Seeding rate:

The amount of seeds required per unit area varies according to the varieties, soil type and planting method. The male clover needs a smaller amount than other varieties, and the amount of seeds increases in saline and uneven lands. Also, the method of spreading cultivation requires higher seed rates compared to planting in rows or using a seed drill. The amount of seeds required per hectare ranges from 32 to 40 kg for multi-crop varieties such as the Misqawi variety planted in Iraq. As for the male single-crop variety, it needs a smaller amount of about 24 to 32 kg, and this rate decreases when planting in rows. One should not exaggerate in using high seed rates, as high density leads to lodging and burning. Burning means rotting of the crown area and the lower leaves of the stems and their infection with fungi due to excessive moisture in them.

Irrigation:

Clover is a water-loving plant, so it requires continuous moisture so that the moisture content in the soil is not less than 50 to 60% of the field capacity. The number of irrigations during its growth period depends on the amount of rainfall, the type of soil, and the temperature of the atmosphere. Alfalfa needs light irrigation at close intervals during the establishment or fixation stage, because spacing between irrigations leads to the surface of the soil drying out and cracking, and then cutting the roots or exposing them to the sun and air, so they dry out, and thus a large percentage of the seedlings die. Alfalfa is similar to clover in terms of its resistance to drought, but it is more tolerant of increased soil moisture than clover and sweet clover. In general, the following points should be taken into account when irrigating clover:

First: The amount of water in a single irrigation should be regulated, taking into account the proximity of irrigations in light and sandy soils and increasing the amount of water when planting in saline soils to reduce the concentration of salts in the surface layer of the soil.

Second: The second irrigation is given as a washing irrigation before the surface of the soil cracks so that it is light and the water does not stagnate in the field. This should be after the appropriate dates for planting by about 10 days. However, when planting early in mid-September under Iraqi conditions, this irrigation should be about five to six days after the planting irrigation.

Third: The last irrigation should be about five days before mowing and irrigation after mowing should be about 5 to 7 days, depending on the climatic conditions, to encourage the growth of basal buds from the crown area, because direct irrigation after mowing leads to submerging the basal buds and hinders their development and sometimes rots them.

Fourth: In most cases, clover needs two to three irrigations between each two mowings, depending on the climatic conditions and soil type.

Fifth: In case of desire and leaving the crop to produce seeds after the last mowing, give one irrigation a week after mowing and another irrigation at the beginning of flowering, then leave it to produce seeds.

Fertilization:

Organic fertilizers can be used in fields prepared for cultivation with alfalfa crop, especially in poor soils and light sandy soils, and the aim is to improve the chemical and physical properties of the soil.

Clover responds to phosphate fertilizers like other leguminous fodder crops such as Alfalfa, but this depends on the degree of soil fertility and its content of phosphorus that can be absorbed by the plant. Phosphate fertilizers are often added before planting, mixed with the soil. It is also preferable to add potassium sulphate at a rate of 200 kg per hectare before planting, especially in soils poor in potassium, and this depends on the soil analysis before planting.

Although clover does not respond to nitrogen fertilizers as a legume crop, it needs a small amount of nitrogen, about 40 to 50 kg per hectare, added two weeks after planting to stimulate seedling growth, in addition to its need for trace elements, especially in sandy soils.

Nutritional value of clover:

Egyptian clover contains a high nutritional percentage due to its high content of digestible crude protein divided into its energy content. Clover feed is also rich in calcium, carotene, and vitamin D and E and K. Carotene is concentrated in the leaves. Egyptian clover is distinguished by its ability to produce milk, in addition to its .nutritional value, ease of digestion, and palatability by all animal groups

Mowing date: The nutritional value of clover decreases the later the mowing is, due to the lack of protein, and the percentage of fiber increases. Therefore, the appropriate mowing date is the date that ensures obtaining the largest amount of digestible food units with the largest possible crop of green and dry fodder per unit area.

Mowing date:

The nutritional value of Egyptian clover decreases the later the mowing is due to the decrease in the protein content and the increase in the fiber content. Therefore, the appropriate mowing date is the date that ensures obtaining the largest amount of digestible food units with the largest yield of green and dry fodder per unit area.

It was found that delaying mowing of Egyptian clover, Fahal variety, to 90 days or during the flowering stage increases the yield of dry matter and the starch value of the

fodder. However, if mowing is delayed beyond this age, this may help increase the dry matter at the expense of the nutritional value due to the increase in the ratio of stems to leaves and thus the decrease in protein and the increase in fiber.

Continuous mowing of multi-mowing varieties at a short height leads to a significant decrease in the amount of forage crop. The appropriate mowing height when the plant height is between 35 and 40 cm depends on the fertility of the soil and the necessary agricultural operations to serve the crop. The appropriate plant height when mowing is what ensures maintaining the plant's vitality and its ability to quickly regain growth and provide an amount of dry matter with a certain amount of food units and protein per unit area.

Feeding on clover:

Animals should be gradually fed on clover when moving from dry summer fodder to avoid intestinal disorders. This gradual transition takes between 10 to 14 days. In this case, clover is mixed with hay and straw and given to the animal, gradually reducing the amount of hay. Animals can be fed on clover in the following ways:

First: Mowing/ In this case, clover plants are mowed when they reach a length of about 40 cm or when the plants reach a flowering rate of about 15% under suitable conditions for management in the last mowings, either manually or by using sickles in small areas or mechanically by using a mower.

This method has the following advantages:

A- No damage to the crowns of Egyptian clover during cutting, unlike grazing, which causes damage to the crowns of plants when animals pass, especially if there is moisture in the field.

B- Also, mowing and removing fodder from the field helps in the rapid growth of plants after cutting as a result of exposing the crown area to sunlight.

C- Increase the nutritional value of the fodder due to the low percentage of loss of leaves in which protein and carotene are concentrated.

Second: Grazing alfalfa / is releasing animals in the field planted with Egyptian alfalfa alone or mixed with fodder grasses such as barley or oats when the height of the plant reaches about 40 cm. Grazing helps improve the health of the animal and is less expensive than other feeding methods. Some people prefer it in the case of scarcity and lack of abundance of alfalfa as the animals consume less space. Grazing is always used in the male alfalfa or the last cut of the irrigated alfalfa due to the unsuitability of the plant height for cutting or in areas where Egyptian alfalfa is to be turned.

It is recommended to mow clover instead of grazing it for the following reasons:

Firstly/ Grazing may cause damage or death to the basal buds as a result of animals walking on the plants, especially if the soil is wet. The death of the buds results in a decrease in the number of mowings and a weak yield of green fodder. Therefore, animals should not be left to graze for a long time in one place.

Secondly/ Grazing may lead to hardening of the soil, especially if it is wet, and then this affects the growth of roots.

Thirdly/ Grazing in general, with the exception of grazing on clover, leads to bloating in animals. Therefore, it is preferable to mix clover with forage grasses such as barley or oats.

Fourthly/ Grazing leads to contamination of areas of the field with animal manure, which is called clover, and animals refrain from eating it. Therefore, the strip grazing method must be followed.