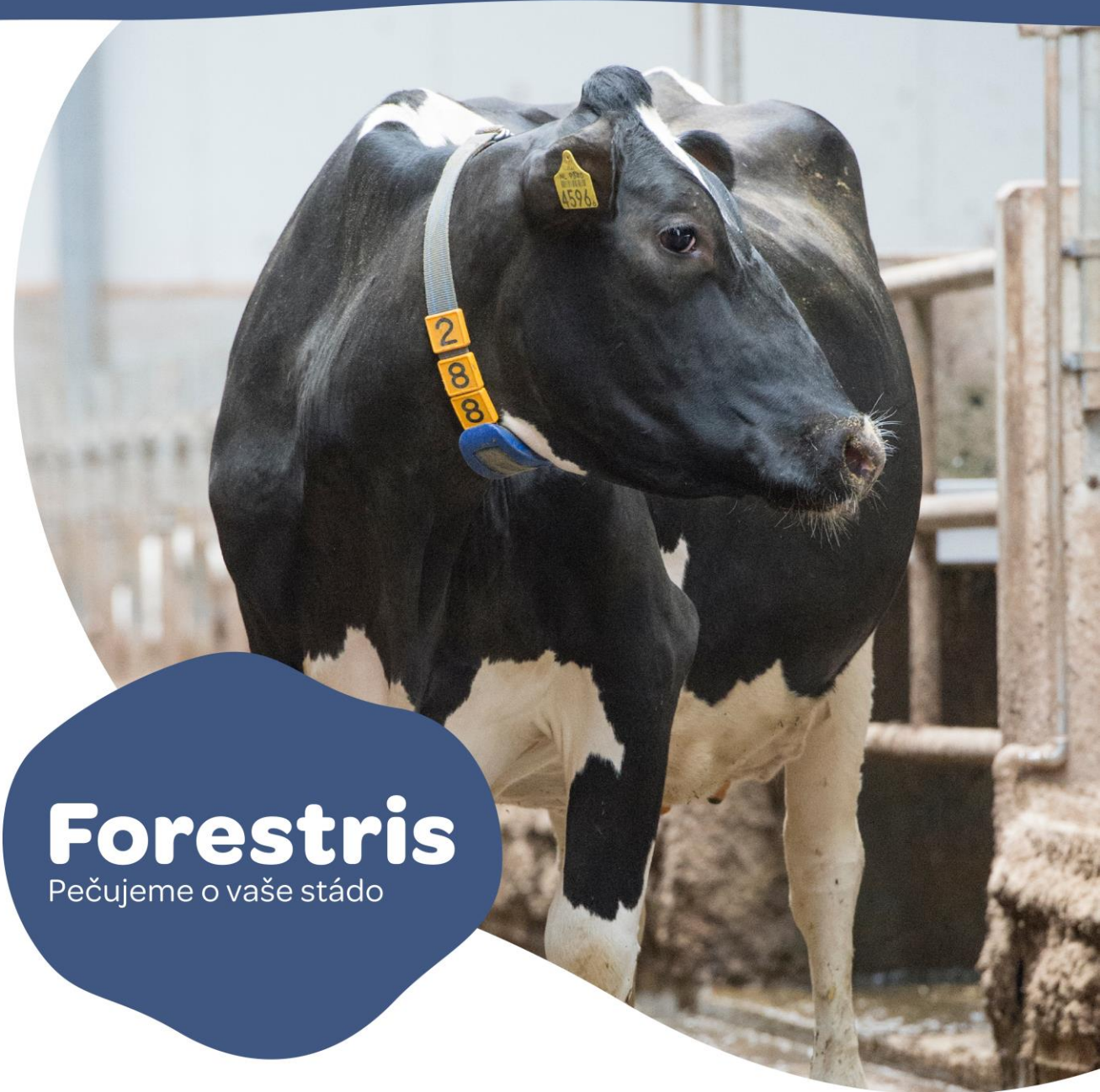


# Use of modern technologies in cattle reproduction

ESTONIA 12/12/2023

**Ing. Martin Platil**

FORESTRIS SERVIS a.s. | Alta Genetics



**Forestris**  
Pečujeme o vaše stádo

# WHO WE ARE

- from 2001 with Alta Genetics
- 2019 DairyComp
- 2020 Alta Cow Watch
- 2020 FORESTRIS SERVIS
- 2022 ALTA SLOVENSKO



**Pečujemo o vaše stádo**

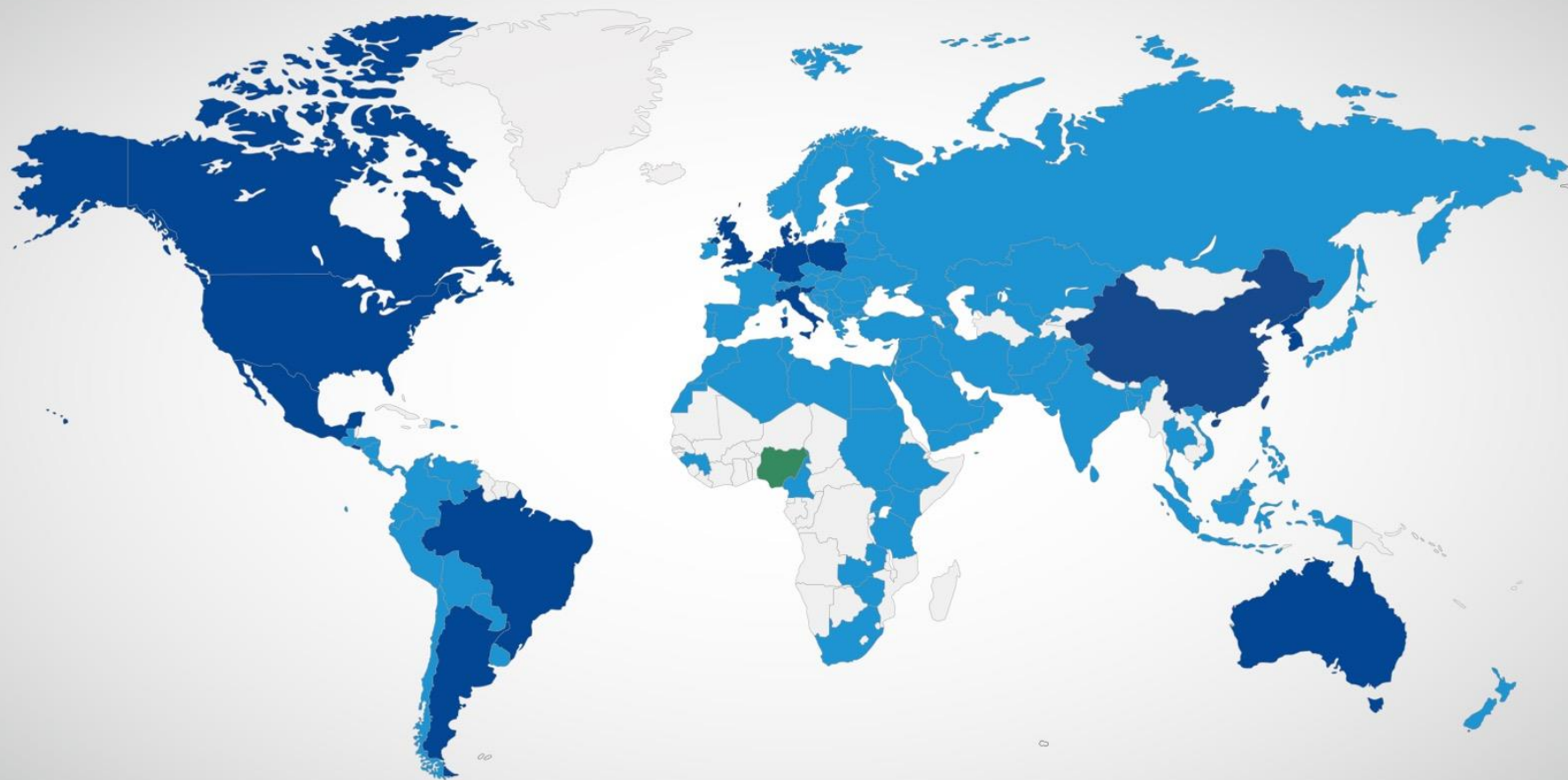
# WHO WE ARE



**Pečujeme o vaše stádo**



# WHO WE ARE



**Pečujeme o vaše stádo**

# THE BIGGEST CHANGES IN DAIRY INDUSTRY

- Robotic milking, feeding and manure cleaning
- Monitoring technologies
- Genomics
- Methane digesters



# WHY WE NEED ON-LINE TOOLS?

- The world is going the way of online apps
- People understand phones better than animals
- Data sharing
- Accurate data is more than feelings



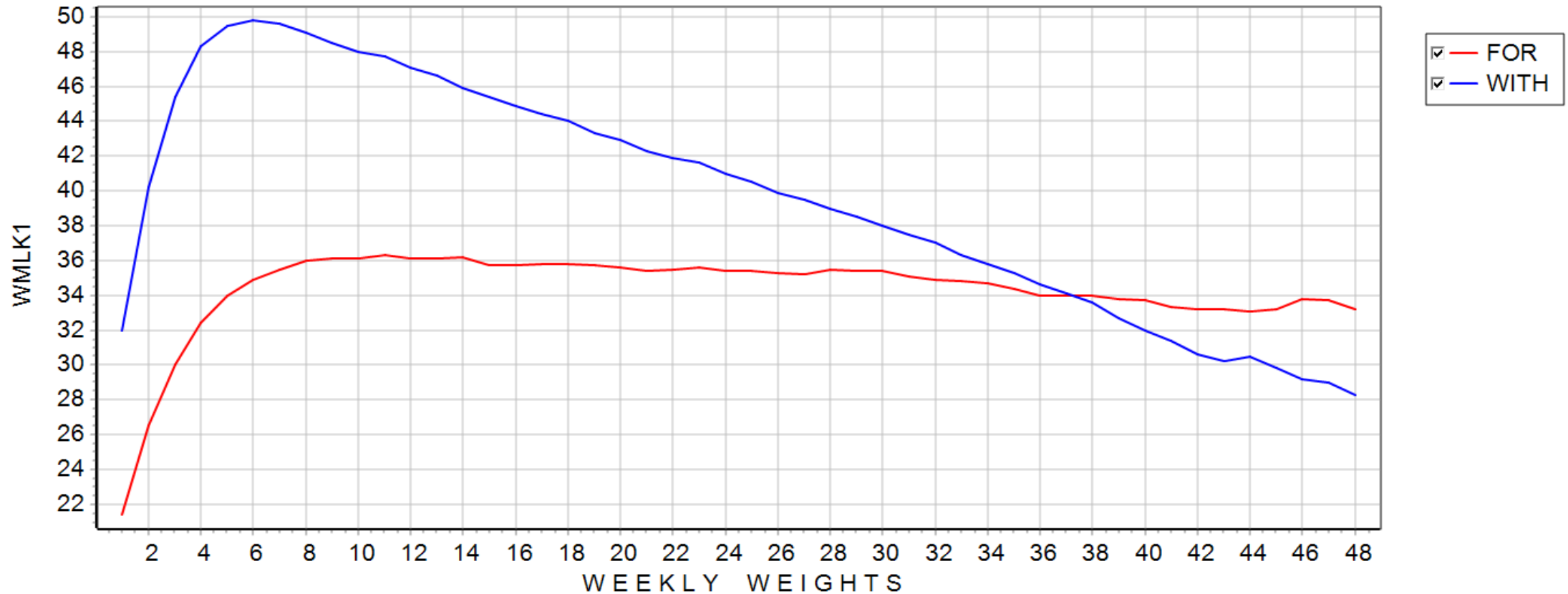
# THE POWER OF REPRODUCTION

- More milk
- More calves
- Less calving issues
- Labor
- Feeding costs
- Genetic progress



# LACTATION CURVES

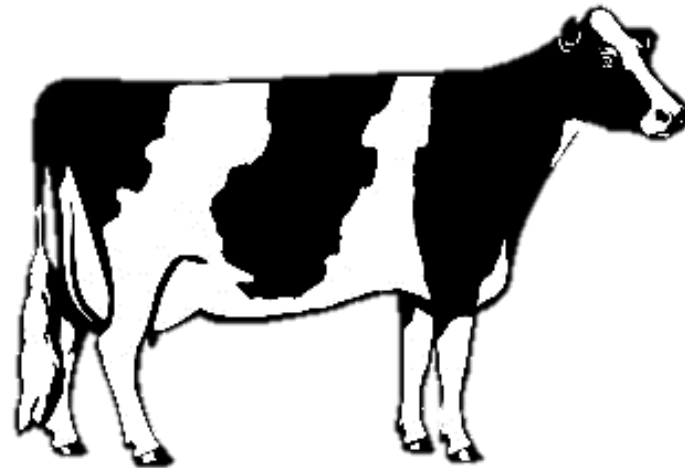
24/11/23 Farma Mikulas



Pečujeme o vaše stádo



# THE POWER OF TECHNOLOGIES



**Pečujeme o vaše stádo**

Heat detection !

Health and management

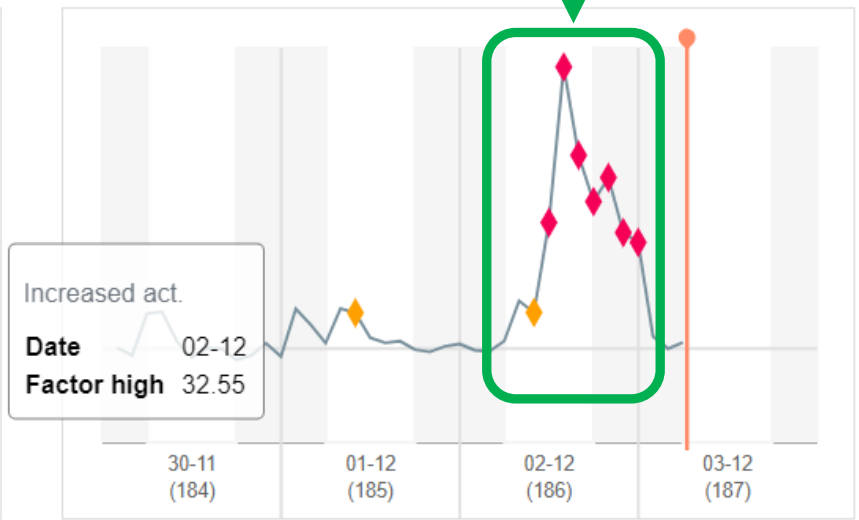
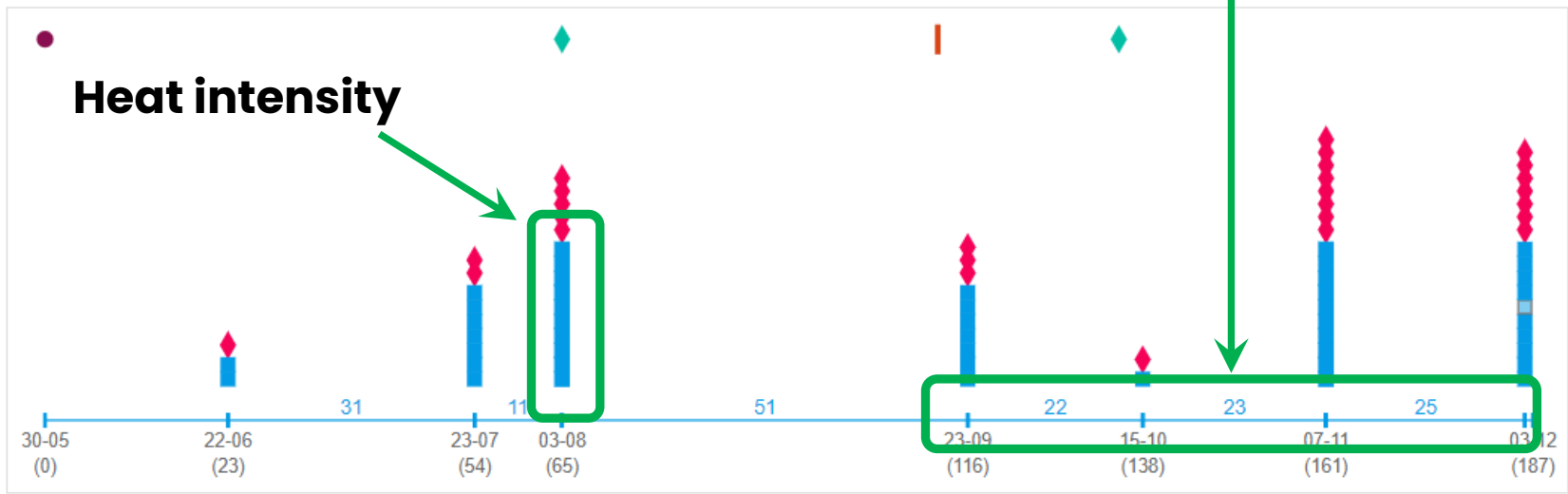
### Interval

### Duration

Lactation ▼

i Legend

### Heat intensity

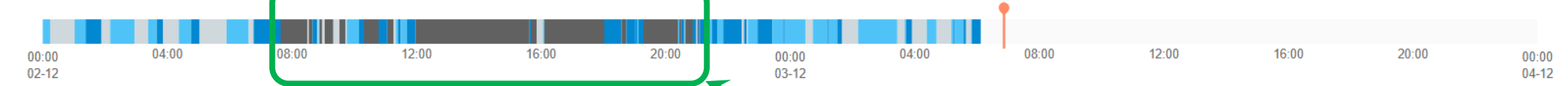


Heat detection !

Health and management

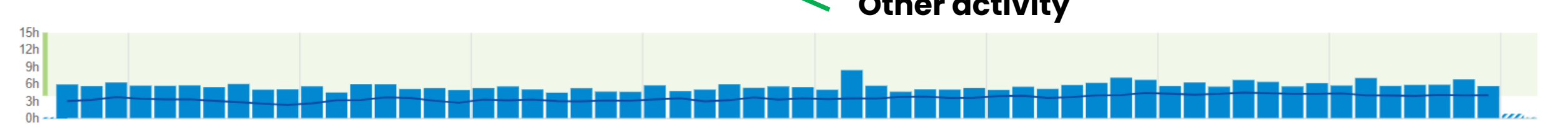
48 hours

i Legend ■ Eating ■ Rumination ■ Inactive ■ Other active



Day totals

i Legend ■ Eating



### Other activity

# THE POWER OF REPRODUCTION



[Need help with Alta COW WATCH — On-premise?](#)

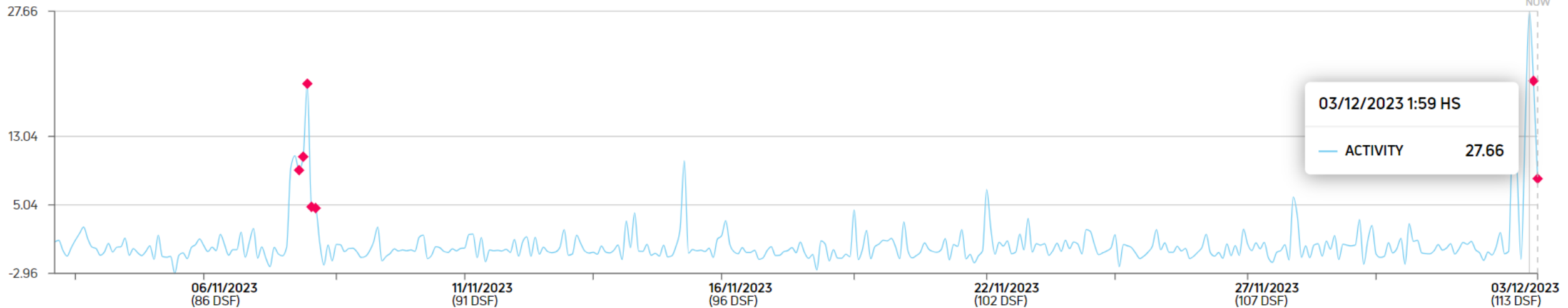
Heat Detection

[Go to dashboard widget](#)

REFERENCES    ..... EVENT    ■ INCREASED ACTIVITY

LAST 24 HS    LAST 7 DAYS    **LAST 30 DAYS**

CHANGE IN ACTIVITY



**Pečujeme o vaše stádo**

# REPRODUCTION OF COWS

- Set up lower and upper limits for DIM
- You still need hormon protocols
- KPI



# REPRODUCTION – KPI

- Interval 18-24 days
- Insemination rate
- Pregnancy Rate
- Conception by insemination number
- Conception by DIM
- Conception by sire



# REPRODUCTION KPI – INTERVAL ANALYSIS

| Heat Interval | 95% CI | %Conc | #Preg | #Open | Other | Abort | Total | %Tot | SPC |
|---------------|--------|-------|-------|-------|-------|-------|-------|------|-----|
| 1 - 3 days    | -      | 50    | 3     | 3     | 0     | 0     | 6     | 1    | 2,0 |
| 4 - 17 days   | 40-61  | 51    | 43    | 42    | 4     | 1     | 89    | 7    | 2,0 |
| 18 - 24 days  | 58-64  | 61    | 576   | 369   | 2     | 10    | 947   | 79   | 1,6 |
| 25 - 35 days  | 36-59  | 47    | 32    | 36    | 1     | 2     | 69    | 6    | 2,1 |
| 36 - 48 days  | 38-62  | 50    | 29    | 29    | 0     | 0     | 58    | 5    | 2,0 |
| Over 48 days  | 37-73  | 56    | 14    | 11    | 0     | 1     | 25    | 2    | 1,8 |
| TOTALS        | 56-61  | 59    | 697   | 490   | 7     | 14    | 1194  | 100  | 1,7 |

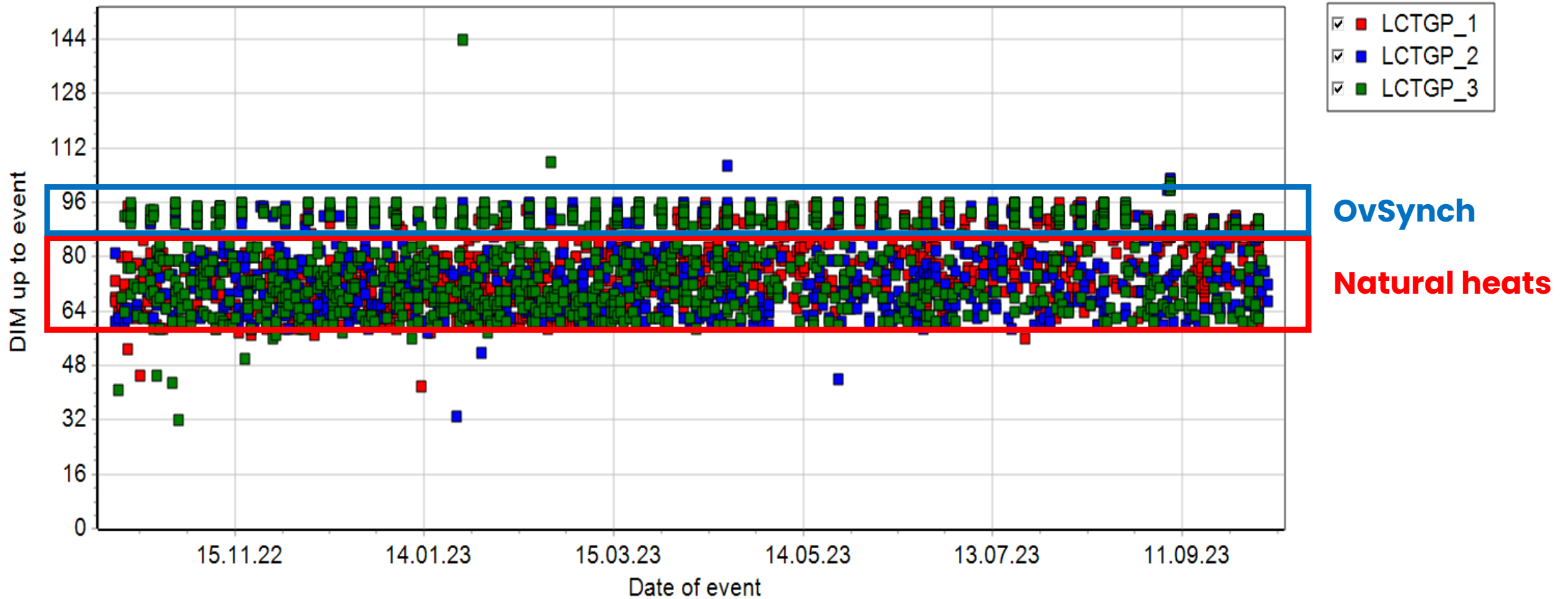


**Pečujeme o vaše stádo**



# THE POWER OF REPRODUCTION – 1<sup>ST</sup> INSEMINATIONS

08/10/23 Plavecky Stvrtok  
EGRAPH BRED FOR LACT>0\SN1T150 BY LGRP



# HOW FAST GET THEM PREGNANT

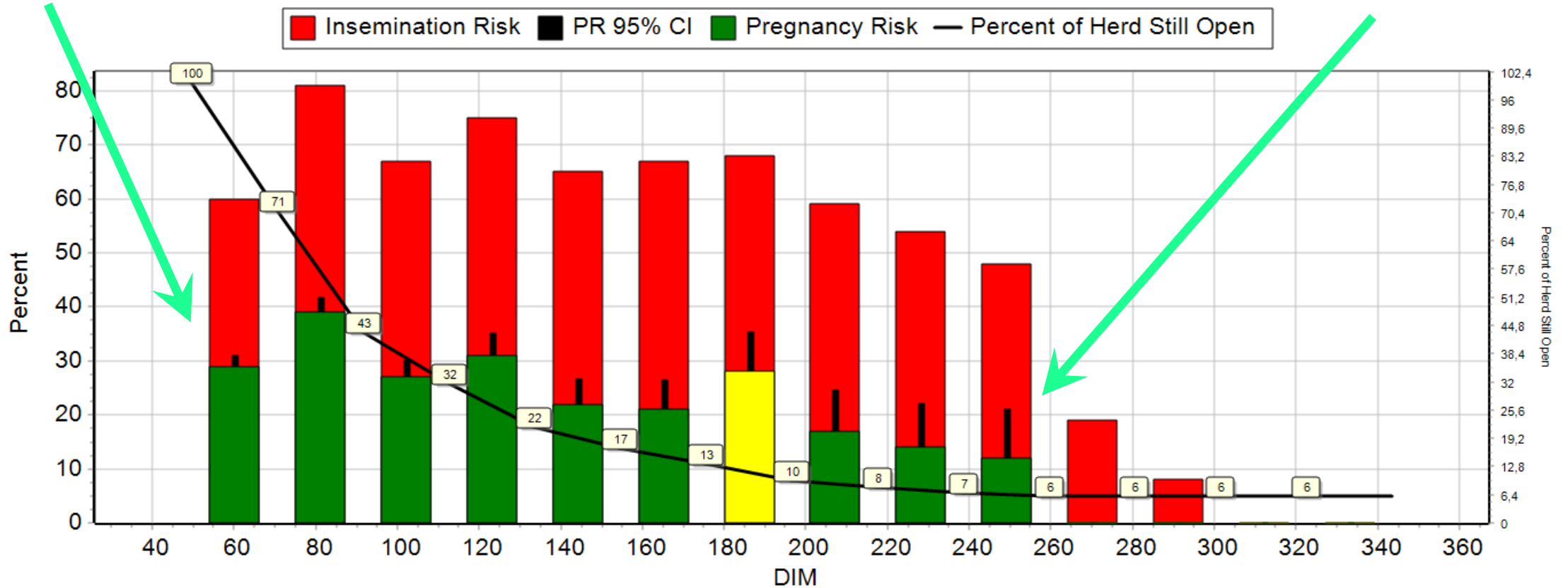
1973 elegible / 572 preg

69 elegible / 10 preg

27 - 31 % Preg Risk

8 - 25 % Preg Risk

30/10/23 Plavecky Stvrtok



Pečujeme o vaše stádo

# REPRODUCTION EVALUATION

| Breeding Code  | 95% CI | %Conc | #Preg | #Open | Other | Abort | Total | %Tot  | SPC   |
|----------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| =====          | =====  | ===== | ===== | ===== | ===== | ===== | ===== | ===== | ===== |
| CIDR synch     | 21-53  | 35    | 11    | 20    | 8     | 0     | 39    | 1     | 2,8   |
| NEDAP          | 44-47  | 46    | 1376  | 1641  | * 337 | 56    | 3354  | 76    | 2,2   |
| PGF            | 22-50  | 35    | 14    | 26    | 9     | 1     | 49    | 1     | 2,9   |
| Stand tech+hun | -      | 20    | 1     | 4     | 0     | 0     | 5     | 0     | 5,0   |
| Ovsynch        | 38-45  | 41    | 339   | 482   | * 147 | 19    | 968   | 22    | 2,4   |
| TOTALS         | 43-46  | 44    | 1741  | 2173  | * 501 | 76    | 4415  | 100   | 2,2   |



# REPRODUCTION OF HEIFERS

- 55% of mature weight, 130 cm height
- Daily gains and health events
- Performance on 1<sup>st</sup> lactation
- Genetics



# INFLUENCE OF ADG ON MILK PRODUCTION

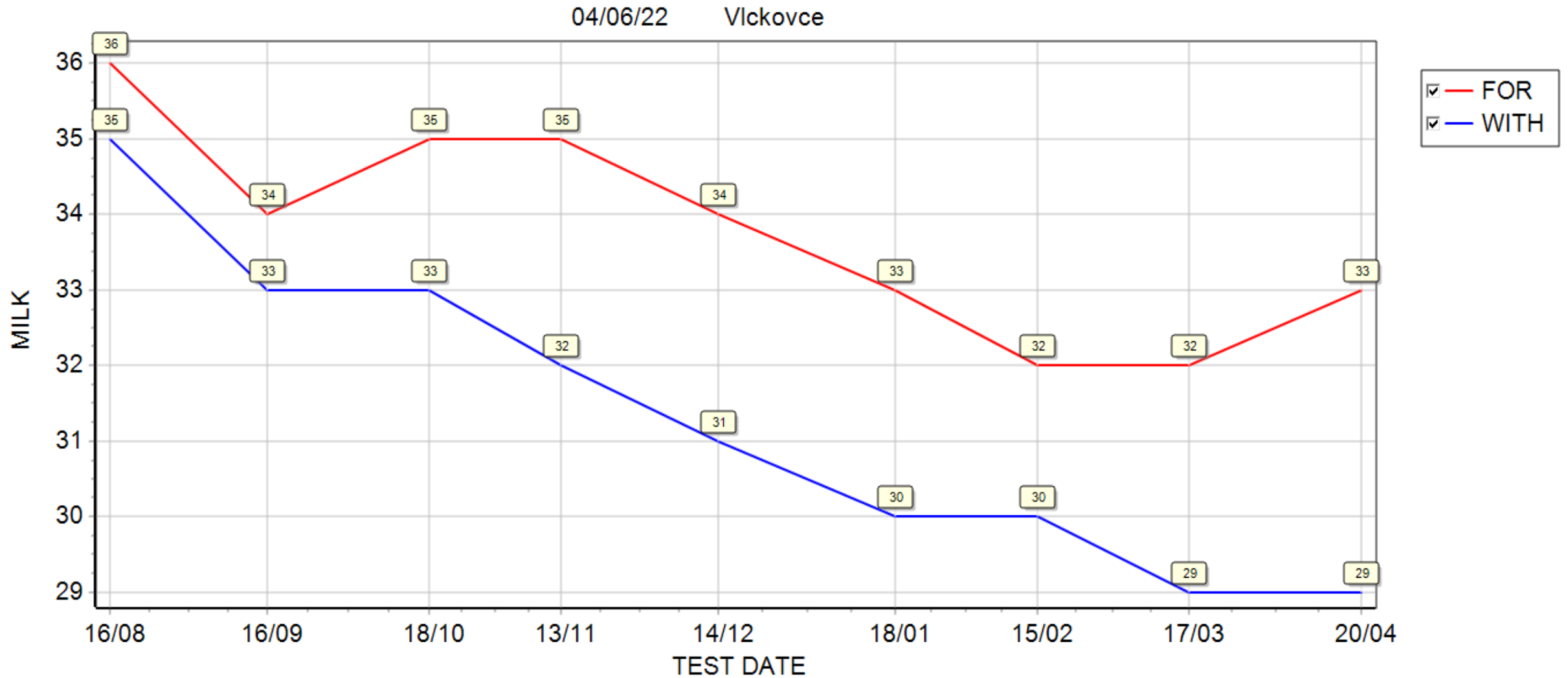
| ADG          | %          | #          | DIM        | MILK      | PEAKM     | 305ME        | GMILK      |
|--------------|------------|------------|------------|-----------|-----------|--------------|------------|
| 1,03         | 27         | 224        | 199        | 31        | 37        | 12670        | 317        |
| 0,96         | 26         | 216        | 210        | 31        | 37        | 12791        | 329        |
| 0,91         | 26         | 221        | 223        | 31        | 37        | 12449        | 351        |
| 0,84         | 21         | 178        | 248        | 29        | 37        | 12239        | 247        |
| <b>TOTAL</b> | <b>100</b> | <b>839</b> | <b>219</b> | <b>31</b> | <b>37</b> | <b>12549</b> | <b>693</b> |



Source: DairyComp, 10/2023, 3.000 cows dairy

**Pečujeme o vaše stádo**

# INFLUENCE OF HEALTH EVENTS ON MILK PRODUCTION



Source: DairyComp, 06/2022, 3.300 cows dairy

**Pečujeme o vaše stádo**



# CULLING RATE BY CALVING AGE

| CALVING AGE | # of calvings | sold | % sold | died | % died | DNB | DNB % |
|-------------|---------------|------|--------|------|--------|-----|-------|
| <21         | 11            | 2    | 18     |      |        | 4   | 36    |
| 21          | 335           | 40   | 12     | 12   | 3,6    | 11  | 3,3   |
| 22          | 357           | 34   | 9,5    | 5    | 1,4    | 12  | 3,4   |
| 23          | 129           | 29   | 22,5   | 6    | 4,7    | 9   | 7     |
| >23         | 77            | 15   | 19,5   | 2    | 2,6    | 4   | 5,2   |



Source: DairyComp, 10/2023, 3.000 cows dairy

**Pečujeme o vaše stádo**

# MILK PRODUCTION BY CALVING AGE

| By AGEFR     | Pct        | Count       | Av DIM     | AvAGEFR   | Av MILK   | AvPEAKM   | Av 305M     | Av305ME      |
|--------------|------------|-------------|------------|-----------|-----------|-----------|-------------|--------------|
| 0-0          | 0          | 3           | 376        | 0         | 23        | 30        | 7727        | 10490        |
| 1-7          | 0          | 1           | 180        | 19        | 26        | 31        | 7900        | 10910        |
| 1-8          | 1          | 12          | 248        | 20        | 31        | 38        | 9270        | 12661        |
| 1-9          | 38         | 403         | 232        | 21        | 32        | 38        | 9485        | 12854        |
| 1-10         | 38         | 402         | 187        | 22        | 30        | 36        | 9125        | 12250        |
| 1-11         | 14         | 148         | 198        | 23        | 31        | 36        | 9362        | 12363        |
| 2-0          | 6          | 64          | 227        | 24        | 31        | 37        | 9130        | 11874        |
| 2-1          | 2          | 19          | 269        | 25        | 31        | 38        | 9726        | 12409        |
| 2-2          | 1          | 14          | 212        | 26        | 31        | 36        | 9104        | 11563        |
| 2-3          | 0          | 2           | 254        | 27        | 29        | 40        | 10345       | 13070        |
| <b>Total</b> | <b>100</b> | <b>1068</b> | <b>211</b> | <b>22</b> | <b>31</b> | <b>37</b> | <b>9306</b> | <b>12470</b> |

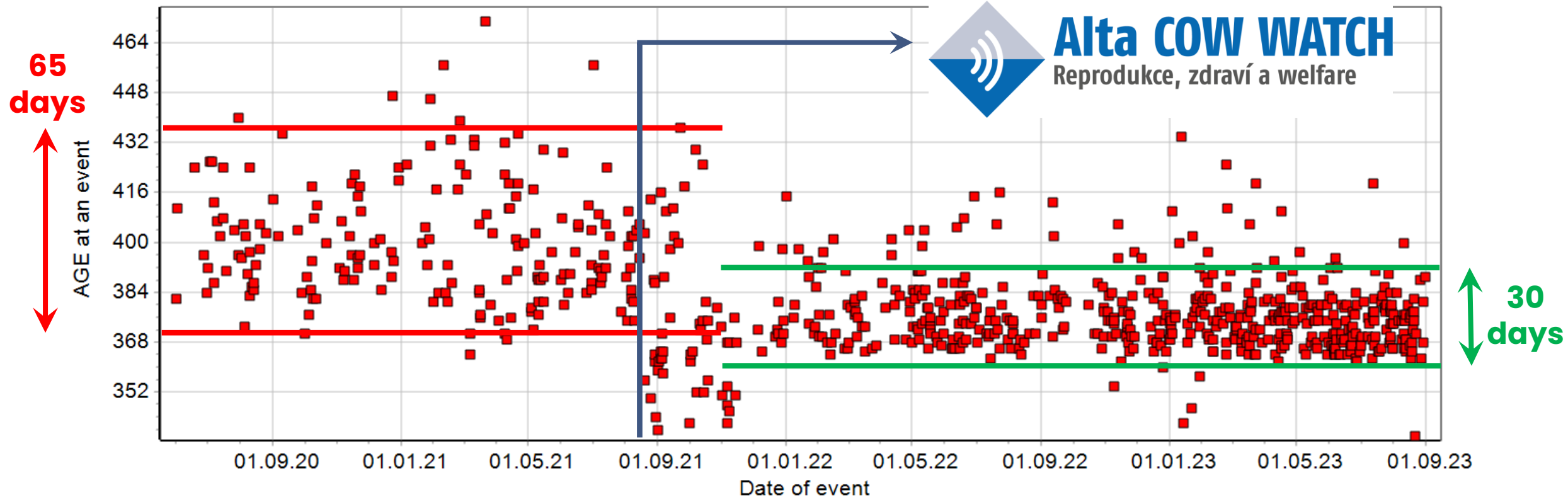


Source: DairyComp, 10/2023, 3.000 cows dairy

**Pečujeme o vaše stádo**

# GET THEM PREGNANT AS FAST AS POSSIBLE

07/12/23 ÚNĚŠOV - CHRANČOVICE  
EGRAPH BRED \YA\SN1



Source: DairyComp, 10/2023, 900 cows dairy

Pečujeme o vaše stádo

# GET THEM PREGNANT AS FAST AS POSSIBLE

| Date         | Br Elig    | Bred       | Pct       | Pg Elig    | Bred       | Pct       | Aborts   |                |
|--------------|------------|------------|-----------|------------|------------|-----------|----------|----------------|
| 1/02/23      | 50         | 36         | 72        | 46         | 25         | 54        | 0        |                |
| 22/02/23     | 38         | 26         | 68        | 38         | 16         | 42        | 1        |                |
| 15/03/23     | 37         | 26         | 70        | 37         | 14         | 38        | 1        |                |
| 5/04/23      | 48         | 38         | 79        | 48         | 23         | 48        | 2        |                |
| 26/04/23     | 40         | 29         | 72        | 40         | 19         | 48        | 1        |                |
| 17/05/23     | 38         | 28         | 74        | 36         | 14         | 39        | 0        |                |
| 7/06/23      | 47         | 41         | 87        | 46         | 24         | 52        | 0        |                |
| 28/06/23     | 49         | 38         | 78        | 47         | 28         | 60        | 0        |                |
| 19/07/23     | 39         | 26         | 67        | 0          | 0          | 0         | 0        | ???? Preg Stat |
| <b>Total</b> | <b>347</b> | <b>262</b> | <b>76</b> | <b>338</b> | <b>163</b> | <b>48</b> | <b>5</b> |                |

Voluntary waiting period 365 days



# Pregnancy Rate, heifers

| Date     | Br Elig | Bred  | Pct   | Pg Elig | Bred  | Pct   | Aborts |
|----------|---------|-------|-------|---------|-------|-------|--------|
| 1/09/22  | 34      | 10    | 29    | 34      | 2     | 6     | 0      |
| 22/09/22 | 39      | 21    | 54    | 39      | 11    | 28    | 1      |
| 13/10/22 | 31      | 19    | 61    | 28 *    | 11    | 39    | 0      |
| 3/11/22  | 24      | 15    | 62    | 18 *    | 6     | 33    | 0      |
| 24/11/22 | 20      | 10    | 50    | 18      | 3     | 17    | 0      |
| 15/12/22 | 25      | 15    | 60    | 25      | 6     | 24    | 0      |
| 5/01/23  | 25      | 18    | 72    | 24      | 10    | 42    | 0      |
| 26/01/23 | 20      | 16    | 80    | 20      | 10    | 50    | 0      |
| 16/02/23 | 16      | 11    | 69    | 16      | 7     | 44    | 1      |
| 9/03/23  | 12      | 8     | 67    | 12      | 4     | 33    | 0      |
| 30/03/23 | 15      | 10    | 67    | 14      | 7     | 50    | 0      |
| 20/04/23 | 17      | 15    | 88    | 17      | 9     | 53    | 0      |
| 11/05/23 | 11      | 8     | 73    | 11      | 2     | 18    | 0      |
| 1/06/23  | 23      | 17    | 74    | 23      | 12    | 52    | 0      |
| 22/06/23 | 18      | 14    | 78    | 5       | 0     | 0     | 0      |
| 13/07/23 | 14      | 8     | 57    | 0       | 0     | 0     | 0      |
| -----    | -----   | ----- | ----- | -----   | ----- | ----- | -----  |
| Total    | 330     | 207   | 63    | 304     | 100   | 33    | 2      |

Insemination Rate 51%  
Pregnancy Rate 24%

Insemination Rate 69%  
Pregnancy Rate 42%

**21.600 € savings**

???? Preg Stat



Voluntary waiting period 365 days

**Pečujeme o vaše stádo**

# CONCLUSION

- Reliable people are the key
- Accurate data is more than feelings
- Reproduction pays back very fast
- Alta Cow Watch and DairyComp are powerful tools





# Děkujeme za spolupráci!



[www.forestris.cz](http://www.forestris.cz)