



Agricultural Institute of Slovenia

Web advisory tools to support dairy production in Slovenian herds

Betka LOGAR, Janez JERETINA

ICAR 2015, Krakov, Poland, 10 June 2015

Cattle in Slovenia



455,000 cattle
162,000 cows



102,000 dairy cows



81,000 dairy cows in
recording scheme (81%)
21 cows/herd



60,000 suckling cows



800 cows in beef
recording



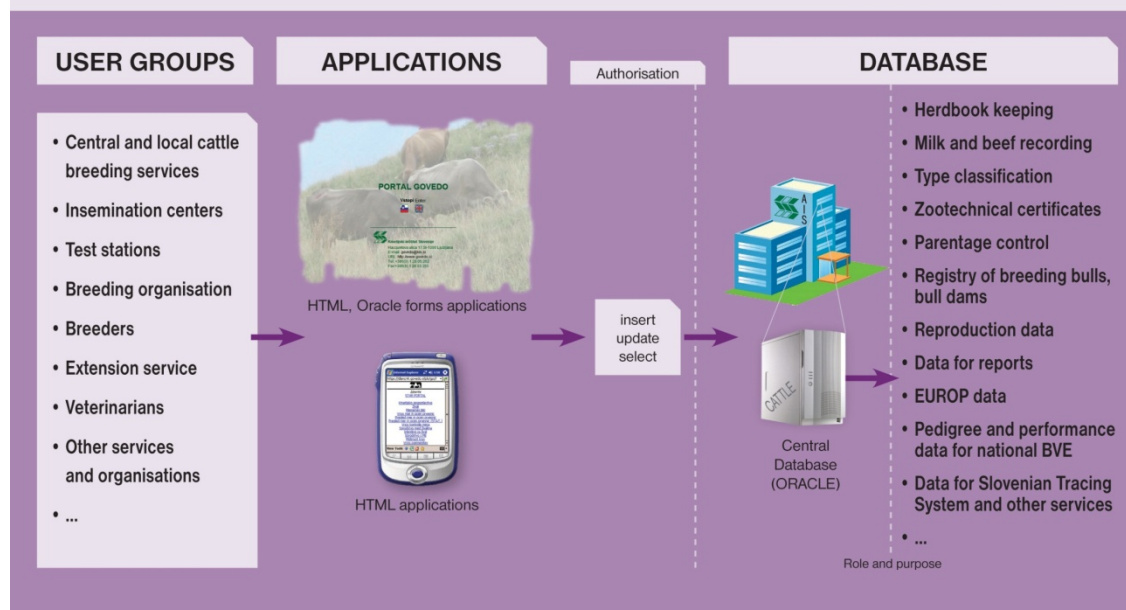
Cattle Information System



Agricultural Institute of Slovenia

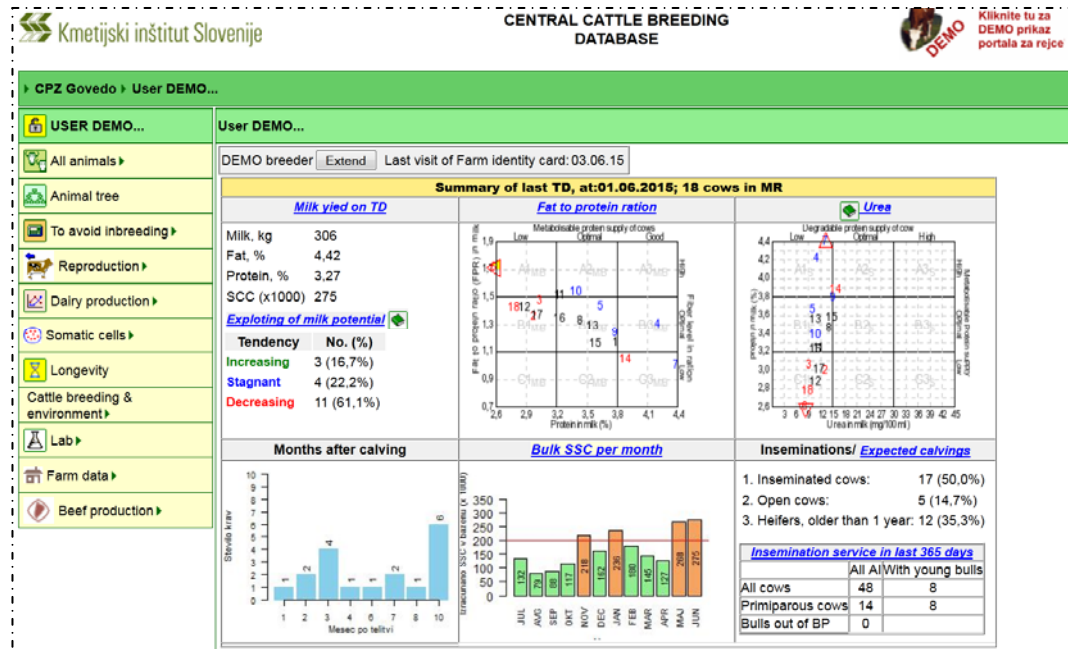
CATTLE INFORMATION SYSTEM

www.cattle.si



Aim

- to introduce advisory tools and services on Web Portal Cattle (WPC) for supporting management decisions in Slovenian dairy herds
- access for all herds in recording



Recording Data Management

- SMS and/or an e-mail after processing of the recording data

```

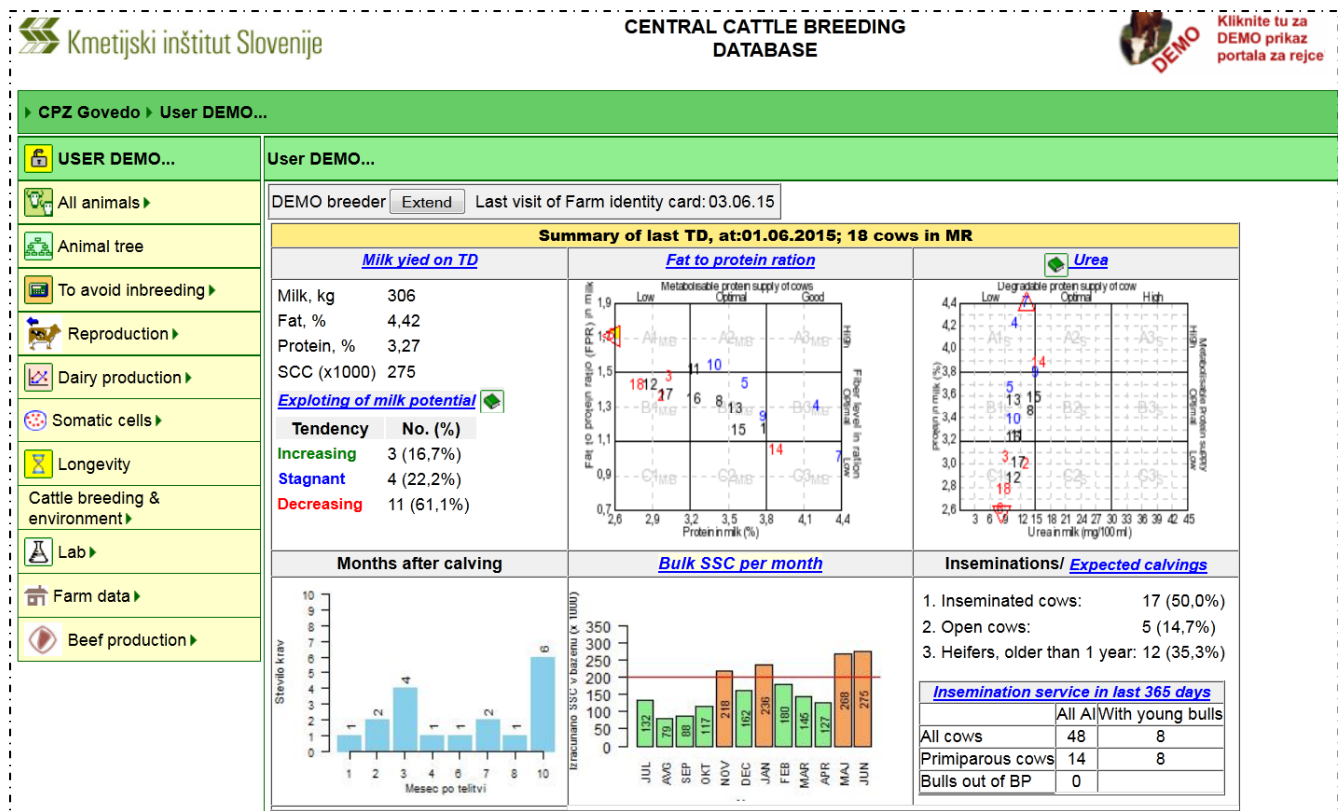
|| : = : = : = : = : = : = : = : = : = : = : = : = : = : = : = : = ||
|| The recording results for 28.05.2015 are available. ||
|| 2561, JANEZ NOVAK, GALICIJA 52, 3310 ŽALEC ||
|| || ||
|| Average sampel (calc.): ||
|| fatt: 3,85 %; || Bulk sample: ||
|| protein: 3,50 %; || fatt: 3,87 %; ||
|| SCC: 75.000 SC/ml || protein : 3,46 %; ||
|| || SCC: 66.000 SC/ml ||
|| || Urea: 21. ||
|| Critical cows (in 1000 SCC): ||
|| SI62327752 KLARISA: 491; ||
|| = : = : = : = : = : = : = : = : = : = : = : = : = : = : = : = ||

```

- more data on www.cattle.si (WPC)

Farm Identity Card

www.cattle.si



Somatic cells




- index of somatic cell count (ISC), 1 - 5
 - SCC, lactation, lactation stage, quantity of milk
- contribution of the SCC

contribution of the SCC
to the bulk tank
in SCC and %

| | | | | Milk | SCC▼ | BSCC | ISC▼ | PSC▼ | Months after | Days after |
|------|-------------|-------|--------|------|-------------|------|------|------|--------------|------------|
| No.▼ | Cow ID▼ | Name▼ | Lact.▼ | kg▼ | (x 1000)/ml | | | % | calving | insem. |
| 1 | SI 63632107 | ANTA | 4 | 29 | 1642 | 275 | 5 | 56,5 | 3 | |
| 3 | SI 63267424 | JASNA | 6 | 14,5 | 927 | 132 | 4 | 16 | 8 | 82 |
| 7 | SI 63825332 | HANA | 3 | 20,6 | 281 | 88 | 3 | 6,9 | 1 | |
| 4 | SI 13541990 | CULA | 5 | 30,5 | 124 | 72 | 2 | 4,5 | 2 | |
| 2 | SI 14034260 | ANUK | 1 | 19,4 | 150 | 64 | 3 | 3,5 | 10 | 66 |
| 11 | SI 94034255 | CENKA | 1 | 14,3 | 178 | 56 | 2 | 3 | 13 | 214 |

Somatic cells (2)

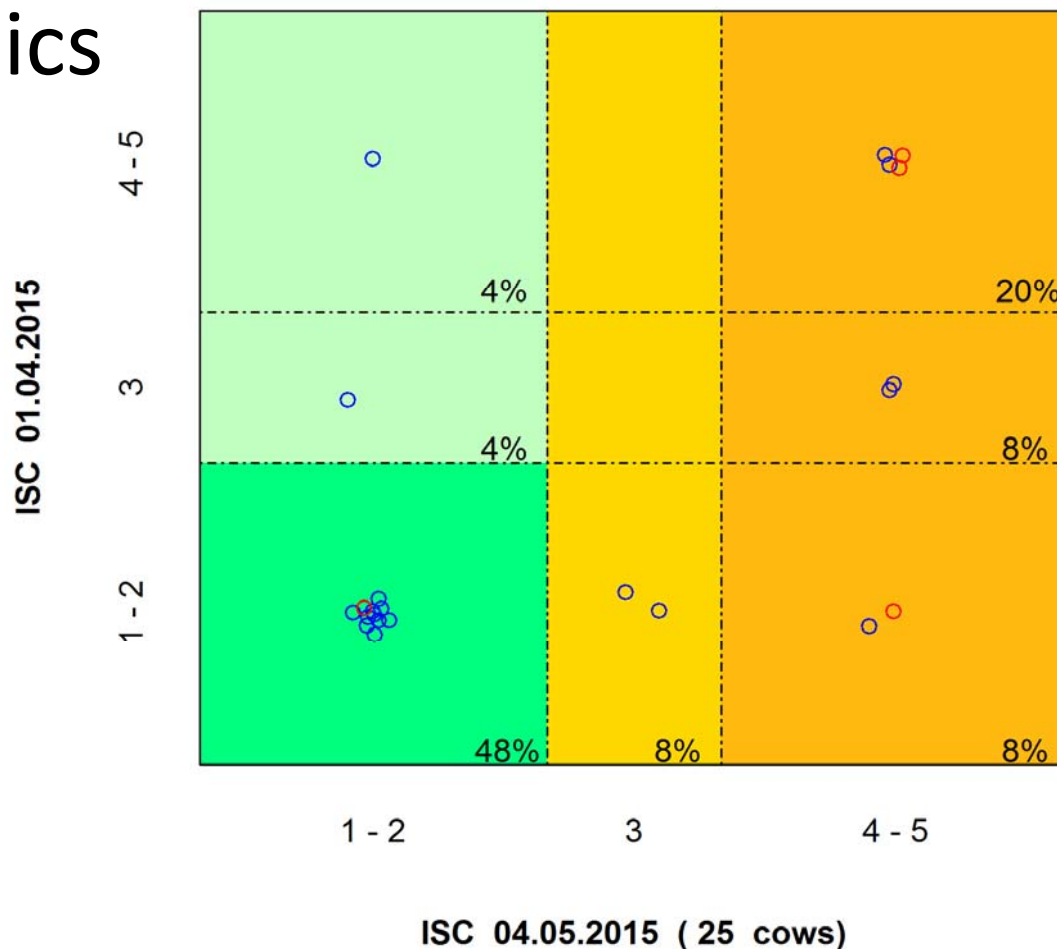
- ISC for the period of the last 12 TD

| No. | Cow ID | Date | | LMD | L_P* | SCI in last 12 months (month.year) | | | | | | | | | | | | Curent TD | | | Inseminations | | |
|--|-------------|----------|---|-----|------------|------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|------|-------|---------------|------|-----|
| | | Dry-off | | | | 06.14 | 07.14 | 08.14 | 09.14 | 10.14 | 11.14 | 12.14 | 01.15 | 02.15 | 03.15 | 04.15 | 05.15 | SCC | Milk | BSCC% | last | days | all |
| 1.  | SI 63632107 | 01.02.15 | 4 | 78 | 1 - 2x M1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | | | 3 | 5 | 1461 | 30,5 | 41,9 | 14.05.15 | 20 | |
| 2. | SI 14034260 | | 1 | 292 | | | | | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 70 | 20,7 | 1,4 | 27.03.15 | 68 | 9 |
| 3.  | SI 63267424 | 31.08.14 | 6 | 238 | 1 - 7x M12 | 3 | 2 | 2 | | | 5 | 4 | 4 | 5 | 5 | 5 | 5 | 717 | 20,1 | 13,5 | 11.03.15 | 84 | 3 |
| 4.  | SI 13541990 | 27.02.15 | 5 | 46 | 3 - 5x M12 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 1 | 3 | | | 3 | 193 | 30,1 | 5,5 | | | |
| 5. | SI 23632118 | 30.05.14 | 3 | 342 | 1 - 5x M2 | | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 104 | 16,5 | 1,6 | 11.11.14 | 204 | 2 |
| 6. | SI 53632115 | 01.07.13 | 2 | 661 | 2 - 5x M2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 5 | 2 | 1 | 1 | 1 | 185 | 10,5 | 1,8 | 07.10.14 | 239 | 8 |
| 7. | SI 63825332 | 29.03.15 | 3 | 31 | 1 - 3x M2 | 2 | 3 | 2 | 3 | 4 | 2 | 4 | 3 | 3 | 3 | | | 876 | 28,1 | 23,1 | | | |

1st > 200,000 SCC ~ lactation-f, lact. stage


Somatic cells (3)

- ISC dynamics



Reproduction

- Reproduction Calendar
 - monitoring and planning of the main reproduction events
 - for desired time period
 - future activities and plans calculated on previously entered events from various data sources
 - simplified entering of data

| Period of (7 (days):25.05.15 - 01.06.2015 | | | | | Heat monitoring and pregnancy check plans | | | | | |
|---|--|-------|--------------|--------------------|---|---------------|---------------|-----------------|--------|------------|
| No. | Animal ID  | Name | Calving date | Days after calving | No. of services | Last insemin. | Insemin. date | Pregnancy check | Remark | Heat check |
| 1 | SI62958484 | STELA | 17.05.15 | 8 | 0 | | 27.05 - 01.06 | | | |
| 2 | SI03199044 | GINA | 07.09.14 | 260 | 3 | 02.03.15 | 25.05 - 28.05 | 25.05 | | |
| 3 | SI53199049 | RIŽA | 13.09.14 | 254 | 2 | 03.03.15 | 25.05 - 29.05 | 25.05 - 26.05 | | |
| 4 | SI53390051 | SAVA | 03.10.14 | 234 | 1 | 08.12.14 | 25.05 - 28.05 | | | |
| 5 | SI93390057 | SONJA | 09.11.14 | 197 | 0 | | 27.05 - 01.06 | | | |
| 22 | SI54043336 | CIKA | 25.04.15 | 30 | 0 | | 26.05 - 01.06 | | | |
| 23 | SI54230101 | | | | 1 | 18.04.15 | 27.05 - 01.06 | | | |
| 24 | SI44230102 | | | | 1 | 17.04.15 | 26.05 - 01.06 | | | |

Feed Ration Planning

- define the feed basis, production price
- choose groups of cows (by lact. stages)
- average data for selected group

KOKRA Fodder meal

Meals

| # | Category | Title | Description | Date |
|---|-------------------------------|-------------|-------------|------------------|
| 1 | Cows 1-3 months after calving | FIRST GROUP | | 14.05.2015 12:32 |

List of animals

| State | Number | Name | Birth | Breed | consecutive lactation | Days | Milk yield | Fat | Protein |
|-----------------|----------|------|------------|-------|-----------------------|------|------------|------|---------|
| SI | 13541990 | CULA | 25.07.2008 | LS | 5 | 27 | 30,1 | 4,10 | 3,32 |
| SI | 54034266 | CARA | 06.09.2012 | LS | 1 | 60 | 18,1 | 4,38 | 3,62 |
| SI | 63632107 | ANTA | 11.11.2008 | Č8 | 4 | 59 | 30,5 | 3,96 | 2,91 |
| Group average : | | | | 4 | 1 | 49 | 25,2 | 3,93 | 3,37 |

Information about the animals and feeding

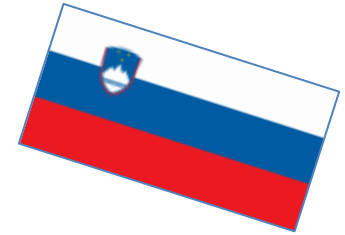
| Parameter | Value | Units |
|--|---------|----------------|
| First year milk yield | 6490 | kg/(305) days |
| Planned milk yield | 7000 | kg/ (305) days |
| Daily milk yield | 31,0 | kg/day |
| Fat content of milk | 3,9 | % |
| Protein balance in milk | 3,4 | % |
| Days after calving | 49 | days |
| Body weight | 650 | Kg |
| The number of animals in a group or herd | 7 | - |
| Feeding | 180 | days |
| Frequency of feedstuff feeding | 2 times | per day |

Feed Ration Planning (2)

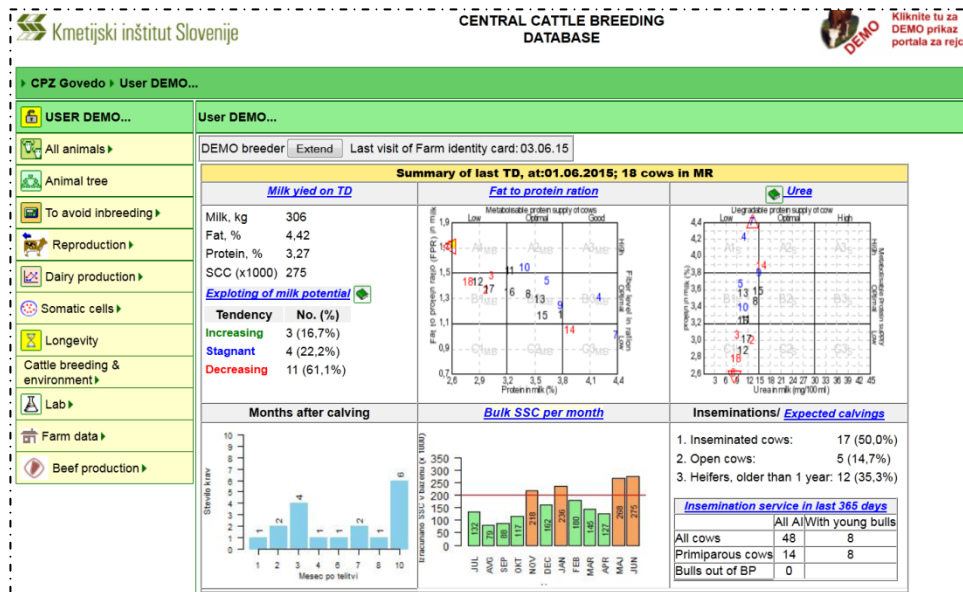
- feedstuffs and forage with daily needs per animal
 - needs
 - costs
- nutritional value of feed ration
- chart - distance to optimal value
- prof. advices
- feed rations can be saved

| | | Per animal | | | | Per Group (n=7) | | In periode (180 days) | |
|---------------------------------------|---|-------------|---------------|-----------|------------|-----------------|------|-----------------------|------------|
| | Fodder | Quantity | Unit | Quantity | Unit | Quantity | Unit | Quantity | Unit |
| <input type="checkbox"/> | First cut grass silage: 2. good quality | 11,0 | kg | 77,0 | kg | 13,9 | t | 1040 | EUR |
| <input type="checkbox"/> | Local/domestic Hay,first cut: 1. excelent quality | 2,0 | kg | 14,0 | kg | 2,5 | t | 504 | EUR |
| <input type="checkbox"/> | Corn silage: 2. good quality | 11,0 | kg | 77,0 | kg | 13,9 | t | 638 | EUR |
| <input type="checkbox"/> | Cereal grains, maize/corn for grain/Silage | 4,5 | kg | 31,5 | kg | 5,7 | t | 1644 | EUR |
| <input type="checkbox"/> | Foder premix: Jata-Emona K-MIX | 2,0 | kg | 14,0 | kg | 2,5 | t | ▲ | |
| | Sum value | 3,04 | EUR | 21 | EUR | | | 3825 | EUR |
| + CALCULATE | | | | | | | | | |
| Parameter | Units | In meal | Desired value | Alerts | Graph | | | | |
| Consumed dry matter (DM) | kg DM/day | 16,5 | 17,7 | ↑ | | | | | |
| Net energy needed for lactation (NEL) | MJ/kg DM | 6,85 | 8,24 | ↑ | | | | | |
| Transfer proteins (TP) | g/kg DM | 99 | 110,6 | ↑ | | | | | |
| Transfer proteins balance in meal | g/kg DM | -6,9 | 0 | ↑ | | | | | |
| Dry matter % | % | 17,5 | 18,0 | ↑ | | | | | |
| Structurale value of meal | SV/kg DM | 1,78 | 1,08 | ✓ | | | | | |
| Starch | g/kg DM | 286 | 265 | ✓ | | | | | |
| Carbohydrates | g/kg DM | 23 | 60 | ↑ | | | | | |
| Calcium (Ca) | g/kg DM | 4,5 | 6,8 | ↑ | | | | | |
| Phosphorous (P) | g/kg DM | 3,4 | 4,2 | ↑ | | | | | |
| Magnesium (Mg) | g/kg DM | 2,3 | 1,8 | ✓ | | | | | |
| Natrium (Na) | g/kg DM | 0,86 | 1,7 | ↑ | | | | | |

Conclusion



- WPC - advisory tool to support dairy management



Thank You for your attention!

