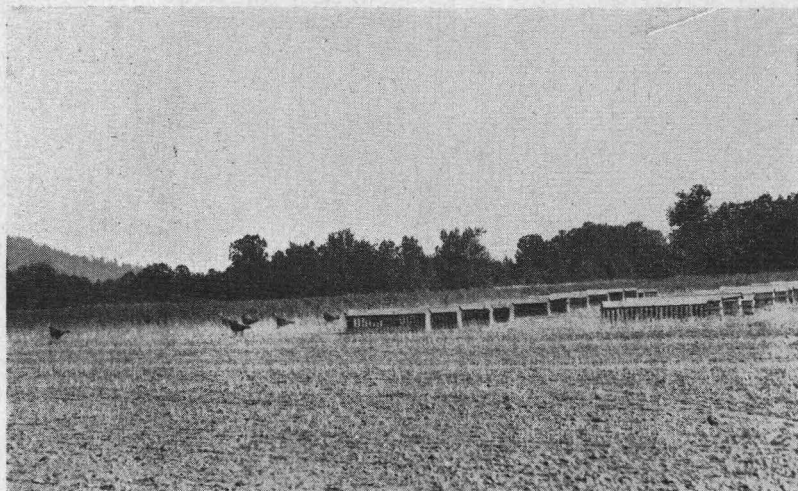


Figure 2. Sudan grass is very palatable to chickens and turkeys. This picture shows how turkeys will harvest a crop of sudan without tramping or wasting.

Sunflowers for turkeys

Sunflowers are a good summer range crop, especially for turkeys. They provide shade, some green feed, and the mature seeds produce considerable feed. The Manchurian variety is one of the most popular. Sunflowers should be planted from April 15 to May 15 in rows 36 inches apart with the hills about every foot, using 8 to 10 pounds of seed per acre. If a large patch of sunflowers is being used, lanes about 10 yards wide should be cut through every 50 yards to feed and water the birds and encourage them to forage.

Corn as green feed for turkeys

Corn is also a good summer and early fall range crop for turkeys. Young growing corn is very palatable to turkeys and they will consume the leaves and practically all of the stocks if permitted to graze it when it is about 3 feet tall and before it becomes too coarse. Some growers prefer to follow this pro-



Figure 3. Sunflowers are a good summer range crop for turkeys. They provide shade, some green feed, and the mature seeds produce some additional feed.

cedure. If the birds are not permitted in the corn until about the middle of August when it is 6 or 7 feet tall they will consume only the leaves and what corn they can reach as it matures. It may be necessary to knock the stocks down if the turkeys are to harvest the entire crop. May is the best time to



Figure 4. A turkey range composed of sudan grass and corn. If corn is grazed early, turkeys will consume leaves and stocks. If grazed later they will consume leaves and the corn as it matures.

seed corn, in rows 36 inches apart with the hills about every foot, using 10 pounds of seed per acre.

Some growers prefer to raise a combination of corn and sunflowers by first seeding five to ten rows of sunflowers and then five to ten rows of corn until the entire field is planted. If turkeys are permitted to graze this combination when the corn is about 3 feet high, they will consume practically all of the corn and permit the sunflowers to grow tall and provide more shade.

Alfalfa ideal summer range

Alfalfa makes an ideal crop for summer range where it can be grown successfully. It is very palatable and provides more green feed on irrigated land than any other crop. It requires a fertile, well-drained soil. The best time to plant alfalfa is in May using 12 to 15 pounds of seed per acre. Chickens or turkeys will kill alfalfa if they graze it too heavily. If succulent green feed is not available a good grade of baled alfalfa or alfalfa leaf meal can be used for chickens or turkeys.

Ladino clover for cut-and-carry crop

Ladino clover is probably the best crop for an irrigated



Figure 5. Alfalfa makes an ideal summer range crop for chickens or turkeys where it can be grown successfully. It will provide large quantities of palatable green feed per acre.



Figure 6. Ladino clover is probably the best crop for an irrigated green feed plot where it is cut and carried to the birds. It is palatable, produces large quantities and will stand continuous cutting.

green feed plot where it is cut and carried to the birds. It is very palatable and produces large quantities and will stand continuous cutting. Ladino is also a good crop for chickens or turkeys to graze if sufficient moisture is available. Ladino is seeded in April or May at the rate of 5 pounds of seed per acre.



Figure 7. An overhead sprinkling system for a cut-and-carry green feed plot.

If used as a cut-and-carry crop, it should be seeded alone. If pastured it may be seeded with grasses.

Lawn clippings for green feed

Lawn clippings are frequently used as green feed for birds in confinement. They should be short and fresh. If lawn clippings are too long and tough they may cause impaction of the crop.

Swiss chard for summer greens

Swiss chard is an easy crop to grow on well-drained soil and will produce large quantities of green feed from June 1 to November 1. The best way to feed Swiss chard is to cut and carry it to the birds. It can be used for birds in confinement, or on range if other green feed is not available. It should be seeded from March 15 to April 15 in rows 18 to 30 inches apart. About 12 pounds of seed per acre is required. The Lucullus variety is one of the most popular.

Spring cereals for summer feed

Spring cereals, wheat, oats, or barley, seeded in March or April are sometimes used for summer range. In this case the birds are allowed to harvest the grain as it ripens. Turkeys are more effective in harvesting a grain field than chickens. The

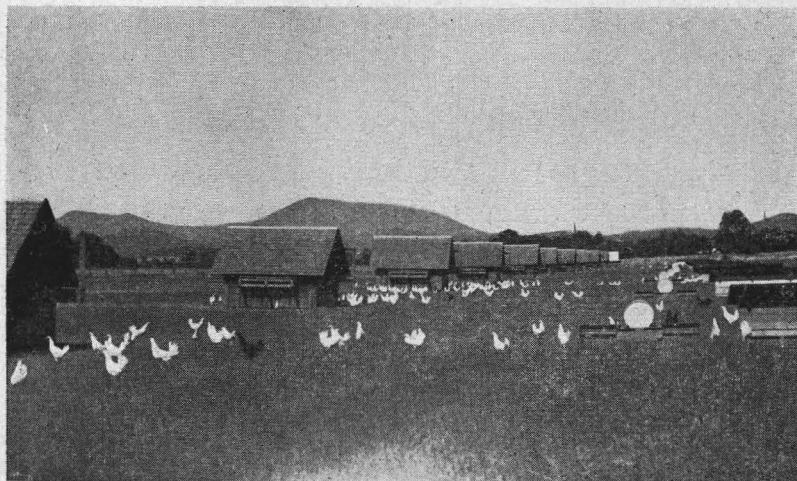


Figure 8. Permanent grass pastures are frequently used for chicken and turkey range. There are many advantages in having a heavy sod pasture, especially for turkeys during the fall, winter, and spring months.

amount of green feed obtained from these crops is limited to a short period. From 125 to 150 pounds of seed per acre should be used.

Permanent grass pastures for summer range

Permanent grass pastures are frequently used for poultry range. The variety or mixtures to use depend upon type of soil, price, and availability of seed. Some of the tall growing grasses are orchard grass, Alta fescue, and tall meadow oatgrass. Some of the short grasses are meadow foxtail, creeping red fescue, Chewings fescue, and highland bent. Perennial ryegrass is intermediate.

A permanent grass pasture should include a legume of some kind mixed with one or more of above grasses, such as subterranean clover, lotus, hop clover, and red or alsike clover. These green pastures produce a good sod and green feed during the spring months, but they become dry during the summer months without irrigation. If grass pasture is cut two or three times during the growing season in order to keep the grasses from heading, it will stay green longer and be more palatable.

Mixed grasses and clovers will normally be more satisfactory than any one grass or legume. Single grass pastures, however, can be used for seed production as well as range, which may be profitable and highly desirable under some conditions.

Heavy sod pastures for fall, winter, and spring months

There are several advantages in having a heavy sod pasture, especially for turkeys, during the fall, winter, and spring months. If a heavy sod pasture is not overgrazed and the shelter, feeders, roosts, and watering equipment are moved frequently, it will not only provide green feed but it will help to keep the turkeys out of the mud during the rainy season. Cleaner eggs, better fertility and hatchability will be obtained if the turkey breeding stock are on a heavy sod pasture.

Some of the best grasses to make a heavy sod pasture are highland bent, creeping red fescue, Chewings fescue, Alta fescue, perennial and common ryegrass. These grasses are also grown for seed crops. It may be desirable to seed them separately rather than in mixtures so that a seed crop may be harvested where a two or three year rotation system is followed.

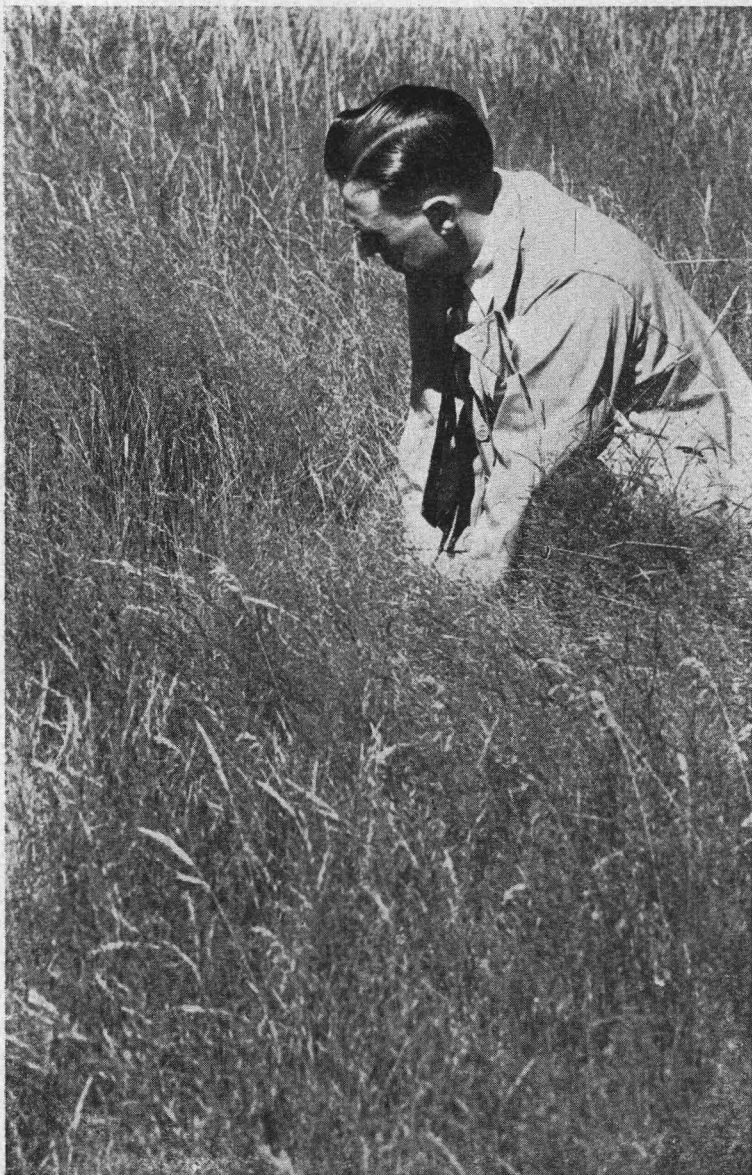


Figure 9. A seed crop will be harvested on this highland bent range.

Highland bent

When highland bent is once established it is very difficult to eradicate and it may spread to adjoining fields. Where not wanted it is a weed. It should be seeded only where the field is to be used as a permanent pasture. It can be seeded in the early fall or spring using about 10 pounds of seed per acre. Highland bent thrives best on a fertile, well-drained soil but it will tolerate a wet, heavy soil, and will grow on clay hill lands where most other grasses are unsatisfactory.

Creeping red or Chewings fescue

Creeping red fescue or Chewings fescue both make thick sods that will stand heavy grazing. They can be planted in the spring or early fall using from 15 to 25 pounds of seed per acre. They require well-drained soil. Creeping red fescue makes a thicker sod and is more palatable but Chewings fescue will stand more tramping. Both are more tolerant of shade than other grasses so can be used on ranges where there are trees or brush. These grasses are used for lawns and the seed is usually high priced, but it is not necessary to use the highest grade of seed for sod pastures. Creeping red or Chewings fescue should be planted only where the field is to be left in sod for several years because they are expensive to establish and difficult to break up.

Alta fescue

Alta fescue is a coarse, tall, fast growing grass that is grown extensively in the Willamette Valley. Although it is coarse it is still quite palatable to turkeys and chickens if it is not permitted to grow too rank. If it gets too tall it should be mowed. Alta fescue grows faster and stays greener during winter and summer than most grasses. It does not make so heavy a sod and it will not stand so much tramping as creeping red fescue, Chewings fescue or bent grass. It can be planted in the spring or early fall using from 15 to 25 pounds of seed per acre. It will thrive on a wetter soil than the other fescues.

Perennial ryegrass

Perennial ryegrass will also thrive in a soil that is too wet and heavy for creeping red or Chewings fescue, and makes a reasonably good sod. It will not stand so much tramping and heavy grazing as the fescues nor does it make so heavy a sod.

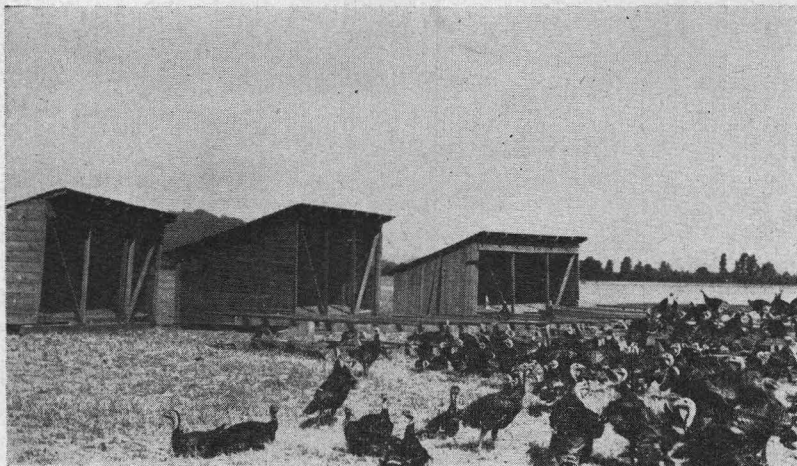


Figure 10. Before the turkeys were placed on this range a seed crop of perennial ryegrass had already been harvested.

The seed is inexpensive and the sod is easy to break up. It makes a good pasture crop where a sod is desired for two or three years. It can be planted in the spring or early fall, using about 50 pounds of seed per acre.

Common ryegrass

Common ryegrass is an annual that makes a sod similar to



Figure 11. Kale is used extensively in western Oregon as a cut-and-carry green feed crop during the fall and winter months.

perennial ryegrass. It will also tolerate a wet, heavy soil. It is one of the most palatable of all grasses. It can be planted in the spring or early fall, using about 50 pounds of seed per acre. If a sod pasture is desired during the fall and winter months it should be planted in April or May. It may be necessary to clip common ryegrass to prevent it from heading. After it heads out it soon dies. The seed is inexpensive and it makes a quick, heavy growth. It is a good crop where a one-year sod is desired.

Kale for winter greens

Kale is used extensively in western Oregon as a green feed crop during the fall and winter months. It will provide green feed from October 1 to March 1 unless killed by severe cold, which happens in western Oregon about once in five years. Kale is usually cut and carried to birds in confinement. It is seeded in April and transplanted in June in rows spaced 24 to 36 inches. Kale thrives best on a fertile well-drained soil. The most common variety is Thousand Headed. It requires about 1 pound of seed to produce sufficient plants for 1 acre.



Figure 12. Carrots are a good succulent feed for chickens and turkeys during the fall and winter months. They are high in vitamin A and make a desirable green feed substitute especially for breeding stock.

Carrots a green feed substitute

Carrots are a good succulent feed for chickens and turkeys. They are high in vitamin A and make a desirable green feed substitute, especially for breeding stock during the fall and winter months. They require a well-drained, fertile soil. Carrots should be seeded early in June in rows spaced 24 inches, using about 3 pounds of seed per acre. They will be ready to harvest and store from October 15 to November 15. They should be allowed to dry and be placed in a cool, dark, well-ventilated storage room.

Green feed for early spring months

Fall-planted rye, wheat, oats, or barley will produce large quantities of green feed during the months of March, April, and May. Abruzzi rye planted in the fall is an especially good crop for early spring feed because it comes early and grows in cooler weather than the other cereals. These fall-planted cereals should be seeded from September 1 to October 15 when adequate moisture is available. From 125 to 150 pounds of seed per acre is required.

Common or perennial ryegrass seeded in the fall during September or October at about 50 pounds of seed per acre will produce large quantities of green feed during March, April, May, and June. Permanent grass pastures will provide green feed during the spring months and they make an ideal range for turkey breeders, resulting in fewer dirty eggs.

Birds per acre

The average range will care for about 100 turkeys or 300 pullets per acre. Sufficient range should be available so that at least a two- and preferably a three-year range rotation system can be followed.

Feeders, shelters, roosts, and watering equipment should be moved about once a week to avoid contamination, killing out of green feed, and to obtain better distribution of the manure. To move the equipment about 10 yards each time is sufficient. If an outbreak of some disease occurs it may be necessary to move the equipment a greater distance and more often.

Green feed crops need fertilizer

There is a close correlation between the amount of green feed a pasture will produce, especially during the late fall,

winter, and early spring months, and the amount of nitrogen it receives. A pasture should receive about 40 pounds of nitrogen per year. This can be provided by applying 200 pounds of ammonium sulphate per acre each year, applying 100 pounds in October and 100 pounds in February. Three to four hundred pounds of superphosphate per acre on some soils is valuable aid in establishing grass seedings. Legumes may also require some superphosphate.

It may not be necessary to add commercial fertilizer on poultry range after it is once established if it is properly grazed and the droppings distributed. Poultry manure is an excellent fertilizer and is very high in nitrogen. If it is properly distributed it provides an ideal fertilizer for pastures and green feed crops.

Chickens and turkeys will produce from one to two pounds of fresh droppings for each pound of feed consumed. Market turkeys are on range from 4 to 5 months, and range-reared pullets about 3 months. If there are 100 turkeys per acre or 300 pullets they would produce a minimum of $3\frac{1}{2}$ and $2\frac{1}{2}$ tons of poultry manure respectively. If this amount is properly distributed it will provide sufficient fertility per acre. If the manure is not distributed evenly, it should be supplemented by the commercial fertilizer and the latter should be used on the range in any case in the years when not in use for poultry pasture.