Medfly (*Ceratitis capitata*): biology, effective phytosanitary measures and the situation in neighboring countries

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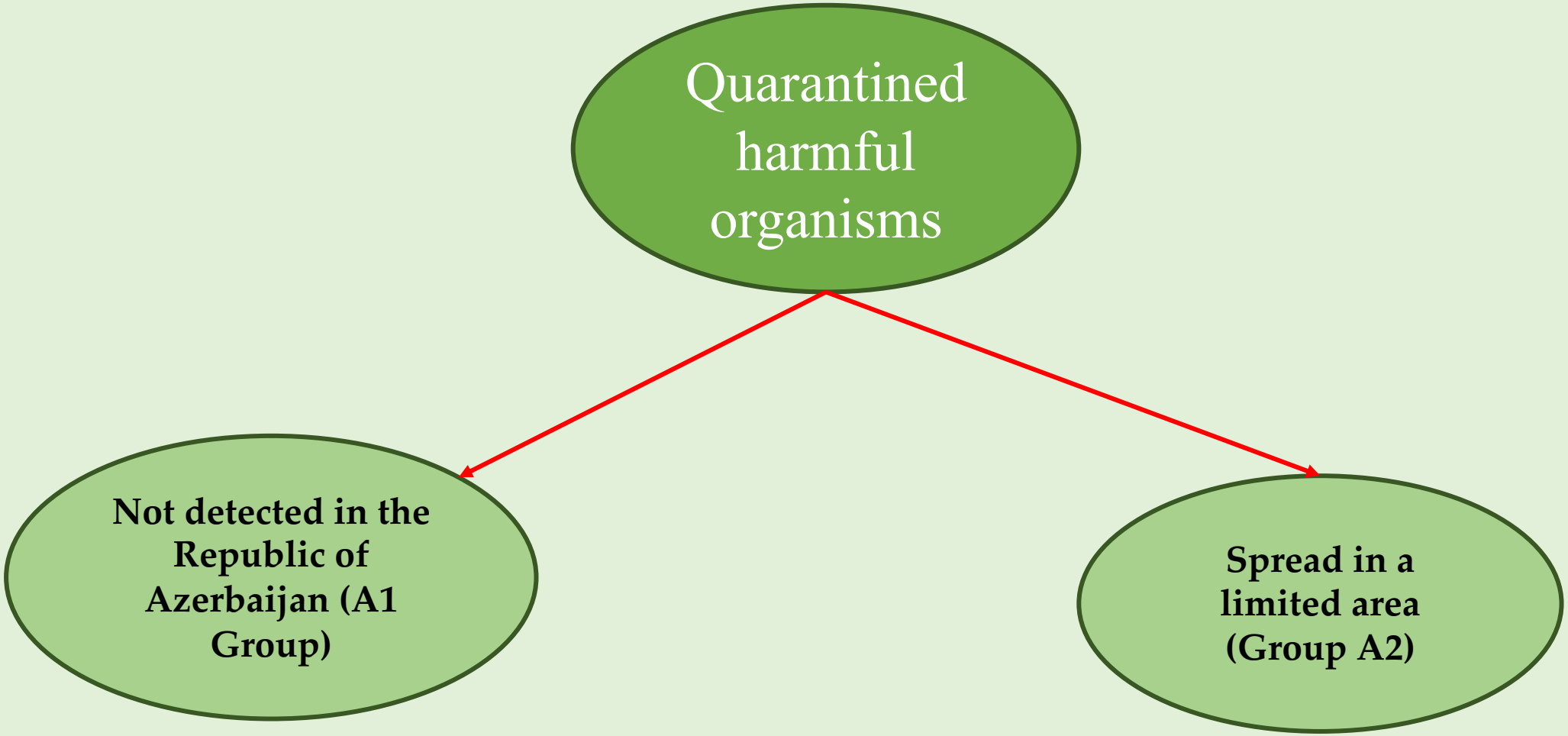
Quarantine-applied harmful organism:

- not yet available in the area;
- or exists, but spread in a limited area;
- has become an object of official control;
- are harmful organisms that pose a potential threat to the environment,
- the economy of the area
- and public health.

Reference: Law of the Republic of Azerbaijan on phytosanitary control



Note: It was approved by the decision No. 280 of the Cabinet of Ministers of the Republic of Azerbaijan dated December 29, 2006.

Pests listed in A1

1. raphognathus (Pantomorus) leucoloma Boheman
2. Agrilus mali Matsumura
3. Rhagoletis pomonella (Walsh)
4. Liriomyza trifolii (Burgess)
5. Ceratitis capitata (Wiedemann)
6. Numonia pyrivorella (Matsumura)
7. Spodoptera litura (Fabricius)
8. Tetradacus citri (Chen)
9. Zabrotes subfasciatus (Boheman)
10. Anguina tritici (Steinbuch) Chitwood
11. Aphelenchoides besseyi Christie
12. Callosobruchus chinensis Linnaeus
13. Lymantria dispar Linnaeus (asian race) (Asiya rası)
14. Caulophilus latinasus (Say)
15. Pectinophora malvella Hb.
16. Ceroplastes rusci
17. Ditylenchus dipsaci (Kühen) Filipjev
18. Trogoderma granarium Everts
19. Ditylenchus destructor Thorne
20. Meloidogyne chitwoodi Golden et al.
21. Dacus ciliatus Loew
22. Aleurocanthus woglumi Ashby

Ceratitis capitata (CERTCA)

MENU

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- Distribution
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- Host commodities
- Categorization
- Reporting
- Photos
- Documents
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Overview

Basic information

- **EPPO Code:** CERTCA
- **Preferred name:** Ceratitis capitata
- **Authority:** (Wiedemann)

Code created in: 2002-10-28

more photos...

Notes

DAISIE

Other scientific names

Name	Authority
Ceratitis citriperda	Macleay
Ceratitis hispanica	de Breme
Pardalaspis asparagi	Bezzi
Tephritis capitata	Wiedemann

Taxonomy

Kingdom	Animalia (1ANIMK)
Phylum	Arthropoda (1ARTHP)
Subphylum	Hexapoda (1HEXAQ)
Class	Insecta (1INSEC)
Order	Diptera (1DIPTO)
Family	Tephritidae (1TEPHF)
Genus	Ceratitis (1CERTG)
Species	Ceratitis capitata (CERTCA)

General information about the Mediterranean fruit fly

❖ ***Ceratitis capitata*** (Wiedemann), a Mediterranean fruit fly of African origin, is listed as a regulated pest in up to 20 countries.

- ➢ It is included in the A2 list in the EPPO.
- ➢ It is on the A1 list in Azerbaijan.

❖ It is a polyphagous pest and there are more than 260 food plants (Tiftikci / RTEÜ-FEMÜD 1(2) 1-8 2020).

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TOOLS

Save list as excel file

Save list as csv file

Categorization

Country/NPPO	List	Year addition	Year transfer	Year deleti
Africa				
East Africa	A2 list	2001		
Egypt	A2 list	2018		
Southern Africa	A2 list	2001		
America				
Argentina	A2 list	2019		
Mexico	Quarantine pest	2018		
United States of America	Quarantine pest	1994		
Asia				
Bahrain	A2 list	2003		
China	A1 list	1988		
Kazakhstan	A1 list	2017		
Uzbekistan	A1 list	2008		
Europe				
Azerbaijan	A1 list	2007		
Belarus	Quarantine pest	1994		
Georgia	A1 list	2018		
Moldova	Quarantine pest	2017		
Russia	A1 list	2014		
Turkey	A2 list	2016		
Ukraine	A1 list	2019		
Oceania				
New Zealand	Quarantine pest	2000		
RPPO/EU				
APPPC	A2 list	1988		
EAEU	A2 list	2016		
EPPO	A2 list	1975		
OIRSA	A2 list	1992		
PPPO	A2 list	1993		

Morphology

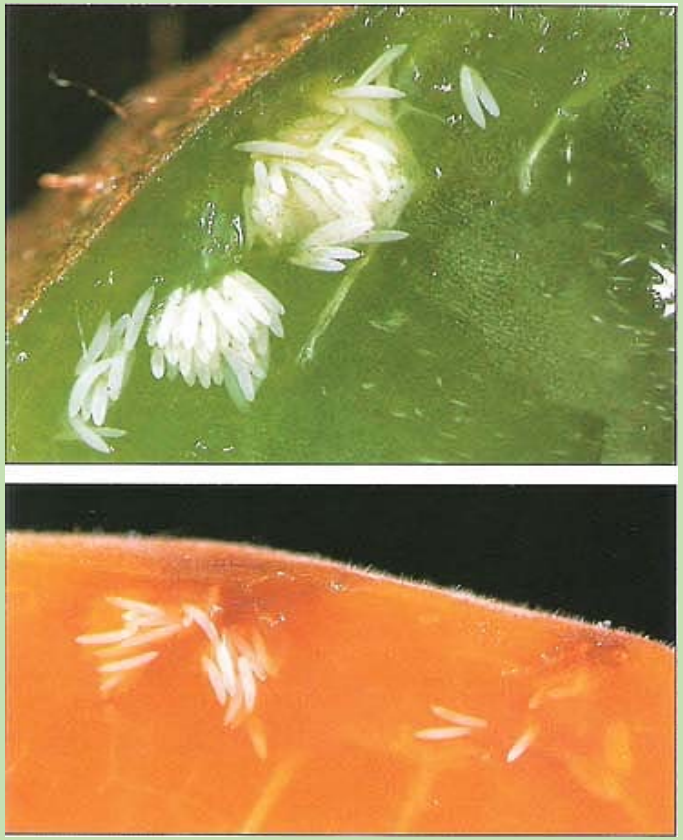
The body length of adult individuals is 4.5 mm.

The head of the female individual is grayish-white. Whiskers consist of 3 joints and bristles. Their eyes are large, shiny, green and red in color.

The breast part (thorax) is lighter in color than the abdomen, and on its upper side there is a strip covering the lower half of the second segment and 2/3 of the lower part of the fourth segment, there are white-yellow spots on it, characteristic white rings on the shoulders.

The wings are broad, grayish-yellow, with elongated, broken pale brown furrows. There are dark stripes at the base of the wing.

The legs are mustard yellow and there are gray transverse stripes on the back.



The egg is elongated, 0.5-0.9 mm in size and white in color.

The larva is translucent, whitish-yellow in color and the end of the abdomen is blunt. It is 7-10 mm long and consists of 11-12 joints.

The length of the pupa is 4-5 mm, it is oval, slightly elongated, the color varies from yellow to dark brown.

Biology


ADULT
EGGS
1ST INSTAR
2ND INSTAR
3RD INSTAR
PUPA
CERATITIS CAPITATA
LIFE CYCLE

Females lay their eggs on the underside of the fruit's skin.

Larvae emerge from the eggs within 2-4 days (16-18 days in cold weather) and feed on the fleshy part of the fruit. It passes the 3-year stage, the fruit development takes 1-3 weeks depending on the temperature.

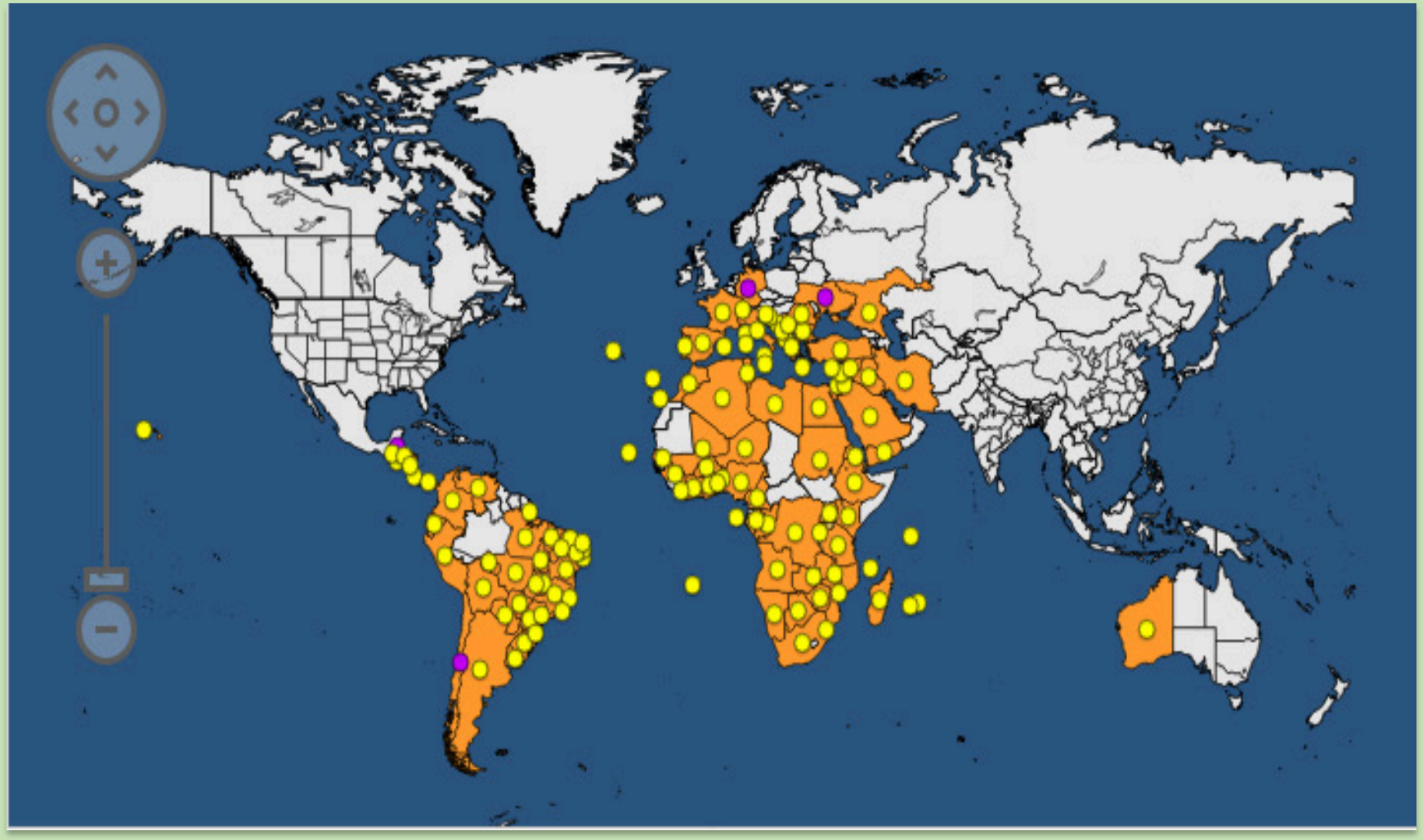
Pupation occurs in soil. Adults emerge from the pupae after 6-11 days in temperature conditions of 24-260C, and in cold weather this process takes longer.

In summer, when the air temperature is 120C, adults become active and fly. The lifespan of an adult Mediterranean fruit fly is 30-50 days.

Its development can last 18-100 days depending on environmental factors. At air temperature +26ºC and humidity 70%, development from egg to imago can be completed in 18-20 days, at 21ºC temperature in 40-70 days, and at 16ºC in 100 days.

Geographic distribution

Last updated: 2022-06-30



EPPO Global Database, https://gd.eppo.int/taxon/CERTCA/distribution

Its spread in Azerbaijan

At the end of 2018, the Mediterranean fruit fly was detected by AFSA in Fatmayi, Mashtaga and Khirdalan settlements of Absheron region in oriental date palm and pomegranate fruits.

The spread of the pest is likely due to prolonged storage of imported infested products in wholesale and retail outlets and improper waste management.

This harmful organism is found in the southern regions of the Russian Federation (Krasnodar region, 1995), bordering with Azerbaijan, Iran, and is widespread in Turkey.

Rutaceae

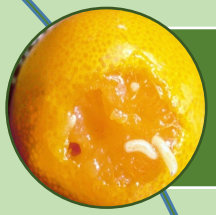
- *Citrus*

Rosaceae

- *Prunus*
- *Pyrus*
- *Rubus*
- *Malus*

Rubiaceae

- *Coffea*



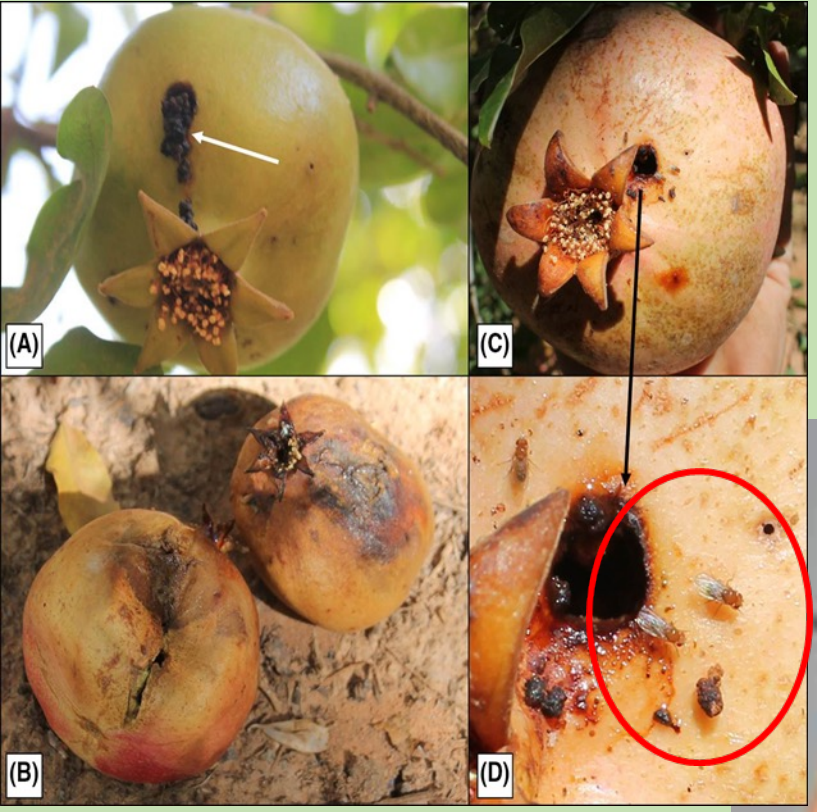
Larvae feeding on the fleshy part of food plants cause softening and sedimentation in that part.

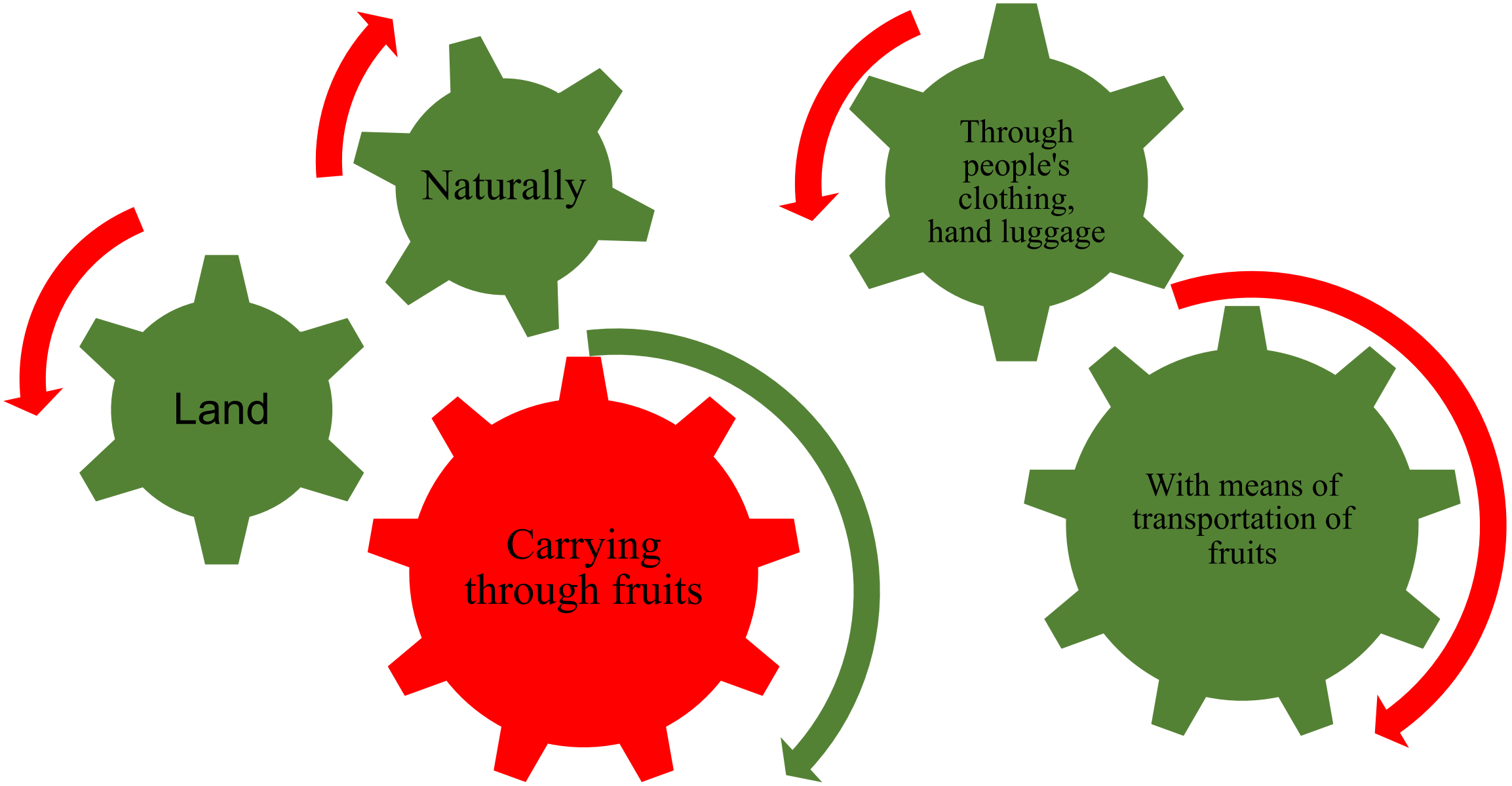
Infected fruits ripen prematurely and fall off.

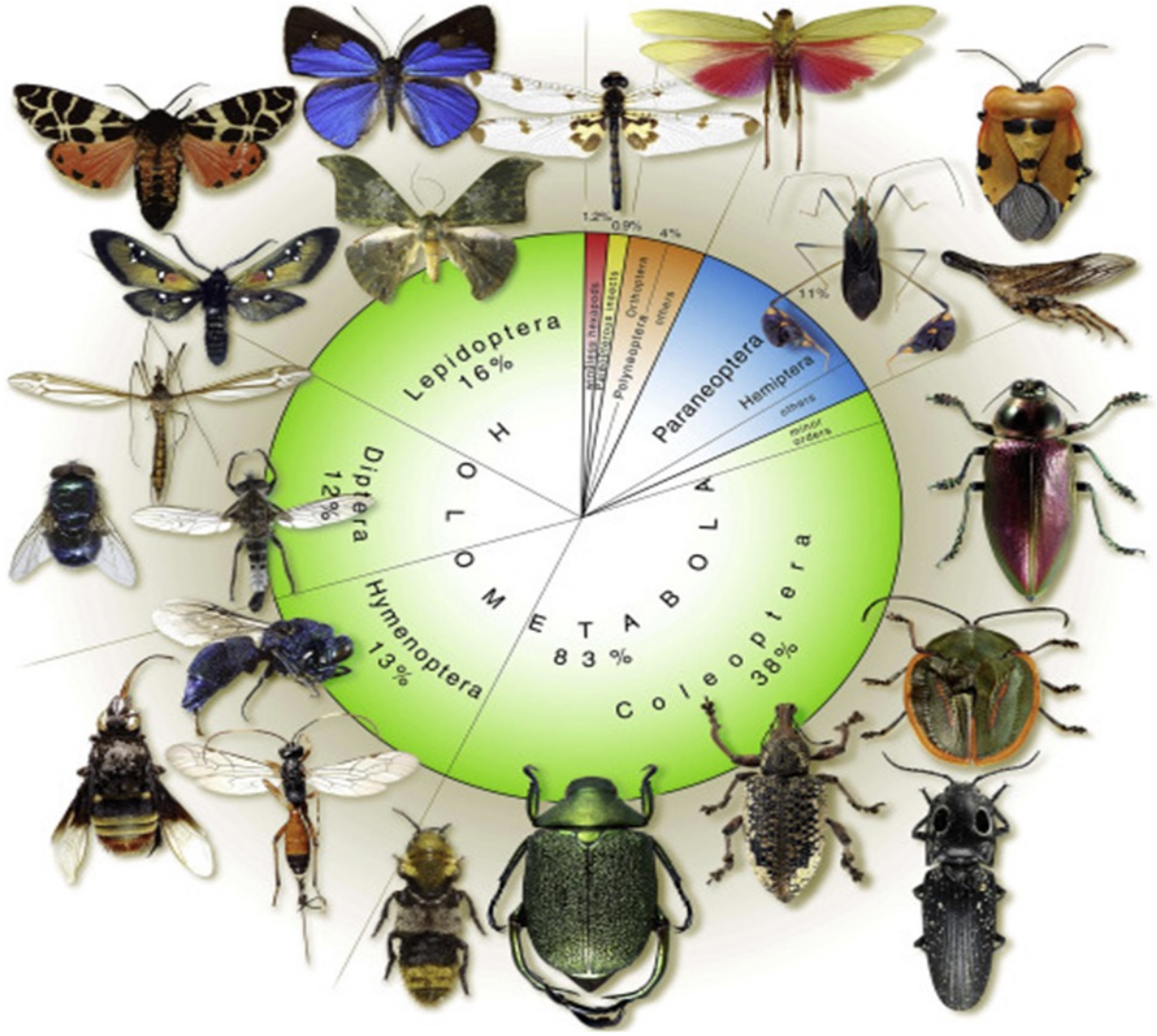
Sugar exudate can be observed in plants with high sugar content.

Secondary infections of fungal origin are found in damaged tissues.

It can damage fruit plants by 30-100%, coffee plants by 5-15%, oranges and peaches by 100%, tangerines by 80-90%, pears and figs by 70-80%, and grapefruit by 40-50%.


(A)
(C)
(B)
(D)


Naturally
Through people's clothing, hand luggage
Land
Carrying through fruits
With means of transportation of fruits



Thanks for your attention!