BEES HELP TO INCREASE OILSEED YIELDS

Introduction

Cultivation of gingelly in the paddy fields during the Yala season - in the dry zone areas is increasing. Sometimes you would have observed that gingelly crops grow well in paddy fields and some of these crops may appear to be much better than gingelly crops grown in chenas. But the seed yield of gingelly grown in chenas have been more often superior to the seed yield from gingelly grown in paddy fields.

Perhaps the reason may be that gingelly crop in the chena is visited by bees from adjoining jungles. Seed yield of gingelly and many other oil seed crops are known to increase, when bees pollinate the flowers.

Although gingelly is considered to be a self-pollinated crop, the floral structure of gingelly flower, permits insect pollination.

Bees and oil seed crops

Some of the well known oil seed crops are:

Gingelly	Safflower
Ground nut	Niger
Mustard	Sunflower

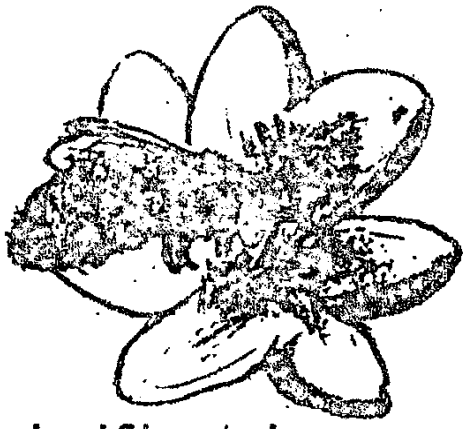
Ground nut is a self pollinated crop and it does not depend on insects for pollination. But some other oil seed crops are benefited by insect pollination.

Bee pollination experiment

An experiment was conudcted to study the effect of pollination by bees on the oil seed yields of Mus tard, Gingelly, Sunflower, Safflower and Niger.

The individual plots were enclosed with nylon mosquito nets just before flowering started. In the first treatment pollinating insects were excluded, while in the second treatment a small colony of bees (Apis indica) was kept. The colonies were removed once flowering was complete.

The results



* There was a significant increase in yields in the pollinated plots over those without bees.

* Percentage increase in yield due to Pollination by bees were as follows :

Crop		Yield increase (Percent
Sunflower	..	675.4
Niger	..	199.0
Mustard	..	43.7
Gingelly	..	21.0
Safflower	..	9.2

Useful observations

* Presence of bees at flowering stage resulted in :
  - uniform pollination
  - uniform seed setting
  - early maturity of the seed

* When bees were prevented from pollinating
  - maturity of seeds was delayed.

* Seed from bee pollinated plots were of superior quality. Sunflower seeds from bee pollinated flowers had 6.5% more oil than the seed from flowers that were not visited by bees, although the same variety was used. Similar results were observed in the Niger crop.

Demonstrations in farmers' fields

This experiment was conducted in farmers fields. Results obtained are given below:

Treatment	Yield increase (Percent)
Not pollinated by bees	-
Pollinated by bees	80-115

In another demonstration plot bee pollination increased gingelly yeilds by 30 %.

Observations

Advantages of bee pollination are:

- increased yield of seed
- increased oil content in the seed
- ensures uniform maturity
- harvesting can be done earlier.

What we should do

- provide bee colonies in the field during the flowering period of the crop. About 3 - 5 bee colonies per hectare will be sufficient.
- Bees are easy to handle for pollination services and can be transported for pollination whenever and wherever re quired.

Maintenance of bee colonies

Once the bee colonies are taken to the field take care to ensure that insecticides and chemicals are not sprayed while bees are in the field.

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සූරියකාන්ත	67.5%	නයිගර්	19.9%
අබ	43.7%	තල	21%

මී මැස්සන් පරාගණය කිරීම නිසා ලැබෙන ප්‍රයෝජන

- බීජ අස්වැන්න වැඩිවේ.
- බීජවල අඩංගු තෙල් ප්‍රතිශතය වැඩිවේ.
- ඒකාකාරව බීජ මෝරයි
- වේලාසනින් අස්වනු නෙලාගත හැක.

හෙක්ටාර් 1 ක වගාවක මල් පිපීම ආරම්භයේදී තැනින් තැන මී මැසි ජනපද 3-5 දක්වා තැන්පත් කිරීම ප්‍රමාණවත්ය.

எண்ணெய்ப் பயிர்களின் விளைவுக்கு தேனீக்கள் அதிகரிக்கின்றன

தேனீக்களின் எண்ணெய்ப் பயிர்கள் பூக்கும் காலத்தில் - உலவுமாயின் பூக்களின் மகரந்த சேர்க்கை அதிகரித்து பயிர் - விளைவு கூடியுள்ளது. இதன் விபரம் பின்வருமாறு:

1. சூரிய காந்தி	67%	2. கடுகு	43.7 %
3. எள்ளு	21%	4. நைஜர்	19 %

இப்பகுதியான மகரந்த சேர்க்கைக்கு 1 ஹெக்டார்/ இலக்கில் 3 - 5 தேன் பெட்டியிருந்தால் போதுமானது.