|  |  |
| --- | --- |
| Logo AGES | |
| Varroa mite | |
|  |  |
| 11.07.2025 03:22 Uhr | |

**Varroa
mite**

**Varroa
destructor**

Last
change:
19.03.2025

**Profile**

The
Varroa
mite*(Varroa
destructor*)
originates
from
Asia
and
parasitizes
bees
and
bee
brood.
It
reproduces
in
the
bee
brood.
In
addition,
it
is
a
vector
of
various
bee
viruses.
Both
the
parasitization
and
the
transmitted
viruses
damage
bees
and
brood
stages.
It
has
been
present
in
Austria
since
about
1980
and
is
now
found
in
every
bee
colony.
It
is
an
important
trigger
of
colony
collapses
and
is
associated
with
high
winter
losses.

**Occurrence**

In
Asia,
the
varroa
mite
lives
in
colonies
of
the
Eastern
honey
bee*(Apis
cerana*).
In
the
course
of
evolution,
these
bees
have
developed
effective
defense
mechanisms
to
keep
varroa
infestation
low.
Therefore,
infested
colonies
of
this
bee
species
do
not
perish
from
varroa
mite.
In
the
last
century,
Western
honey
bees*(Apis
mellifera*)
were
brought
to
Asia
by
humans
and
thus
came
into
contact
with
the
varroa
mite.
As
a
result,
the
mite
was
able
to
use
the
Western
honey
bee
as
a
host
as
well,
and
spread
almost
all
over
the
world.
Currently,
the
varroa
mite
is
found
in
Asia,
Europe,
Africa,
North
and
South
America.

**Host
animals**

Varroa
mites
are
generally
present
in
every
bee
colony.
During
the
breeding
season
of
the
bees,
the
varroa
mites
multiply
in
the
colony
and
thus
become
a
serious
problem.
For
reproduction,
the
Varroa
females
migrate
into
brood
cells
that
are
ready
for
mating.
The
complete
development
from
egg
laying
to
mating
of
the
young
females
then
takes
place
in
the
closed
brood
cell.
During
this
time,
both
the
mother
mite
and
the
offspring
feed
on
the
bodily
fluids
of
the
bee
larva.
With
the
hatching
young
bee,
the
mature,
already
mated
Varroa
females
also
leave
the
brood
cell
and
transfer
to
other
bees.
Thus,
a
new
cycle
begins
again.

The
number
of
female
offspring
per
reproductive
cycle
is
different
in
worker
and
drone
brood.
In
worker
brood,
one
to
two
adult
daughter
mites
are
produced
per
mother
mite,
while
in
drone
brood
two
to
four
daughter
mites
are
produced
due
to
the
longer
mating
period.
This
can
lead
to
high
infestation
numbers
and
the
development
of
varroosis
symptoms
in
the
course
of
the
season.

Infestation
of
bee
brood
has
the
greatest
impact
on
the
health
of
the
colony,
as
the
brood
is
damaged
by
the
mites
in
the
course
of
its
development
(withdrawal
of
nutrients
from
the
bee
larvae,
transmission
of
viruses).
Infected
bee
larvae
give
rise
to
damaged
young
bees
with
shortened
lifespan,
crippling
and
reduced
performance.

**Symptomatology**

Varroosis
is
the
symptom
pattern
that
occurs
in
colonies
of
the
Western
honey
bee
in
the
course
of
a
massive
varroa
infestation
-
usually
in
combination
with
virus
infestation.
The
symptoms
affect
both
the
adult
bees
and
the
brood.
Only
when
there
is
already
severe
damage
to
bees
and
brood,
the
symptoms
of
varroasis
become
obvious.
However,
even
if
the
colony
looks
strong
and
healthy
at
first
glance,
a
dangerously
high
number
of
varroa
mites
may
already
be
present.

Typical
signs
of
a
colony
with
varroosis
are
bees
with
shortened,
crippled
wings,
with
shortened
abdomens,
varroa
mites
visible
on
bees
and
combs,
and
a
patchy
brood
nest.
Colonies
dead
from
varroosis
were
typically
strong
until
recently
and
were
producing
abundant
honey.
Now,
either
the
hive
is
largely
empty
of
bees
or
there
are
still
large
quantities
of
dead
bees
in
the
bottom
board.
On
the
combs
are
capped,
not
hatched
brood
cells,
which
usually
contain
large
amounts
of
mites.
Often
there
are
several
mites
in
one
brood
cell.
Usually
there
are
also
abundant
honey
and
pollen
stores.
Such
colony
collapses
usually
occur
in
late
summer,
fall
and
winter.

**Therapy**

To
get
the
varroa
mite
under
control,
an
integrated
concept
of
varroa
control
is
required.
This
must
be
planned
and
coordinated
with
the
farm.
It
consists
of
a
combination
of
successive
measures
to
reduce
infestation
over
the
course
of
the
year.
The
measures
have
to
be
adapted
to
the
seasons,
the
period
of
the
grape
harvest,
the
state
of
the
colony
and
the
type
of
operation
(conventional
or
organic
beekeeping).
For
details
on
the
integrated
concept
of
varroa
control,
please
refer
to
the
technical
information
below
and
the
PDFs
in
the
download
area.

**Prevention**

All
methods
of
varroa
control
that
stop
or
slow
down
the
growth
of
the
varroa
population
in
the
colony
serve
to
prevent
varroasis.
Particularly
worthy
of
mention
here
are
the
biotechnical
methods
that
do
not
involve
the
use
of
veterinary
medicines.
These
methods
can
also
be
used
during
the
breeding
period,
when
veterinary
medicines
may
not
yet
be
used.
Their
effectiveness
is
based
on
the
fact
that
in
colonies
with
brood,
the
majority
of
varroa
mites
are
found
in
the
capped
brood
cells.
If
this
brood
is
partially
or
completely
removed
from
the
colony,
the
mites
in
it
are
also
removed.
This
delays
the
development
of
a
critical
varroa
infestation.
For
details
on
biotechnical
methods,
please
refer
to
the
technical
information
below
and
the
PDFs
in
the
download
section.

Another
prevention
strategy
is
breeding
varroa
tolerant
bees.
Breeding
aims
to
select
colonies
that
are
themselves
capable
of
limiting
Varroa
mite
infestation
to
such
an
extent
that
no,
or
reduced,
additional
control
measures
are
required.
In
the
existing
bee
population,
those
colonies
are
identified
that
are
more
resistant
to
the
mite
due
to
their
genetic
characteristics.
These
colonies
have
the
ability
to
remain
healthy
and
productive
despite
Varroa
mite
infestation.
Information
on
this
can
be
found
in
the
folder
"Varroa
mite
-
selection
for
varroa
tolerance"
in
the
download
area.

**Situation
in
Austria**

The
Varroa
mite
has
been
present
in
Austria
since
about
1980
and
can
now
be
found
in
every
bee
colony.
According
to
the
new
EU
Animal
Health
Law
(AHL),
infestation
with
*Varroa*
spp.
(varroosis)
is
notifiable.
Analogous
to
the
previous
regulation,
it
is
planned
that
notification
will
only
be
mandatory
in
the
case
of
epidemic
occurrence
of
varroosis.
Details
are
currently
being
worked
out
(as
of
January
2021).

**Specialized
information**

**Contact**

**National
Reference
Laboratory
for
Bee
Diseases**

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