

KOMPAS FARM

Herd and milking management system



Towards professional milk production

KOMPAS FARM

Herd and milking management system

KOMPAS FARM currently is one of the most complex tool to manage and automation of dairy farms. The system consists of the INFODEX management program and system of sensors and devices. It is a modern and the most profitable product available for all milk producers.

Advanced system creates data exchange network with RS or CAN communication between all necessary parameters for breeding and milking. This data is indispensable to make herd management better every day. It shows the way to enhance profits.



Milk sensors
Heat sensors
Feed stations
Milk controllers
RFID readers
CIP sensors

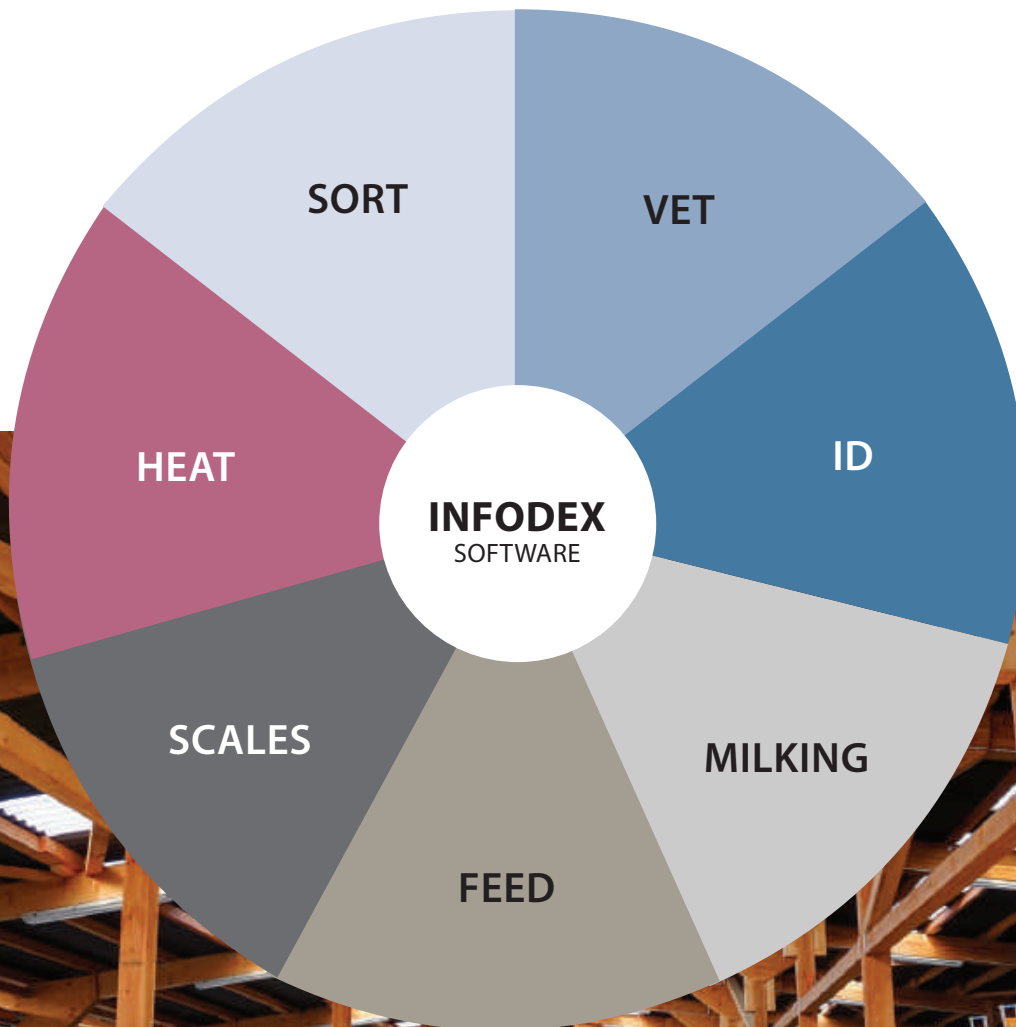
INFODEX:
Production
Reproductiveness
Grouping
Feed dosing
Health

Alerts
Reports
Performance indicators
Treatment plan
Feeding costs
Profit

KOMPAS FARM

Modular structure of system

Complete herd management system consists of functional modules, integrated with the Infodex program, which can be configured and completed depending on expected results.



MILKING

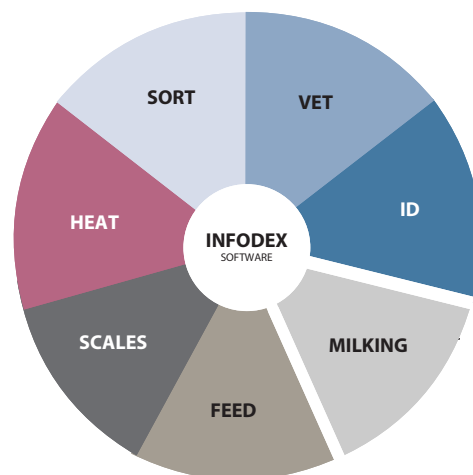
Automation and analysis



User-friendly controller along with chosen measurement module offers series of support functions and helpful alerts for an operator. It provides full control over milking process on each milking stand in the milking parlour.

During milking, Kompas 500 controller shows quantity of milk yield, a cow identification number, information about milking process and alerts generated in the INFODEX program. The device also shows a flow curve on the chart and other data about milk depending on applied measurement module.

The operator can send important data directly from the milking stand to the Infodex program using keyboard of the controller.



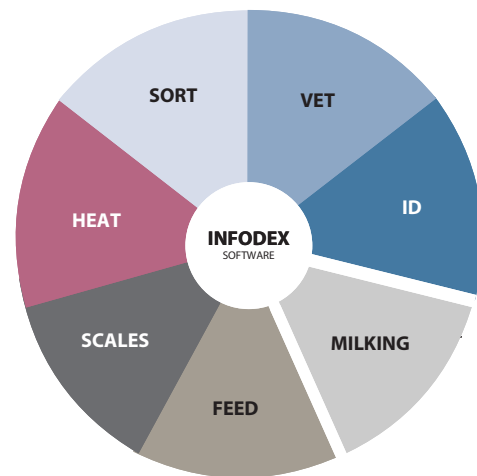
Kompas 500
Multifunctional controller



Built-in multiboards and panel milking units with ACR system.

MILKING

KOMPAS 500- control of milking



■ Pulsation and stimulation

Pulsation stops when a cluster is removed, extending the life of milking equipment, pulsators and liners. Stimulation supports pre-milking phase.

It is especially useful for cows with so-called hard udders.

■ Milking

Built to cope with a high milk-flow rate; offers necessary protection against damaging vacuum fluctuations.

■ Cluster removal

Provides accurate, adjusted to gradual automatic stoppage of milking when milk flow decreases; planned vacuum closure guarantees smooth release of a cluster from an udder.

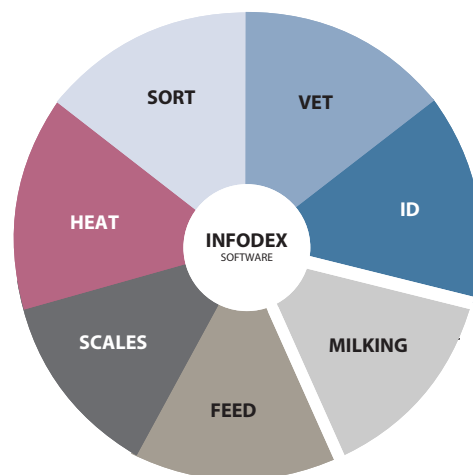


MILKING

KOMPAS 500- milking analysis



KOMPAS 500 controller was designed to measure cow performance applying 3 methods: conductivity, scales and optical. Each of these methods provides both basic information about performance and additional parameters, saved in the Infodex program, which display animal health.



■ Controller

The controller is equipped with ethernet ports standardly. Using the INFODEX program, data from each milking are being buffered in the cloud.

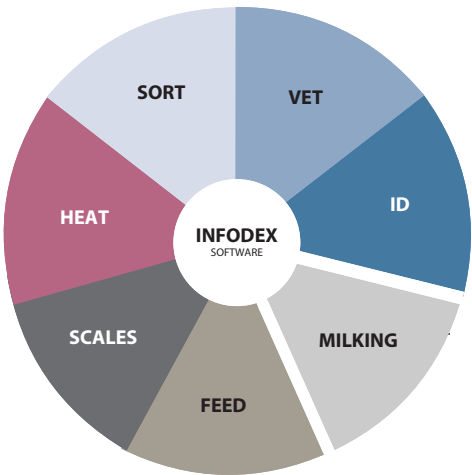
You can be sure that even in case of damage of computer, data from all the milkings are safe.

Independently on applied measurement method, the milking unit can be equipped with a sampling set for milking.



MILKING

Kompas 500 functions
According to applied measurement module



GM



AF*



IR



DAIRY



PULSAMETER 2

Milk yield measurement
conductivity measurement method

- Control of individual pulsation
- Low milk flow alert**
- Charge-And-Hold technology
- Automatic udder stimulation**
- Automatic cluster removal
- Measurement of washing water temperature**

* POLANES is not a supplier of AF measurement chamber.

Milk yield measurement
optical measurement method

- Control of individual pulsation
- Low milk flow alert**
- Charge-And-Hold technology
- Automatic udder stimulation**
- Automatic cluster removal
- DAIRY+**
- Measurement of washing water temperature**
- Mastitis detection
- Colostrum detection
- Blood detection
- Fat content measurement
- Protein content measurement
- Lactose content measurement

Milk yield measurement
scales measurement method

- Control of individual pulsation
- Low milk flow alert**
- Charge-And-Hold technology
- Automatic udder stimulation**
- Automatic cluster removal
- Measurement of washing water temperature**
- ICAR certificate**

i The controller with Pulsametr2 measurement module has ICAR accuracy which is approved for use in Animal Identification Recording System. The set has an option of adding Dairy Sensor, which is a basic element of VET module (one controller operates with two measurement devices).

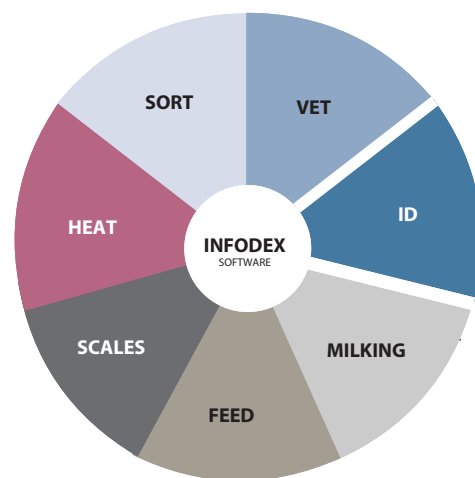
ID

Efficient electronic identification



Each reliable herd management system must check a cow, goat or sheep identity precisely.

ID module receives a clear signal about the animal identity by proven technical solutions developed by POLANES company according to ISO 11784/85.



Advantages of system



- universal solutions for every type of a milking parlour
- RF ID collar can be easily transferred from one cow to another
- passive RF ID collar without a power supply
- work parameters according to ISO standards approved by ICAR
- secured against mechanical damage



RF ID collar type HDX 134,2kHz for an omnidirectional antenna



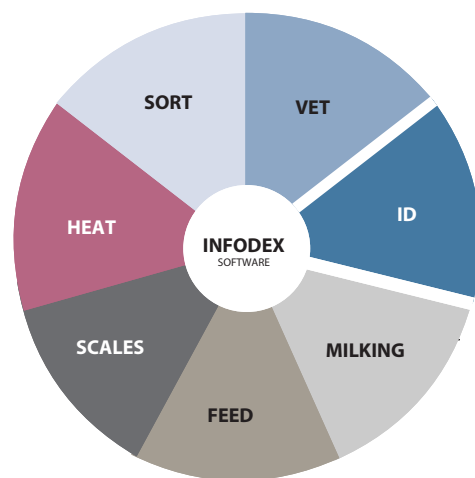
RF ID collar type HDX 134,2kHz for a frame antenna

ID



POLANES company developed two systems of electronic identification of animals which are flexible enough to meet expectations of all breeders of cows, sheep and goats.

- with an omnidirectional antenna and classic RFID responders (132,4kHz HDX) on the cow's neck
- with a frame antenna for classic cow neck responders or economical ear responder



RFID Antenna controller with autotuning function.



Typical omnidirectional antenna is assembled to the construction at the entrance to the milking parlour. The frame antenna of POLANES company is a perfect solution in case of lack of space or other circumstances.

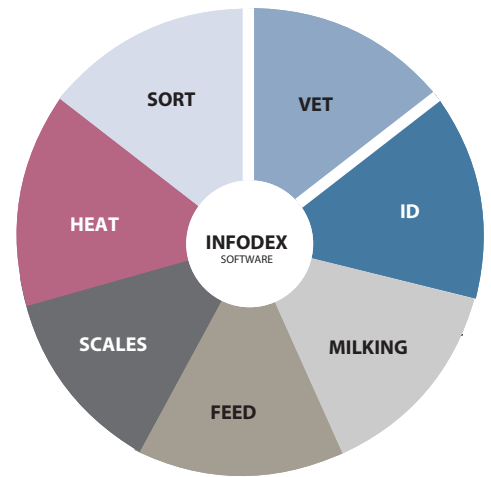


VET

VET

Dairy Sensor Early detection for better health

It is one of the most important modules that cooperates with INFODEX program. System consists of milk sensor Dairy Sensor.



Mastitis - an udder infection which is one of the most expensive disease (or even the most expensive). Early detection is very important for effective treatment, prevents from loss in production and allows to avoid cross infection.

Dairy Sensor device, which is a unique combination that monitors changes in milk yield, conductivity, lactose, fat and protein content, is currently the most effective tool for routine detection of mastitis and ketosis.



Harmful effect of mastitis:

- reduces milk production
- late disease detection contributes to chronic damage on health
- contributes to infertility or difficult inseminations
- one of the three reasons of culling



Dairy Sensor - an effective tool for detection of:



ketosis - minimizes loss because of negative energy balance in cows after calving.

mastitis - an early alarm allows to avoid huge loss in production and improves fertility.

colostrum and blood - a sensor will stop milking process and protect milk from infections and loss.

VET

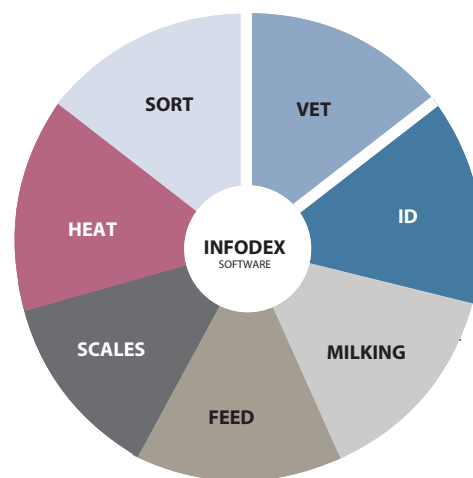
Dairy Sensor Fat and protein measurement in milk

i Effective treatment allows to detect disease and this is what distinguishes Dairy Sensor from other devices. Cows with ketosis have increased fat level in milk and decreased protein level. Dairy Sensor measures milk components from each milking. If fat level in milk is higher than protein level by 40%, the device will indicate suspicion of ketosis by the Infodex program. This method is incredibly reliable because milk is being monitored every day.

Dairy Sensor Checks feeding performance

How will Dairy Sensor improve results?

- Early detection of serious health problems
- Feeding optimization
- Identification of results after changing food ration
- Detection of decreased feeding quality
- Faster return on investment in VET module (1-2 years)



Dairy Sensor will inform you about feeding problem

Feeding is the biggest cost in dairy farms, that is why optimization and control is so essential. Problems like unplanned changes or mixed feed rations often cause changes in fat and protein level in milk and proportions between them. Dairy Sensor monitors milk components during each milking. Each change is quickly identified in the Infodex program and sent to a breeder.

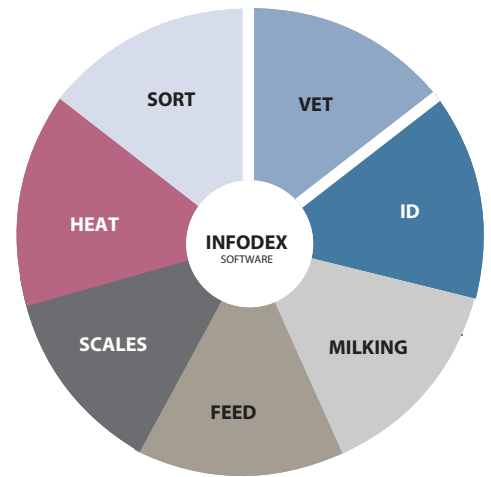
VET

Dairy Sensor Small device- huge possibilities

Dairy Sensor except for earlier mentioned parameters, measures also milk yield so a milk stand is completed, without any additional devices and costs. If you expect certified measurement approved by ICAR you can connect Dairy Sensor with Pulsametr2 measurement chamber on one milk stand.



Except for receiving all the parameters provided by Dairy Sensor, the set allows to certified milk measurement and collect the samples for milking. The set serves one common KOMPAS 500 controller.



**Measurement set is intended
for breeders who demand
daily control of milk at the highest level.**

Technical specification:



- Electronic device which tests milk flow
- No-cost measurement process, doesn't require reactive substances
- Works automatically without disrupting milk flow
- Measurement process doesn't require additional activities from service or the dairy
- Washing with other elements of a milking system during CIP process
- Small internal volume doesn't require extra water or detergent
- Minimal exploitative costs- Dairy Sensor doesn't include any moving or exploitative parts
- Service costs for the device are limited to period calibration with the Infodex program performed online

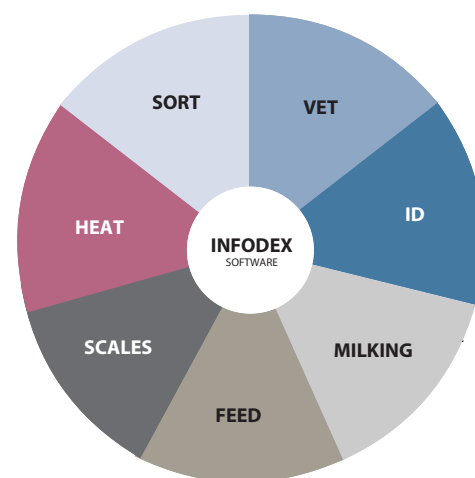


INFODEX

INFODEX

PROGRAM

Herd and milk management centre



Infodex program will help you to obtain information that you need in a friendly and intuitive way due to the latest technology of software implemented by our developers.

We created a program with support of veterinary specialists, fully functional and open to meet expectations of every breeder. The only thing you have to do, is to tell us about your need and our team will develop an appropriate tool.



Intelligent Sensors

Our sensors will measure not only milk quantity, but also fat, protein, lactose, temperature, conductivity and activity.

Accurate animal identification

Accurate and precise animal identification system ascribes measured parameters to appropriate animals.

What makes our management effective?

Smart decisions

Algorithms of artificial intelligence change data from the sensors into valuable information and decision for a farmer making a herd healthy and well fed.



INFODEX

PROGRAM

Reproduction and Herd Health

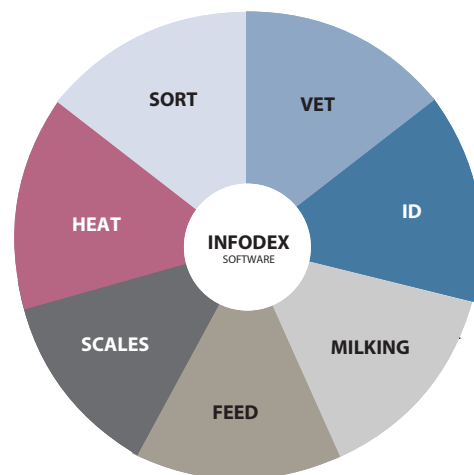


- Review and maintenance of reproductive effectiveness
- Accurate defining of cow problems- fertility, mastitis and other health problems
- Organization of health control, vaccines and synchronization programs
- Statistics about affliction and treatment
- Monitoring of heat detection and activity in young herd

Management system - network



- Control and components monitoring connected to a computer equipment
- Monitoring of wash parlour performance
- Management of feed intake
- Animal automatic scales
- Animal selection system
- Mobile notifications about heat detection



Milk production

- Milk production monitoring - average of the day, month and year
- Avoidance of lactation decline and production maintenance
- Identification and immediate treatment of exceptions
- Test result integration of specific components in the herd and individually
- Milk flow estimation and production data
- Milk conductivity measurement and better monitoring of mastitis detection



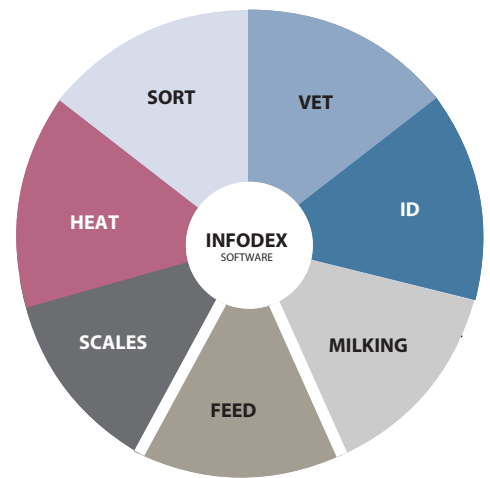
FEEDING

Planning, control, optimization



Feeding module allows to plan and carry out feeding automatic program for each animal in the herd which provides optimization of expensive forage usage.

Infodex program enables programming of a complex feeding plan for the herd considering individual cows needs depending on lactation status, pregnancy or health.



Feeding in the milking parlour

It is worth installing a proper feeding system in the milking parlour especially in the barns where cows are kept the whole year. Except feeding control it is an additional spur for animals to go for milking smoothly. POLANES developed individual feeding systems adjusted to milking parlours. Independently on the type of the parlour (30 or 50 degrees, herringbone, swing over) you choose, POLANES provides such automatic solution as you need. Individual feeding systems in the milking parlours can deliver to 3 kg of forage per cow.

Feeding system was based on controlled electrically pipe forage tanks with 3kg capacity.



FEEDING

Feeding in the feeding stations

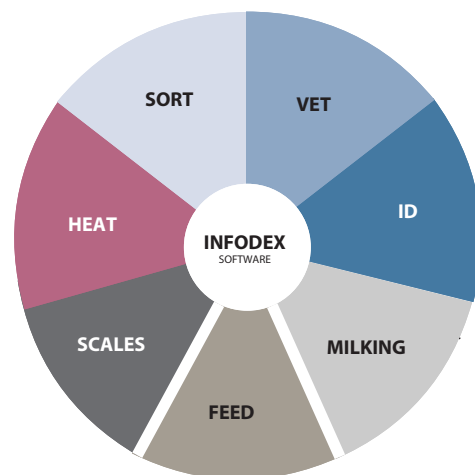
Advantages of feeding module:



- cow's calendar
- maximum single-use dose
- individual feeding
- transfer of uneaten portion
- settings of feeding groups
- alarm of low forage consumption
- dose regulation due to a lactation curve
- calculation of forage amount in a silo

Automatic feeding system allows to choose to 3 types of forage in the feeding station.

From silo directly to cows without hand work.



Liquid supplements for enhancing production potential.



Feeding station has an option of giving high energy additives like molasses and glycol. Applying that type of supplements has a positive influence on cow health:

- supports ketosis treatment and prevents from its occurrence
- facilitates the smooth transition of a high yielding cow from dry period to high lactation
- relieves perinatal stress and prevents excessive weight loss

FEEDING

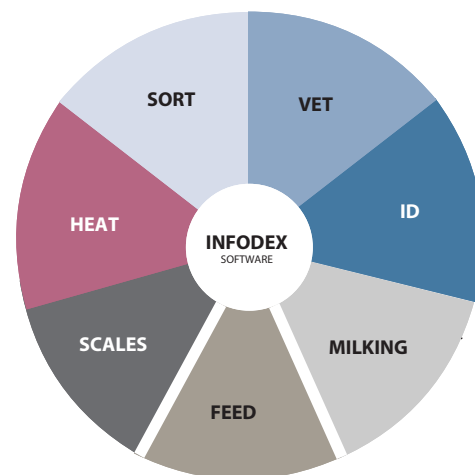
PMR (Partly Mixed Ration) system.

Features of the feeding module:



- Cows are rewarded precisely by day of lactation and amount of milk yield
- By applying liquid additive dispensers allows to fulfill high energy demand of lactating cows
- A scale built in the station facilitates balancing and correction of established food doses

Weight fluctuation is a clear signal to control cow health. Lack of appetite is one of the first symptoms of disease such as mastitis or hoof illness.



Benefits of PMR system



By using PMR, that is, partly mixed ration, there is no need to separate feeding groups, because all cows are given one basic dose of TMR and after that, production over basic performance is rewarded with wet forage and additives from the feeding station.

PMR is also a great opportunity for individual estimation of animal condition in the herd.

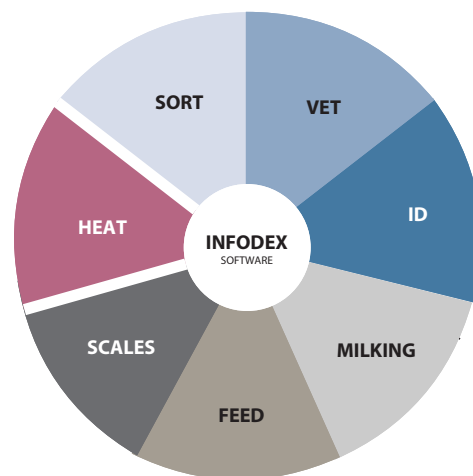




**HEAT
FARMA LIFE**

HEAT FARMA LIFE

Fertility control, insemination



i Research shows that expenses concerning herd may be optimized if a cow was inseminated in the shortest possible period of time. To make this situation happen, you should use an efficient system which informs a milker in the proper time, that the cow is in heat.

Find out when and which cows should be inseminated

FARMA LIFE module helps to detect animals which are in heat. The module indicates them to insemination and shows the appropriate time to perform it.

Benefits:

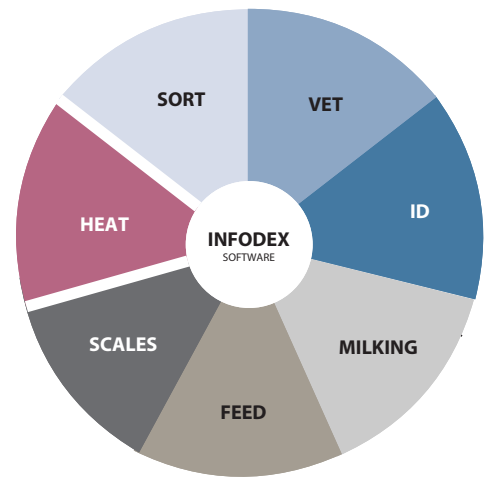
📈 Shortening of calving intervals has a great influence on increase of milk efficiency in the herd in which we want to maintain optimal number of cows, which are in lactation stage.

FARMA LIFE module allows to detect heat in cows both in free-stall barns, on the pasture and in every place where there is no milking rhythm defined.



HEAT FARM LIFE

Insemination on time



Main features of the system:



- Advanced heat detection with a constant indication on an animal's position standing or lying
- Work in a range of ultra-long waves with frequencies 433MHz (ISM range)
- Frequent data transfer in real time provides more information than other systems
- Lack of readers and gates that cause stop in the barn
- Simple integration with an existing milking system
- It does not require battery change during tag's lifespan
- Simple and quick clamping of a band on the front and back legs



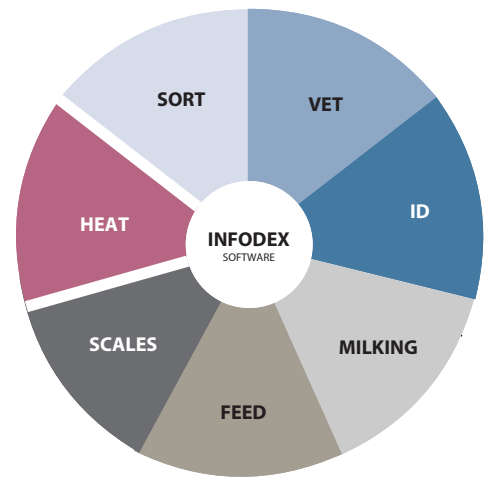
In the Heat module:

- a chart that shows cow's activity from the last 1,2,4,6,8,12 and 24 hours
- a chart of the position (standing or lying) according to cow's activity
- a chart of the chosen lactation or multiple lactations
- a chart of the lactation with events



Mounting behaviour is one of the main symptoms of heat occurrence.

HEAT FARMA LIFE



i LIFE pedometer is efficient monitoring of animals activity and accurate identification of events. LIFE pedometer can be easily transferred from one cow to another. We provide a variant that fits on the cow's leg because research showed that this kind of sensor presents the clearest signals of high activity.



Functions of FARMA LIFE:



- high accuracy, heat detection 24/7
- notifications about heat occurrence on the mobile FARMA LIFE APP application
- monitoring of rest and cows comfort
- wireless, long-range transmission
- long lifespan of battery (over 5 years)

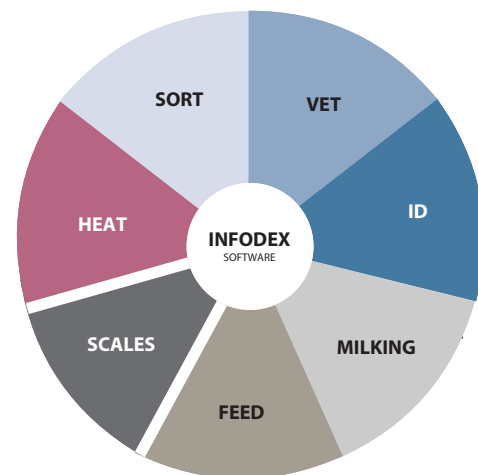


To ensure accurate identification, measurement device of the Farma Life system measures and gathers all 15 sequences of daily activity which means that even the cows that have weak symptoms are detected.

Farma Life system is equipped with an antenna and LIFE pedometers with 3-axis digital accelerometer.

SCALES

Energy balance control



SCALES module is a part of herd management system which measures cow's weight automatically and saves the data in the database of the INFODEX program.

SCALES system consists of one or more platforms placed in the feeding stations which weigh cows regularly during feed intake. Downloaded data from the individual database of the cows allows to create reports about the weight which is an indispensable component for efficient dairy farm management.

Why the cows should be weighed?



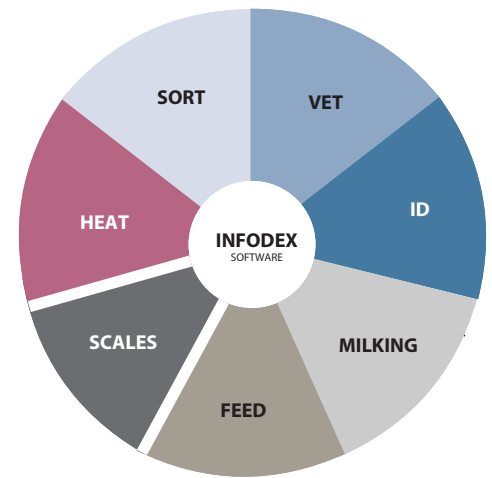
Dry period and post-partum interval define reproductive efficiency during lactation. High-productive cows in transition to the post-partum phase need more energy than they consume for milk production and weight maintenance. These animals can experience a significant energetic imbalance which is mainly associated with a high risk of metabolic diseases and health problems. Cows in post-partum interval usually start to gain weight and energy balance about 30-40 days after calving. Cows that will not reach such results are in the group of risk concerning milk production and reproduction.



SCALES

Energy balance control

SCALES is a tool which enables to prepare multidirectional analysis together with other parameters from the INFODEX program.



Benefits:



- Identification of decrease and increase of weight during dry period
- Identification of cows which have delay in coming back to the proper weight in post- partum phase
- Diet support and assigning parameters to the individual feeding environment to monitor stress and health problems
- Retrospective analysis of changes in feeding

Smooth measurement of disruptions



SCALES system consists of one or more platforms placed in the feeding stations which weigh cows regularly during feed intake. Weight system of animals in the feeding stations does not disturb the flow of moving cows in the barn.



Scales



SORT

An extra pair of hands in the farm



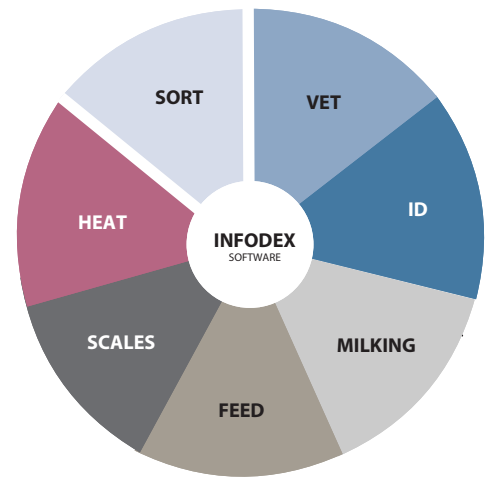
Breeders of medium and large dairy farms take care of a large number of cows every day. Breeding, insemination, pregnancies, controls after calving and veterinary treatment of sick cows are only a short list of things to do which have to be performed regularly.

Tracking, separation and monitoring of animals are important and demanding tasks for the breeder. These activities are time-consuming and requiring data analysis and as a result not all animals are supervised.

Separation in the program



SORT module automatically tracks cows which need your attention every day. The only thing you have to do, is to define criteria, and Sort module will do the rest of the tasks. The system controls selection gates and separates cows into proper places due to chosen settings saved in the INFODEX program.



Separation on the milking point

on Kompas 500 controller keyboard



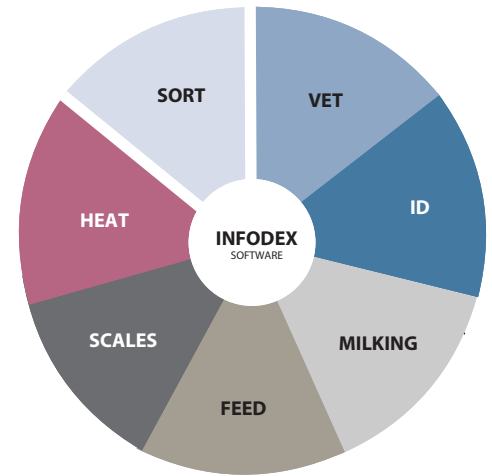
SORT

An extra pair of hands in the farm



Sort module is a part of herd management, used to isolating cows efficiently for breeding and treatment. It allows to quick insemination of cows without the need of overcoming long distances to find the appropriate cow.

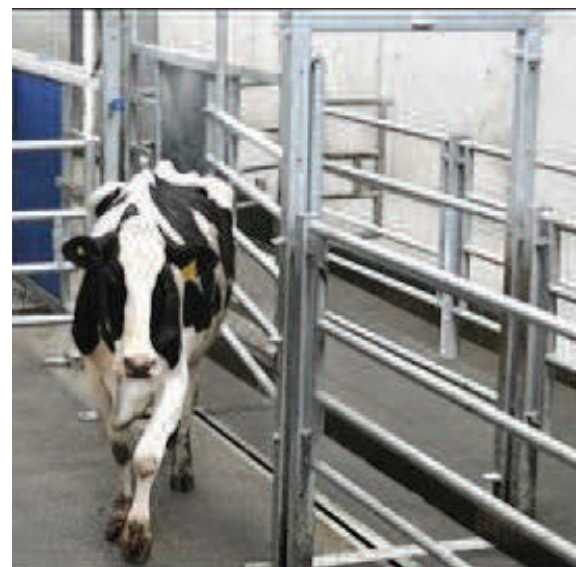
- Automatic selection
- Choosing cows for breeding
- Saving of time and work



Features:



- Separation due to criteria saved in the INFODEX program
- Manual separation in the milking parlour by using Kompas 500 panel
- Pneumatic separating 1,2,3,4-ways gates



Automation supported with photosensors



We have made milk production easier since 1994

We know how important is an individual approach to needs of every breeder. We can adjust our modern solutions to meet your expectations in milk production.

Contact us, tell us about your expectations and we will offer the best solution for you.

PROFIT %

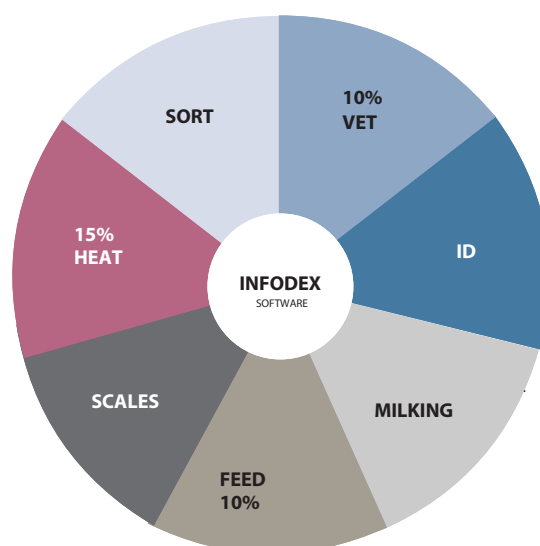


Chart presents possible savings and increase of profits by using KOMPAS FARM modules which support control, diagnosis and planning in your farm.