

## Kangaroo Paw Growing in Central Australia

W. Tregear, formerly Horticulture Division, Alice Springs

### INTRODUCTION

Kangaroo paw (*Anigozanthos* spp. and *Macropidia* sp.) is native to Western Australia and has been cultivated for several years. It has become a substantial export earner for Australia with markets in Japan, USA and Europe.

The flower can be used in arrangements as the focal point or as a backdrop to other flowers. Many varieties have been trialed in the Ti Tree area north of Alice Springs. The colours of the flowers were very vibrant. The product was very good with plants producing high numbers of top quality stems.

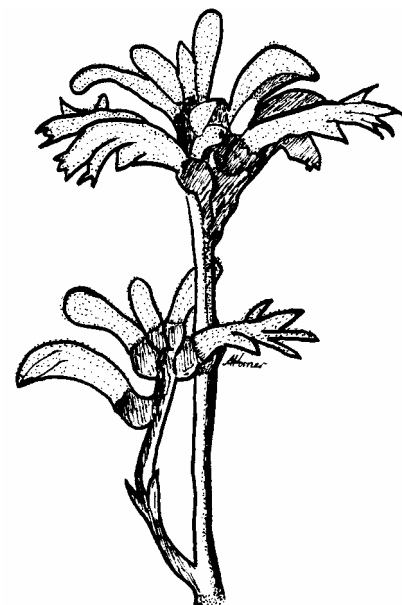
### CLIMATE

Kangaroo paw is tolerant to mild frosts. If possible, choose frost free areas on slopes with a northerly aspect as severe frosts can kill the plants. Frosts severely affect the flowers, but at Ti Tree the possibility of frosts occurring during September and October is rare.

If plants are shaded, the flower colour fades, so full sun is preferred.

Research indicates best flower quality is obtained when temperatures range between 27°C during the day and 22°C at night. The average temperatures at Ti Tree during October are 31°C during the day and 16°C at night.

During the hotter weather experienced in November, December and January (day temperatures 36°C and above), the flowers tend to deform and colour fades rapidly. Only secondary flowers (i.e. short stems) are produced at this time of the year. As the Japanese market for kangaroo paw has slowed in demand by the third week of November, this may not affect returns as harvest will be completed.



## VARIETIES

There are many varieties of kangaroo paw available. Varieties can be either short, medium or tall flowering and there are many colours available. Growers should seek market information about which flower type is required for each market.

## VARIETIES TRIALLED IN CENTRAL AUSTRALIA

The present export market requirement is for tall varieties of yellows. Short varieties of pink and black are also in high demand.

Suggested yellow varieties for Ti Tree are Yellow Gem, Bush Haze and Bush Dawn. Pink Supreme and Black (*Macropidia* sp.) are also suggested.

The yields for the tall varieties average 10 stems per plant in the first year and over 30 stems per year after that.

## SOIL AND FERTILISER

Kangaroo paw will grow on most soils if drainage is adequate. It will not tolerate waterlogged soils.

The high pH of the soil at Ti Tree does not seem to adversely affect plant growth or yields.

A recommended fertiliser regime for Central Australia consists of 500 kg/ha superphosphate, applied before planting, followed by weekly application of ammonium nitrate (0.88 g/plant) and potassium nitrate (0.52 g/plant). Superphosphate may need to be reapplied every three years.

Micronutrients need to be applied one to three times a year, depending on leaf analysis. These can be applied through the irrigation system or as a foliar spray.

## PLANTING

Recommended plant spacing is 80 cm within the row with double rows spaced 90 cm apart. The distance between double rows depends on the machinery being used. A minimum road spacing is 3 m.

Planting can occur in autumn or spring. Autumn plantings are preferred. Planting at this time allows the plant to put on considerable growth, with a small harvest in the following spring.

Kangaroo paw plants should be bought as tissue culture plantlets from reputable propagators and should be ordered six months before planting.

## IRRIGATION

Frequent watering is required following planting to avoid moisture stress. The plants have most of their roots in the top 20 cm of the soil profile and this area needs constant moisture.

As the plants start to flower, their water requirements will increase. If the plants are stressed at this stage the flowers will bend and twist and will not straighten again.

Drip irrigation, with emitter spacing of 40 cm, is recommended. Each row of plants will require a line of drip irrigation.

The amount of water required depends on the soil and climatic conditions. Tensiometers are useful instruments to monitor and guide water requirements.

### **WEED CONTROL**

Kangaroo paw can be planted through plastic mulch if weeds are a severe problem. After 12 months the plastic mulch may need to be removed to avoid strangling the growing plants.

Pre-emergent herbicides can be used before planting to stop many weeds from germinating. Grass weeds in the crop can be controlled using a selective herbicide as they emerge.

### **PESTS AND DISEASE**

Disease is not a major problem in Central Australia due to the dry conditions. Ink disease caused by either *Alternata alternata*, *Alternaria nova* or *Puccinia haemodoi* (a problem in other States) has not been recorded in Central Australia.

To prevent crown or root rots, the plants must not be over-watered.

Many insects live in the plants but do no damage. At harvest the flowers need to be free of insects and so regularly spray insecticide, starting four weeks before harvest. Insects to monitor are grasshoppers, thrips, stem borers and weevils.

Birds, rabbits and kangaroos may cause severe loss soon after planting.

### **HARVESTING AND MARKETING**

Harvest flowers when the first one or two florets are open on a stem. This is the ideal maturity stage which will ensure optimum vase life. If one or two florets are open on 1/3 of racemes on a stem they can also be harvested. These flower stems will not have as long a vase life as those harvested at the optimum stage of development. Pick flowers early in the morning and put directly into water.

Within 2-3 hours of picking, the flowers should be pulsed in a sugar and bleach solution. Buckets are filled to 8 cm of solution. A pulsing solution is a high sugar solution in which flowers are placed for a short period (pulse), to extend vase life and open buds.

Pulse solution:

1. 20 g sugar and 5 mL bleach (sodium hypochlorite - household bleach) per litre of water. Leave in solution overnight in cool room or 12 hours at room temperature.

or

2. 80 g sugar and 5 mL bleach per litre of water. Allow to sit in solution for 3 hours.

Flowers are then graded to market specifications and placed into the cool room. Forced air cooling is best for rapid cooling of the flowers down to 2-4°C.

The export market demands clean and straight stems that are free of insects and disease. Five stems are bunched with an elastic band at the bottom and a plastic sleeve placed over the flower heads.

The prices for kangaroo paw flowers vary throughout the season and with variety. The main market is Japan although other markets are being developed. Australian markets are easily oversupplied during spring and summer.

Market information should be sought from wholesalers and exporters regarding variety, stem length and grading requirements.

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