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The MD-2 pineapple is a cultivar recently introduced in the Canary Islands. The experiences carried out by the I.C.I.A. and some growers of the north of the Islands of Tenerife and Gran Canaria have proved the good characteristics of this clon. As a result of these experiences the following recommendations are given:

### **PLANTATION AREAS:**

The pineapple has higher temperature requirements than the banana, that's why it must be planted under 100 m. bsl. In the north of the Islands it is even recommended to protect the plants with net or plastic.

### **PLANTATION DATE:**

The plantation must be done between April and October, taking into account the following factors:

1. **The cultivation area:** in the northern areas the plantation must be done earlier except when it's going to be done in a greenhouse. In the southern areas later plantations can be done.
2. **Planting density:** in early plantations it is recommended to use wider planting frames (see corresponding paragraph).
3. **Fruit cutting date:** for commercial crops it is convenient to cut the fruit during the the winter months in order to get the best prices. To achieve that and considering good culture conditions (weather and management) the plantation can be done in two periods:
  - a) Early plantations. They are done in spring, with the aim of inducing the blooming later in an artificial way, at the end of the year.
  - b) Late plantations. They are done from the end of August to October, so that in winter the plant is not very developed and the blooming is not induced in a natural way. The induction will be done artificially after 10-12 months, collecting the fruit in the winter months. In this case plants which are still small could get to bloom because of too low temperatures during the winter, resulting this in the obtention of small fruits in the summer.

### **SOIL PREPARATION:**

The pineapple has a very delicate rooting system and for that reason it needs very permeable soils. In clay soils swamping must be avoided because it can cause root asphyxia and/or fungal and bacterial attacks. In this case, it is advisable to do the plantation in ridges, what improves the draining. The incorporation of organic matter also improves the soil structure and prevents this type of problems.

Furthermore, it is a crop which demands slightly acid soils, with a pH slower than 6,5. It is advisable to have the soil analysed before the plantation, so that the necessary amendments can be made.

If the plantation is going to be done in a field previously cultivated with banana, a nematode analysis must also be done in case a disinfection is necessary.

The soil preparation labours must be done up to a depth of 40 cm.

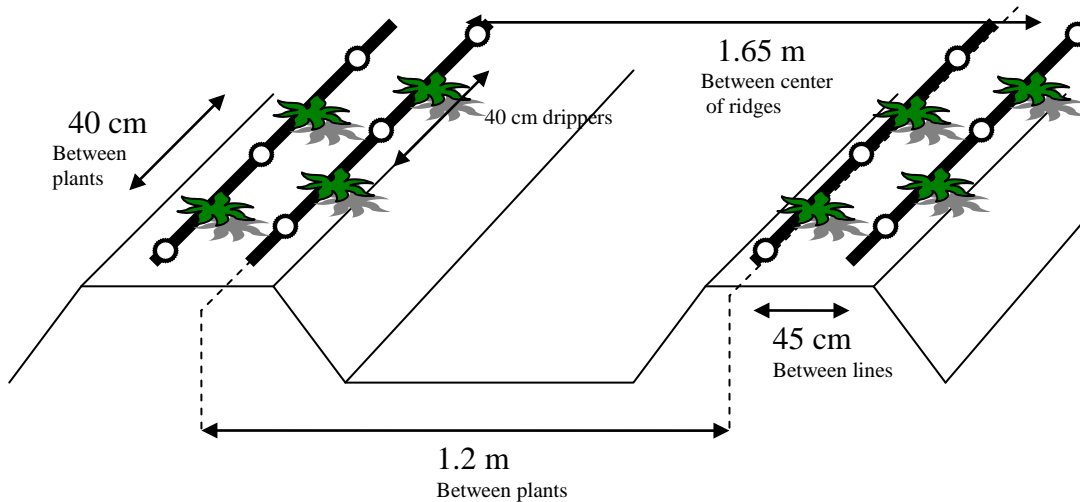
Las labores de preparación del terreno deben realizarse hasta una profundidad de 40cm.

Finally, to make the control of the weeds during the culture much easier, it is convenient to place a black polyethylene film or anti-rooting net in the plantation lines and pine needles in the corridors; this also helps to reduce the water loss due to evaporation.

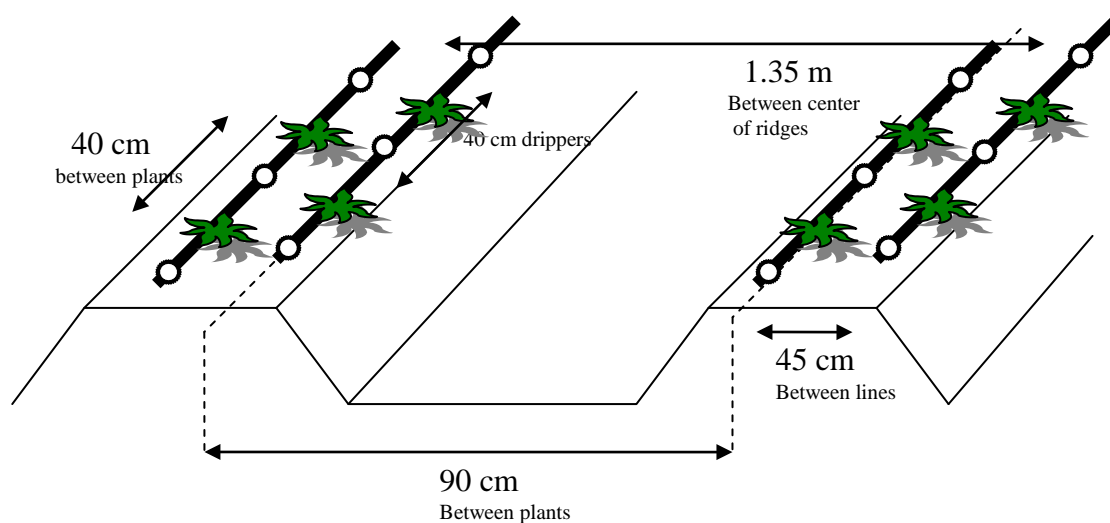
**PLANTING FRAME:**

The planting density is usually from 15000 to 20000 plants per “fanega” (1 fanega = 1,59 acres), what makes 3-4 plants /m<sup>2</sup>. Depending on the planting density, the plants will be planted according to the following diagrams:

- a) Low density cultivation (15000-16000 plants per “fanega”).



- b) High density cultivation (19000-20000 plants per “fanega”)



Note: If the soil is very clayey only a watering hose per ridge must be placed in the center of the two lines of plants and keeping a distance of 20 cm. between drippers.

### **PLANTATION:**

Once after the plants have been acquired in the greenhouse, they will be planted in their final destination as soon as possible. The plantation must be done early in the morning or late in the afternoon, to avoid the hours of higher insolation.

The soil must be in tilth before opening the holes; if it is too dry during the plantation (especially in the late plantation) the loss of plants can be important; on the contrary, if the soil is swamped, a kind of “clayey bowl” can be formed, what would make the rooting of the plants more difficult.

It is advisable to use some rooting solution in the moment of the trasplant.

When placing the plants in their final location it is important to make sure that the root ball enters well in contact with the surrounding soil to make the rooting easier and to avoid damaging the roots (what would be an entryway for pathogens).

After the trasplant it is convenient to apply a treatment with any kaolin-based product (e.g. Profilm®, Surround®) to prevent the leaves to get burned by insolation.

### **IRRIGATION DOSAGE:**

The pineapple coming from in vitro culture is particularly sensitive to the excess of water in the soil, especially during the first stages of its development. For that reason, it is necessary to check the degree of moisture of the soil and to avoid always its swamping.

For an established crop, the irrigation dosage is, in an orientative way, 2 litres per plant and day in the summer, being reduced this amount of water in the winter to 1 liter per plant and day. Nevertheless, this dosage must be adapted in any case taking into account factors such as: type of soil, development stage of the plant, type of irrigation, rainfall...

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### **FERTILIZATION:**

From 15 days since the plantation in the final location it is recommended the application of a fertilizer with an equilibrium 1:2:1 (phosphorus promotes the rooting) for the 2-3 first months. Besides, it is convenient the foliar application of microelements (e.g. NATUR-MIX) following the dosage recommended by the fabricant.

### **PESTS AND DISEASES:**

The main pests and diseases affecting this crop are:

**COCHINEAL** (*Dysmicoccus*): They are small white insects often located in the axils of the lower leaves, in the roots and in the fruit. They get feed sucking the sap of the plants. The apex of the most affected leaves gets dry. This pest can be controlled using Azadiractin 3.2% (e.g. "Neem al oil", 0,75-1,5 L/Ha).

**NEMATODES** (*Meloidogyne, Pratylenchus and Helicotilenchus*): They are small organisms which attack the roots, affecting the normal development of the plant. For their control, a sodium tetratiocarbonate-40% based nematicide must be applied before the plantation (e.g. "Enzone", 55-160 L/Ha).

**HEART ROT** (*Phytophthora cinanomi and Phytophthora parasitica*): This disease causes a humid rot in the base of the leaves which is accompanied by an unpleasant and characteristic smell. It usually breaks out soon after the plantation and can cause the loss of the 80-90% of the plants. Planting in clayey soils and in soils with a high pH must be avoided. To improve the draining of the field contributes to reduce the incidence of this disease. For its control we can use products such as Metalaxil 10% (e.g. Agrilaxil) and Fosetil-Al 80% (e.g. Aliette).

### **FLORAL INDUCTION:**

The floral induction takes place in a natural way when the plant has a minimum development state and gets subjected to a period of low temperatures.

If the plant has as minimum six months of development and for commercial reasons (to get fruit in the winter months) needs to be artificially forced, it is possible to induce the flowering with Etefón (e.g. Fruitel 48, 1 cc per plant), applying it to the plant's apex.

### **NOTES:**

- 1) The culture techniques, advices and suggestions given must only be taken as an orientative guide and they lack any binding effect as far as the sale contract is concerned.
- 2) The use in this crop of the here indicated phytosanitary products is authorized on the release date of this document.

Should you have any technical question or any problem, don't hesitate to contact us by telephone (922 562 611), fax (922 562 310), e-mail (cultesa@cultesa.com), or contacting directly our Agricultural Technic Engineer (mobile phone: 629 858 228).