# Babesiosis: Some Important Facts

# Economically Important Babesiosis Species in Cattle in India

- *Babesia bovis*
- *Babesia bigemina*

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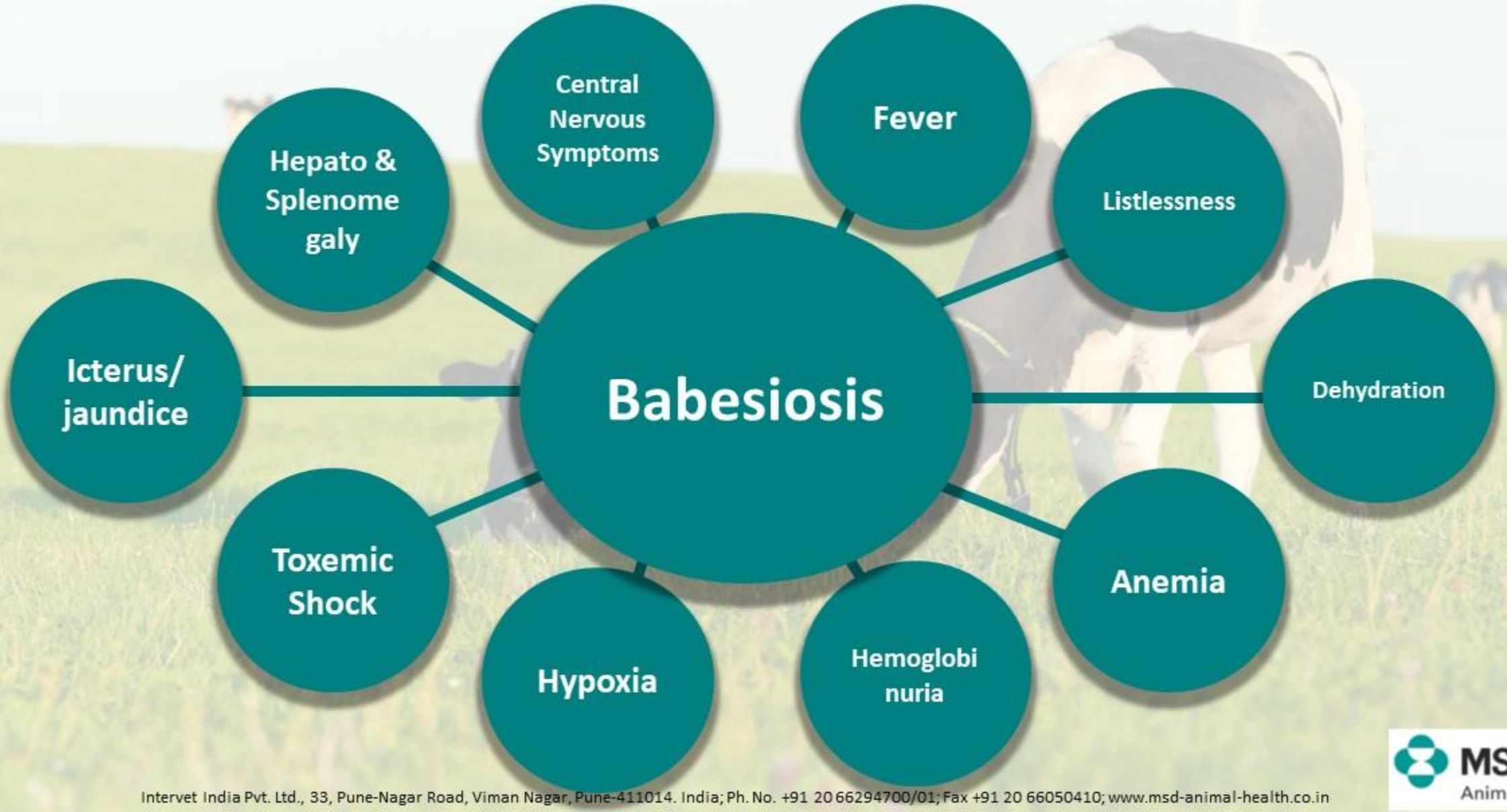
# Babesiosis Signs & Symptoms

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# Babesiosis Incubation Period

**Incubation Period**

**Incubation Period of 14 days (10 – 16)**

**Visibility in Blood Smears**

**Parasites seen in thick blood smears from 12 – 16 days after transmission**

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# Tick Transmission

| | |
|---|---|
| *Babesia bovis* | • ***Rhipicephalus (Boophilus) microplus***<br>• ***Rhipicephalus (Boophilus) annulatus*** |
| *Babesia bigemina* | • ***Rhipicephalus (Boophilus) decoloratus***<br>• ***Rhipicephalus (Boophilus) microplus***<br>• ***Rhipicephalus (Boophilus) annulatus***<br>• ***Rhipicephalus evertsi evertsi*** |

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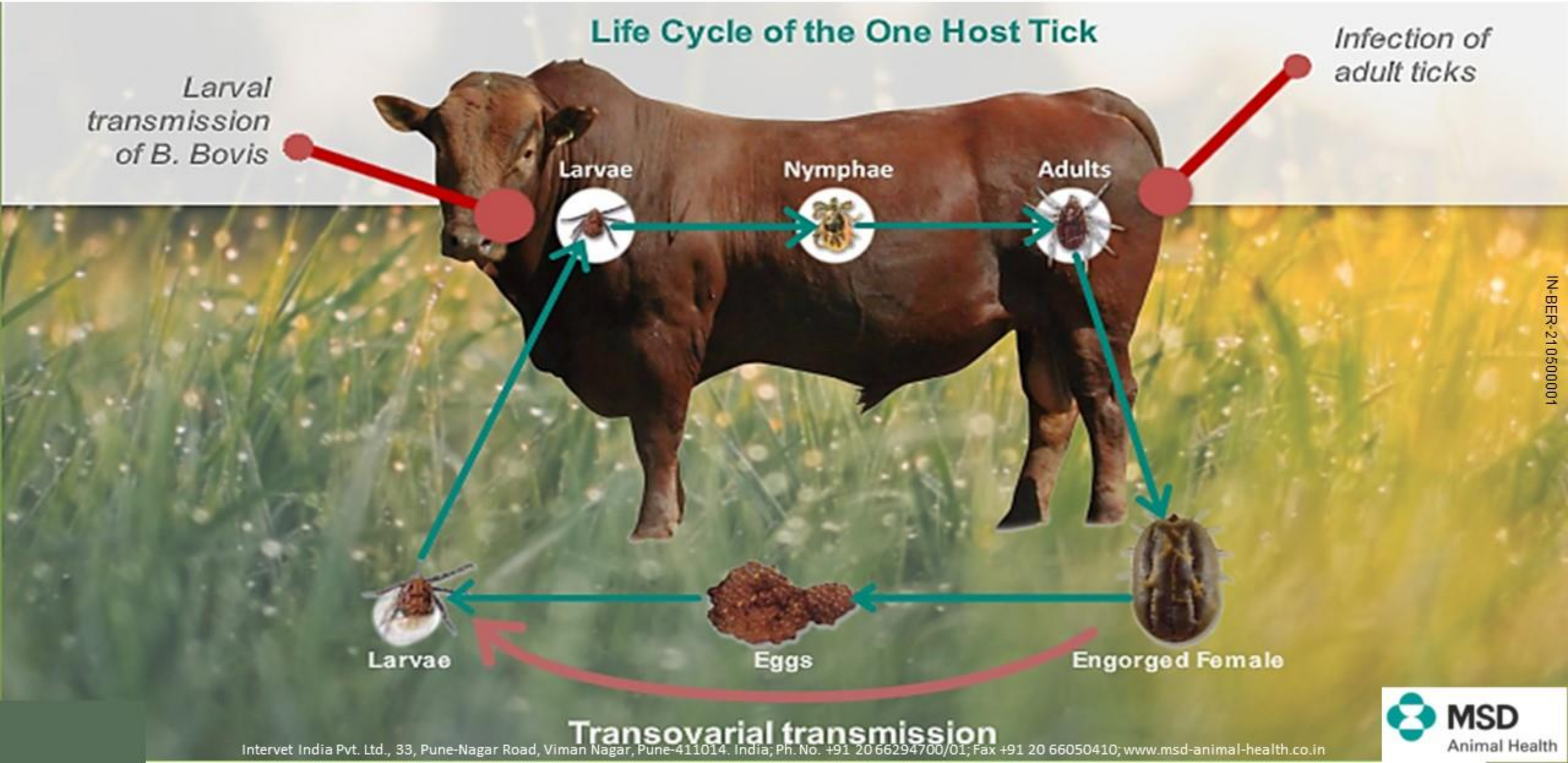
# Tick Transmission in *Babesia bovis*

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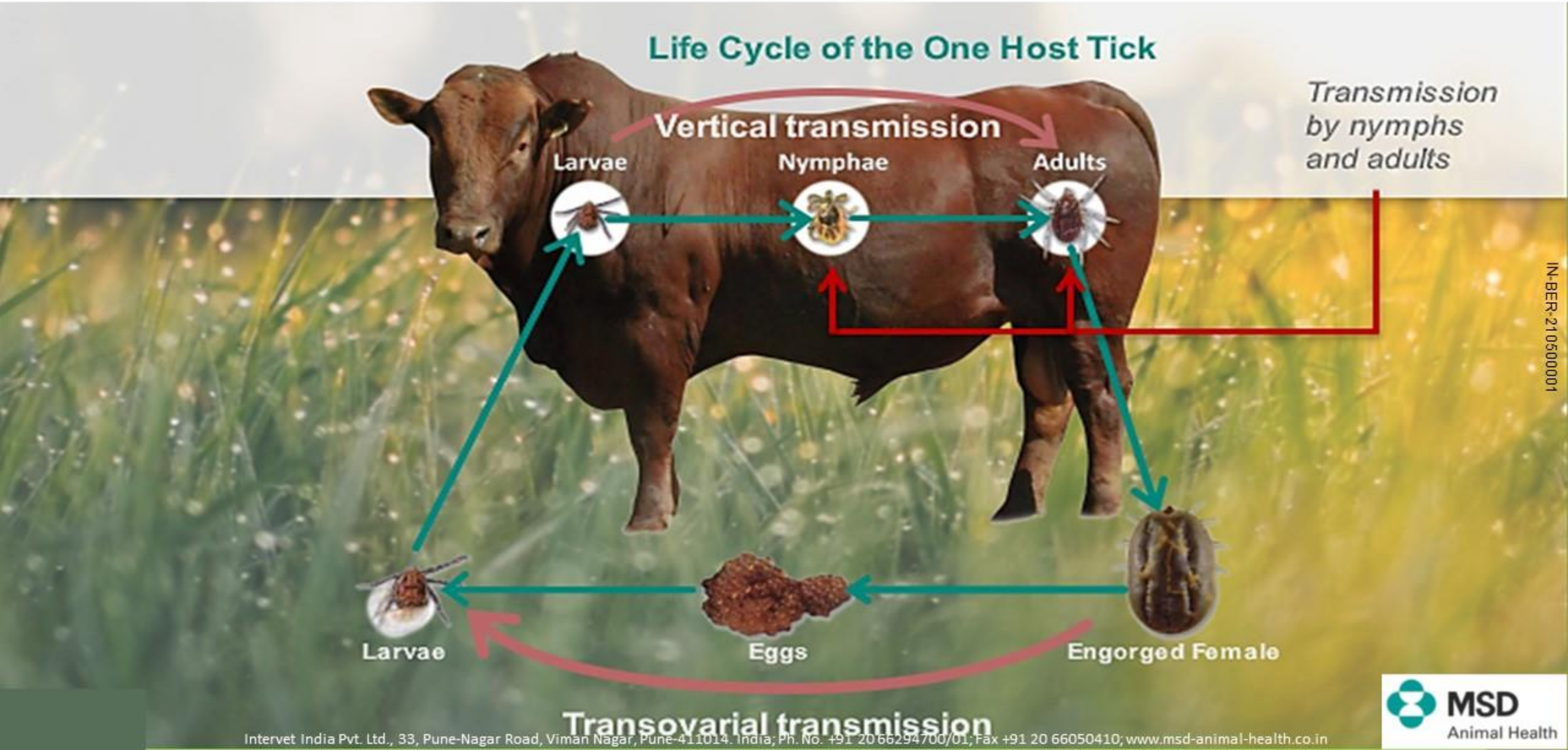
# Tick Transmission in *Babesia bigemina*

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# Immunity for Babesiosis in Calves of < 2 Months Age

## Unexposed Cow

- Calves less than 2 months age who are born to previously unexposed cows are susceptible to the disease

## Immune Cow

- Calves, less than 2 months age who are born to from immune cows are immune – by colostrum or passive immunity


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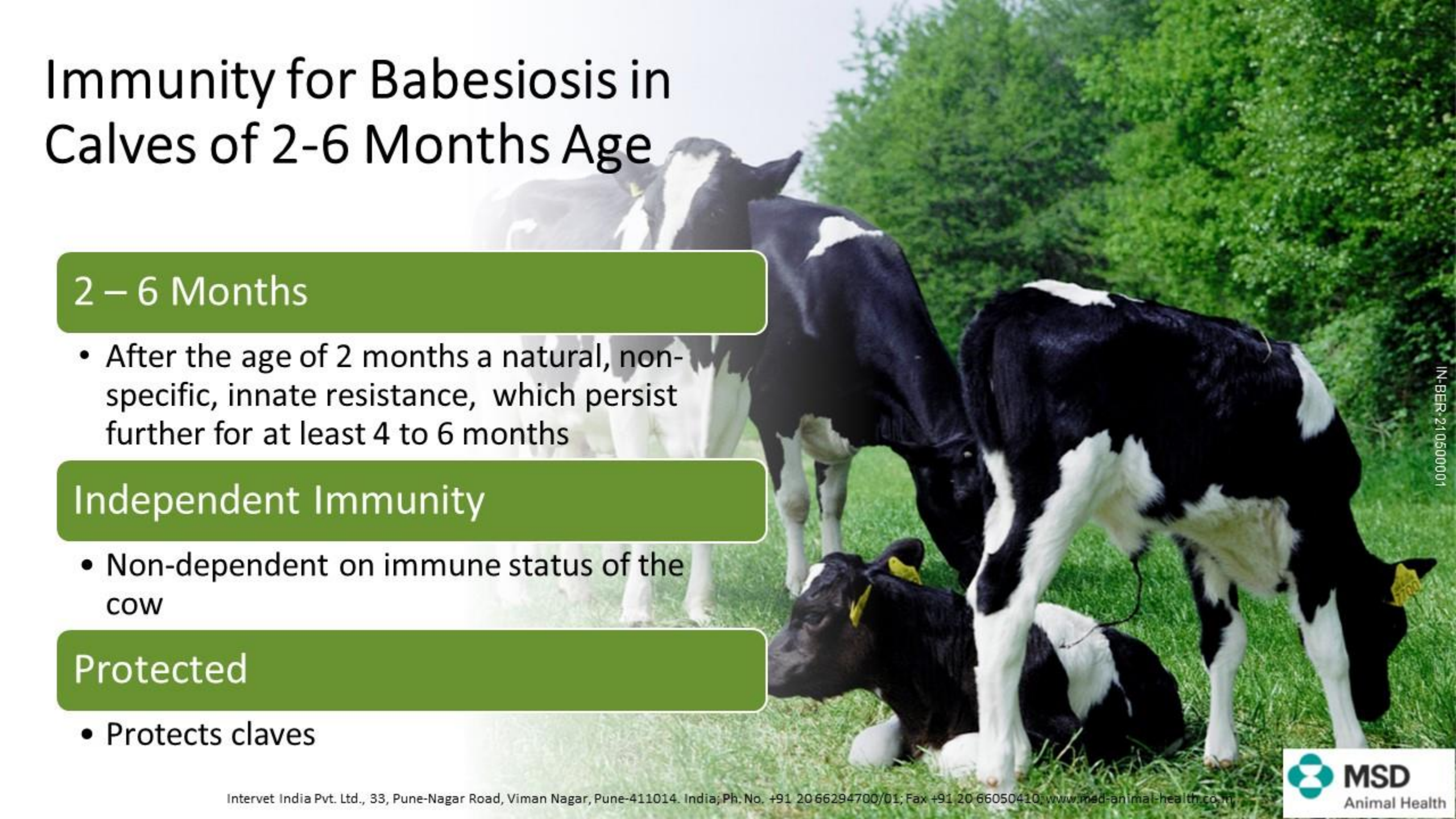
# Immunity for Babesiosis in Calves of 2-6 Months Age



## 2 – 6 Months

- After the age of 2 months a natural, non-specific, innate resistance, which persist further for at least 4 to 6 months

## Independent Immunity

- Non-dependent on immune status of the cow

## Protected

- Protects claves

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# Immunity for Babesiosis in Cattle of > 8 Months Age

## Unexposed Cow

- Cattle older than 8 months and never exposed to babesiosis are fully susceptible to the disease

## Immune Cow

- Most cattle develop a durable immunity after recovery

## Immune Cow

- The persistence of infection is not necessary to ensure immunity



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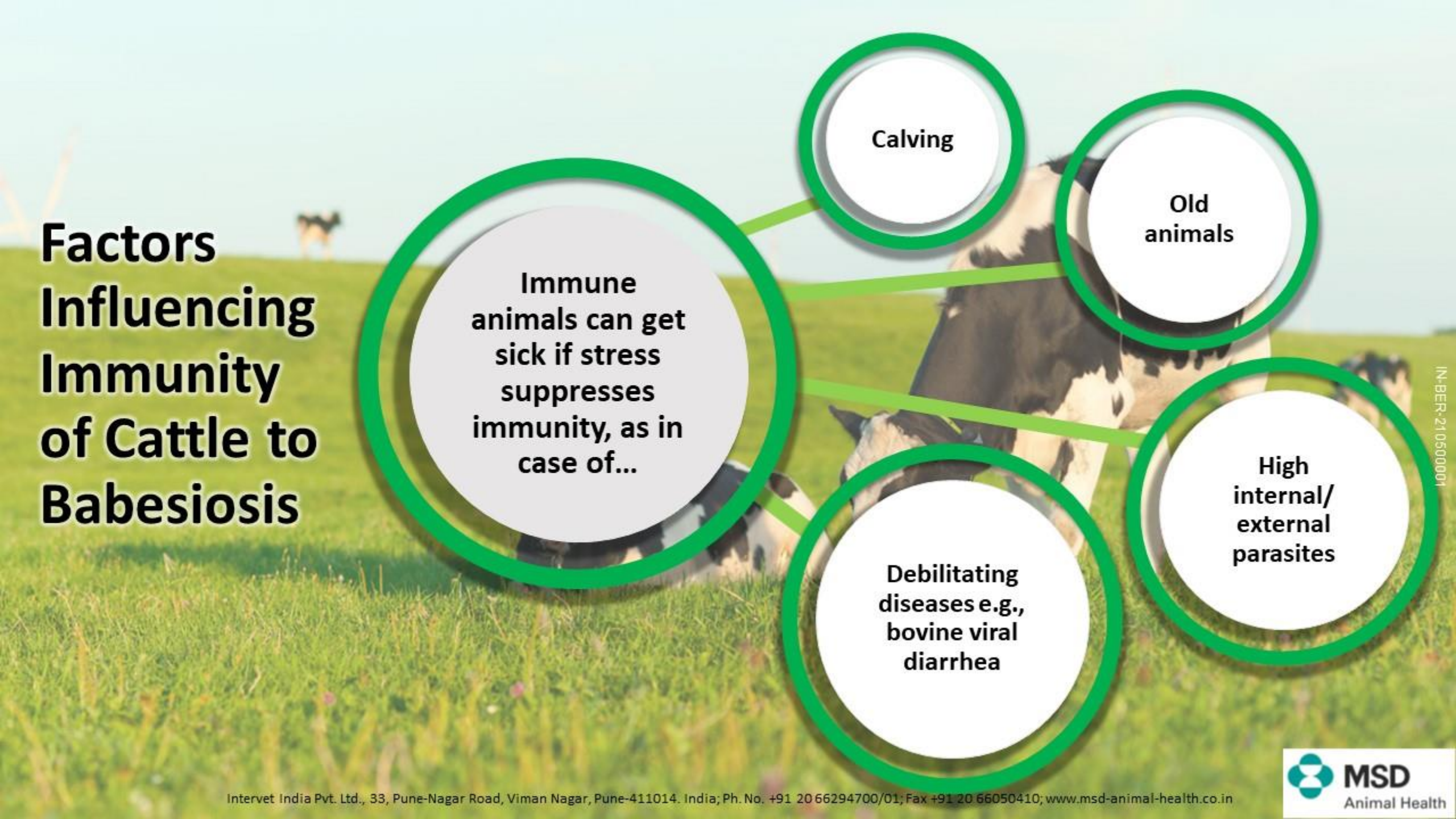
# Factors Influencing Immunity of Cattle to Babesiosis

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# Endemic Stability against Babesiosis can be Upset during:

- Climate changes
- Frequent acaricide treatments
- Cold seasons interrupt disease transmission
- Susceptible animals enter endemic region
- Infected ticks enter new areas via transport of animals

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