

Mass Rearing of *O. vacca* Under Controlled Environments

OUTSIDE GROWTH CHAMBERS

REARING MEDIUM:
Sand: Vermiculite
(3:2) / for 30 L of mix
8 L of RO water

PASTEURISATION:
Rearing medium: for
2 hours > 70 °C
Rearing containers:
3 L containers at 68°C
for 15 minutes



REARING CONTAINERS: 3 L containers
are firmly packed and populated with 3
pairs of beetles, topped up every 3 days
with dung



Outdoor rearing and
on farm nurseries



INSIDE GROWTH CHAMBERS



REARING CONDITIONS Adult beetles/ Brood balls

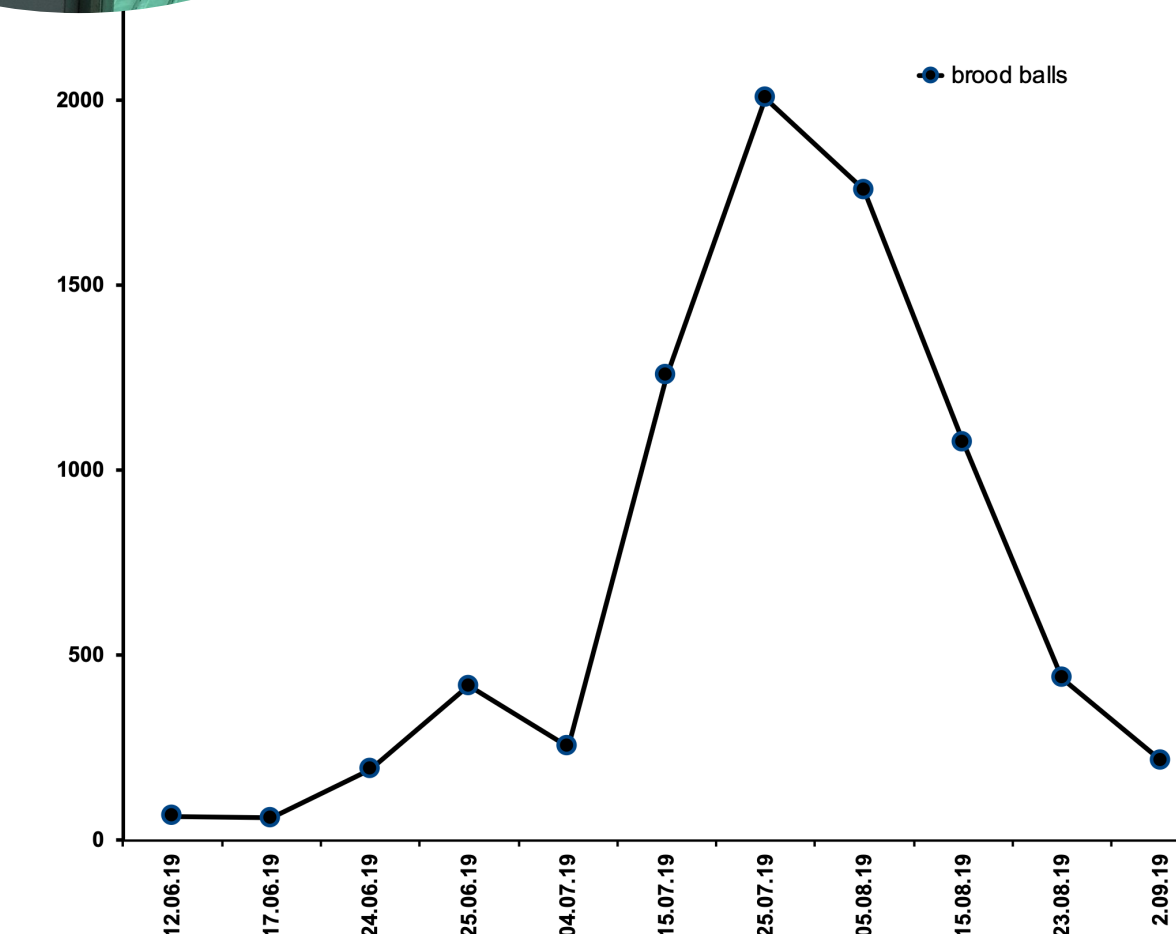
Temp: 22 °C constant
Photoperiod: 14 Light: 10 Dark
Hum: 50%
Light Intensity: <150 lumens

VERANALISATION
(22 °C FOR 4 WEEKS, 15 °C FOR
1 WEEK, 10 °C FOR 4 WEEKS,
15 °C FOR 2 WEEKS)

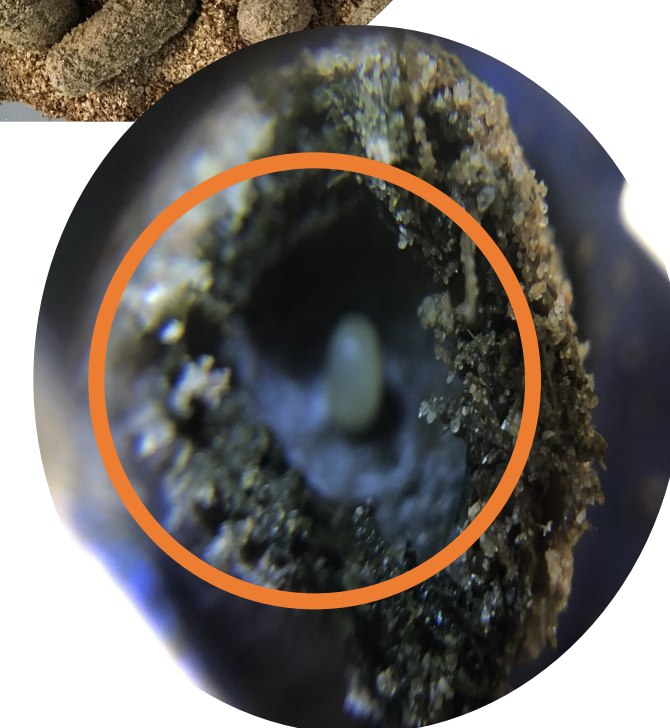
HARVEST: Brood balls harvested
every 10 days and stored within moist
vermiculite (30% VSW) in 8 L
containers till F₁ beetles emerge



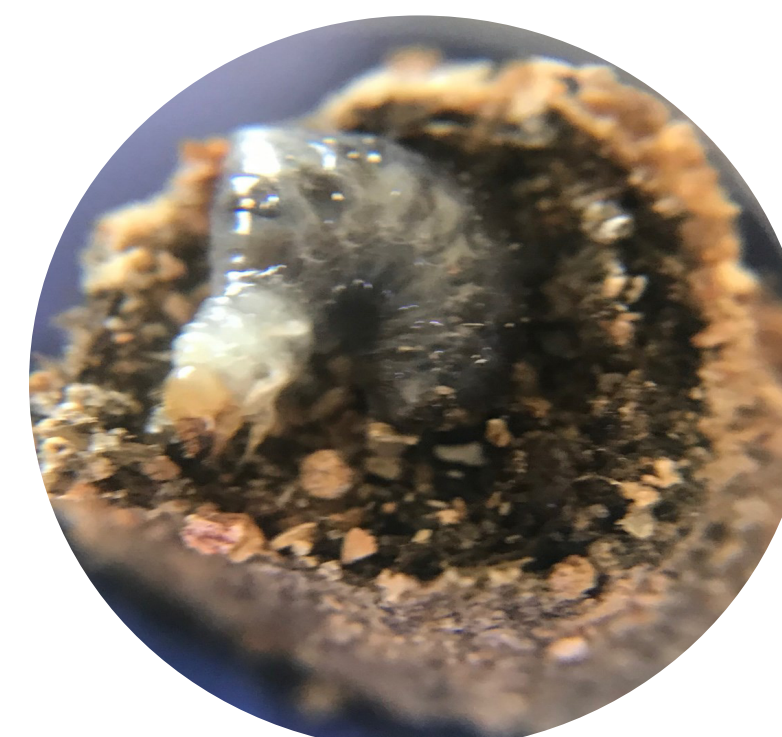
Brood balls



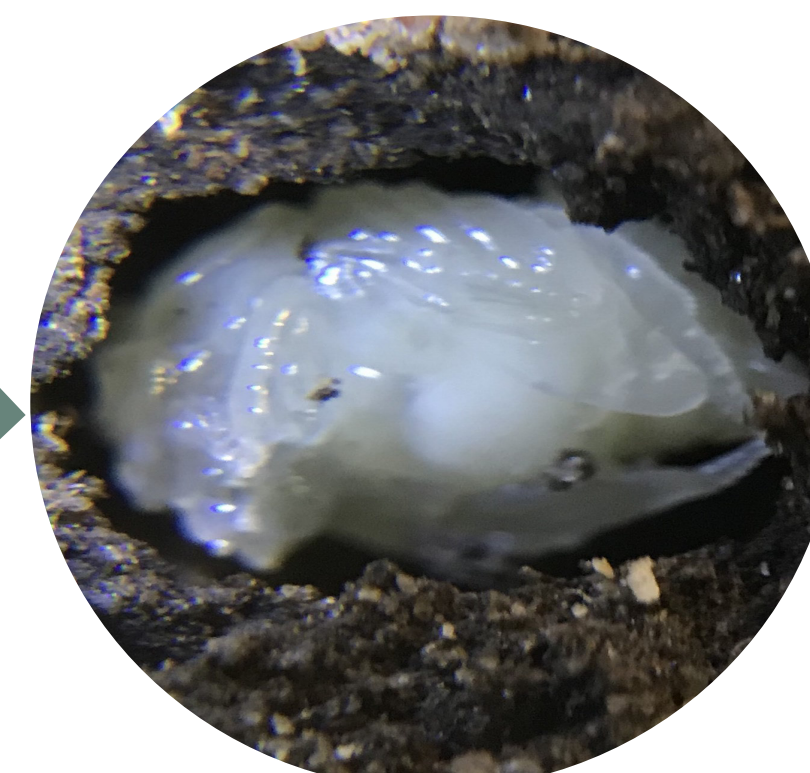
A total of 7,744 brood balls were
harvested from 175
O. vacca (Moroccan) females.



One egg per
brood ball



3 Larval stages (L1 -L3)



Pupal stage



2,296 F₁ beetles
collected as
of 25th Sep 2019

REPRODUCTIVELY FIT
DUNG BEETLES