

# DINAMICA GENERALE SOLUTIONS



# RANGE OF SCALES

DG400



DG500



DG600



DG8000-IC



**COMPLETE RANGE OF SCALES  
TO MEET **ALL FARMERS** NEEDS**

# SCALE SPECIFICATIONS



- **Connectors: SPM military standard**
- Protection rate: IP68
- Working Temperature: -30 / +65°C
- Case material: Specific Nylon with Glass Fiber V0
- **Double/large display for a better ux**



WiNET port for plug & play connection of ALL accessories as standard. With **just one code of indicator** you can connect accessories (remote control, remote display, modem 4g, etc) as well in after market.



**USB standard** in all model of scales to exchange data with the cloud feeding SW (with DG500 it is also possible to download feeding data in excel).

# DG400 ENTRY LEVEL INDICATOR



- Digital weight indicator
- Overload control for improved operator security
- Working mode: total/partial and net/gross weight
- **WiNET port for plug & play connection of ALL accessories**
- All models of load cells can be connected
- Modbus - CAN J1939 protocols for automation (on request)
- **IP 68 protection rate**
- RS 232 port for serial communication

# DG500 & DG600 PROGRAMMABLE INDICATORS



- 24 Recipes
- 24 Distribution programs
- **Double LCD display improves user interface with clear messages**
- Intuitive keyboard for Quick & Easy programming
- Service function with overload recorder & working time count
- Compatible with the **DTM Advanced cloud feeding sw**
- Component consumption counter
- Download executions report in excel
- FarmCHEF - DinaTEL 3 APP compatibility
- RS232 Port for external systems connections



- Same features of DG500 plus:
- 99 Recipes, 24 Components each (from a list of 99 components)
- 48 Distribution programs
- Compatible with the DTM Advanced cloud feeding sw
- **Wireless data exchange via 4G modem with DTM sw**
- **Multi language including ideograms (chinese, japanese, etc)**
- FarmCHEF - DinaTEL3 APP compatibility

# DG500



ALL features of DG400 plus:

- **Programmable** weight indicator
- 2 LCD displays for a **better UX**
- **APPS** compatibilty
- Exchange feeding data with **DTM advanced sw** or download loading data in csv

## accessories

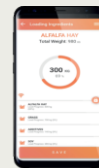
### REMOTE DISPLAYS



### REMOTE CONTROL



### FARMCHEF



### DTM Adv SW



### WT



# DG600



All features of DG500 plus:

- **Wireless data exchange via 4G** modem with DTM advanced SW
- **Multi language including ideograms** (chinese, japanese, etc) with dedicated graphic large display

## accessories

### REMOTE DISPLAYS



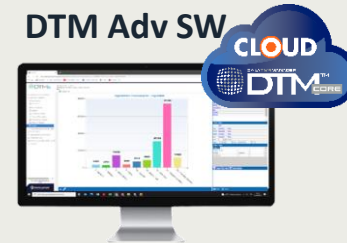
### REMOTE CONTROL



### FARMCHIEF



### DTM Adv SW



### Modem 4G



## Dina TEL 3

Wirelessly manage the weight indicator directly from the tractor/loader cab.

### Compatibility with indicators:

DG 500  
DG 600  
DG 8000  
DG 8000-IC



## Easy Control

Keeps under control the weight indicator from up to 25 m

### Compatibility with indicators:

DG 400  
DG 500  
DG 600  
DG8000-IC



## WiNET

Wireless communication for scales accessory



### Compatibility with indicators:

DG 400 ECU  
FIELD Scale  
All feeding monitoring weight indicators



Weight Repeater\*



Extra Display\*

## Weight Transmitter DG-WT\*

Transmit weight signal from any Dinamica Generale indicator (4-20 mA or 0-10 V, RS232, Profibus)



### Compatibility with indicators:

DG400  
DG500  
DG600  
DG8000-IC

## Motor Control Box\*

Driving your automatic feeding station



### Compatibility with indicators:

DG 8000  
DG 8000-IC

\*All accessories can be wired connected to the weight indicator

## WIDE RANGE OF ACCESSORIES TO AUTOMATE AND INCREASE FEEDING PROCESS EFFICIENCY

- ✓ Remote Control
- ✓ Remote display
- ✓ NIR
- ✓ Automation
- ✓ Distribution Tracking
- ✓ App's
- ...

Discover all accessories compatibility





# REMOTE DISPLAY

## EXTRA DISPLAY



**Weight + name of  
component to be loaded**

## WEIGHT REPEATER



**Weight to be loaded**

**Both Extra Display and Weight repeater can be  
connected wire or wireless to the scale**

# REMOTE CONTROL

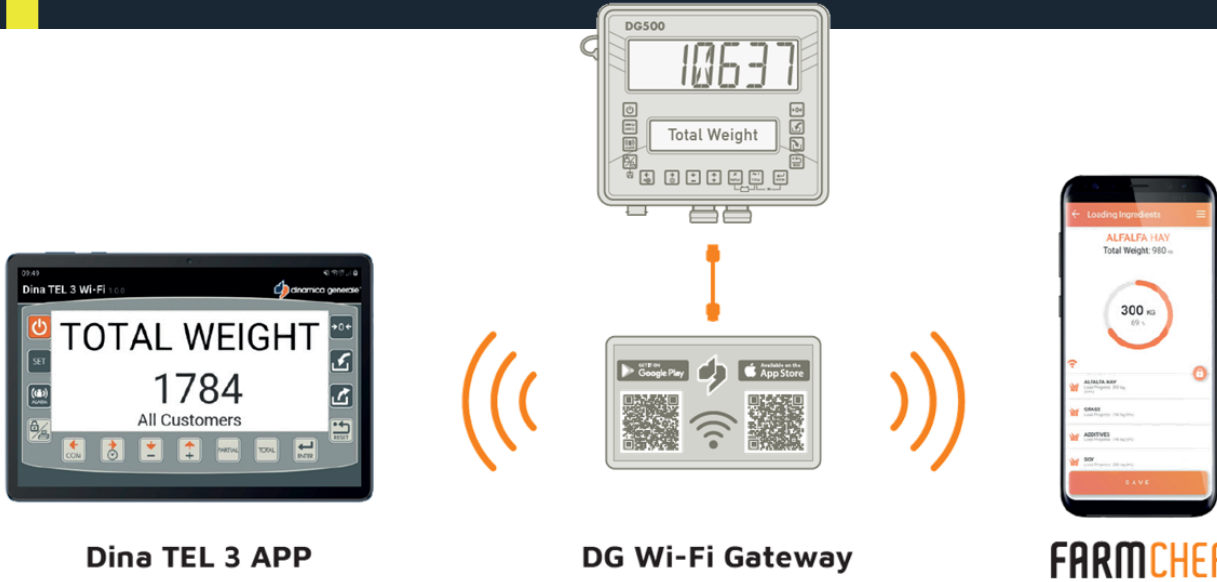
## EASY CONTROL



## DINA TEL3



# APPS



Connecting DG Wi-Fi gateway to Dinamica Generale's weight indicators you can use **FarmChef** or **DinaTEL 3** APPs.

With the same accessory the farmer can choose the APP that best fit his needs

## APPS COMPATIBILITY

	DG500	DG600	DG8000-IC
<b>FARMCHIEF</b> 	✓	✓	
<b>DinaTEL 3 APP</b> 	✓	✓	✓



# DinaTEL 3 APP



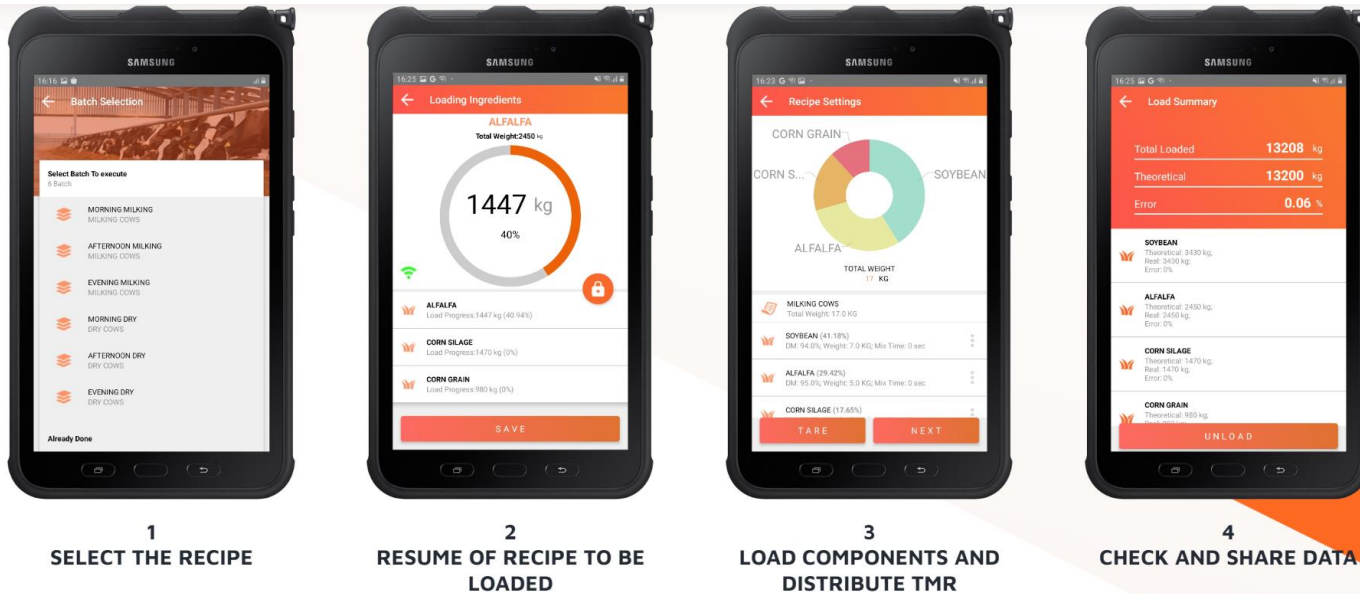
**DinaTEL 3 APP** is a mobile APP that brings the control of the weight indicator to your mobile device.

Farmers can make tare, enter in feeding programs, etc. directly from the loader. DinaTEL 3 APP is available for Android and iOS and compatible with DG500, DG600 and DG8000-IC indicators



# FarmCHEF

**FARMCHEF** is a cloud based precision feed management system. The smart and simple design lets you easily build and manage rations, pens, and feed groups directly with your smartphone/tablet. Compatible with **DTM FarmCHEF**



<https://farmchef.dinamicagenerale.com/en/>



<https://www.youtube.com/watch?v=-IETlaf0yb4>



<https://www.dinamicagenerale.com/public/file/FARMChefENSsinglePagesdef-33814.pdf>

# DG8000 IC –TOP LEVEL SOLUTION



- Recipe formulation based on daily dry matter intake for each pen
- Premix management
- Monitoring operators' labor effectiveness
- Suitable for automatic feeding & stationary applications
- **Compatible with the DTM IC Cloud feeding sw**
- **Wireless data exchange via 4G modem or WiFi with DTM sw**
- Multi ration management
- Specifically designed for integrating **NIR Analyzers**
- Compatibility with **Distribution tracking**
- Modbus protocol built in



# DG8000 IC



All features of DG600 plus:

- **WIFI** data exchange
- **DTM IC sw** compatibility
- **NIR** compatibility
- Motor control box for **automation**
- Distribution tracking
- **Modbus** and CANJ1939 protocol built in
- Big display for clear operator's messages

## accessories

### REMOTE DISPLAYS



### REMOTE CONTROL



### DISTRIBUTION TRACK



### NIR ANALYZER



### MC BOX

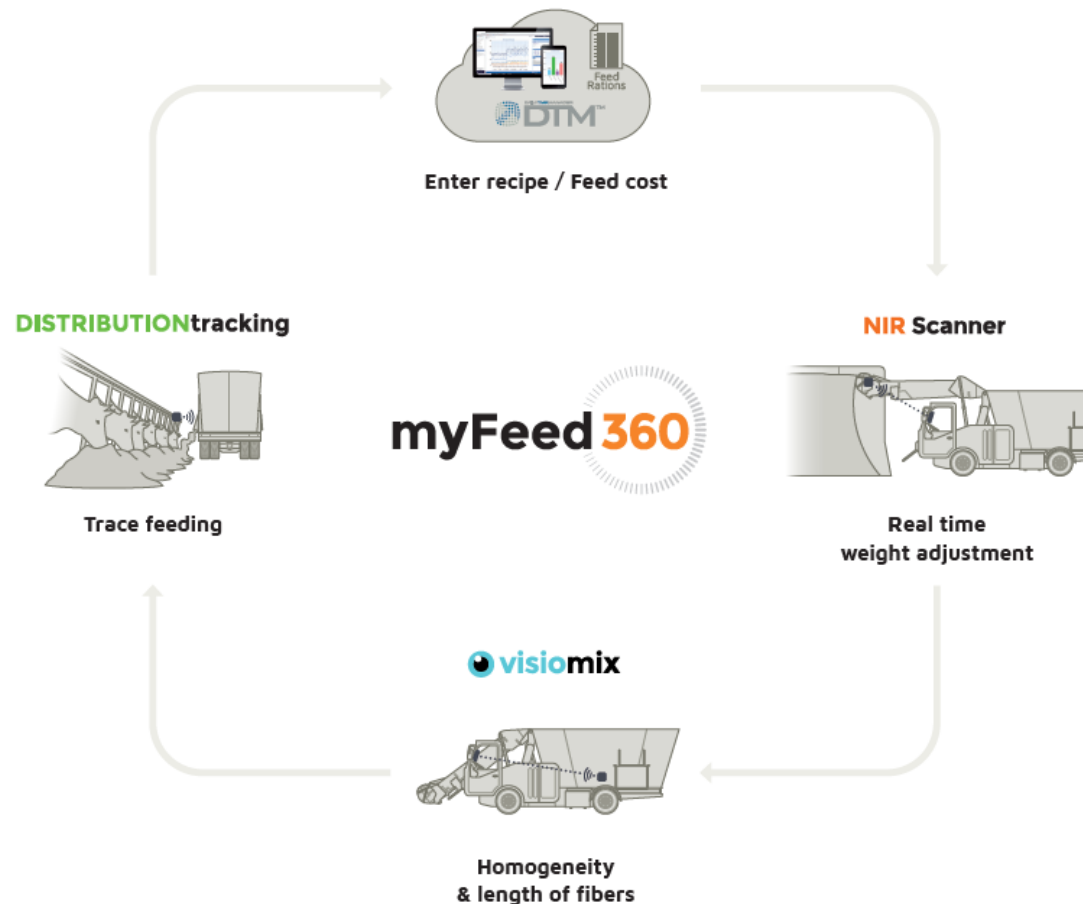


### DTM IC SW



### 4G & WIFI





## VALUE-ADDED SOLUTIONS FOR DAIRY AND BEEF FARMS THAT MAXIMISE PRODUCTION AND REVENUE

Consistent and predictable feed quality is top of mind for today's dairy and beef farmers. The project we called myfeed360 is aimed at providing farmers with the most advanced technology for monitoring, measuring and ensuring the quality of feed within each phase of animal nutrition process. Here is what we manage:

1. Input feed ration into the DTM Feed Management Software and track feed costs
2. Apply real time adjustment of each loaded ingredient based on dry matter and nutrients
3. Control TMR homogeneity and fiber lengths during mixing process in the TMR mixer
4. Measure the real quantity of feed distributed to each pen
5. Track milk production based on real dry matter intake
6. Control farm performance in real time from any location
7. Share feeding information online with nutritionists to improve the process efficiency

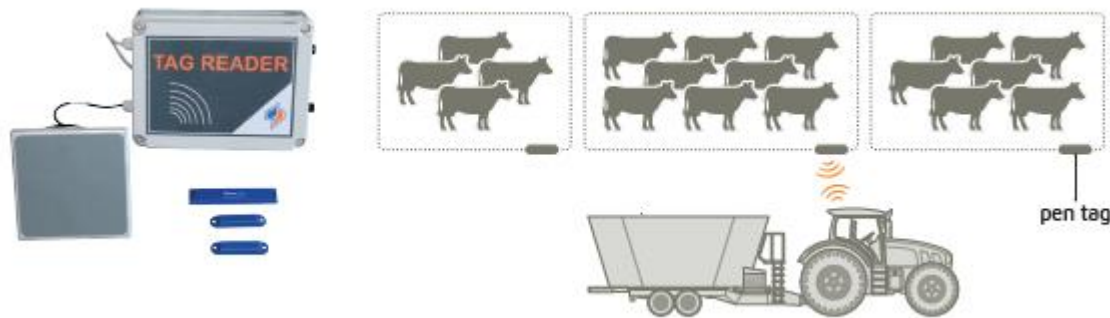


# DISTRIBUTION TRACKING

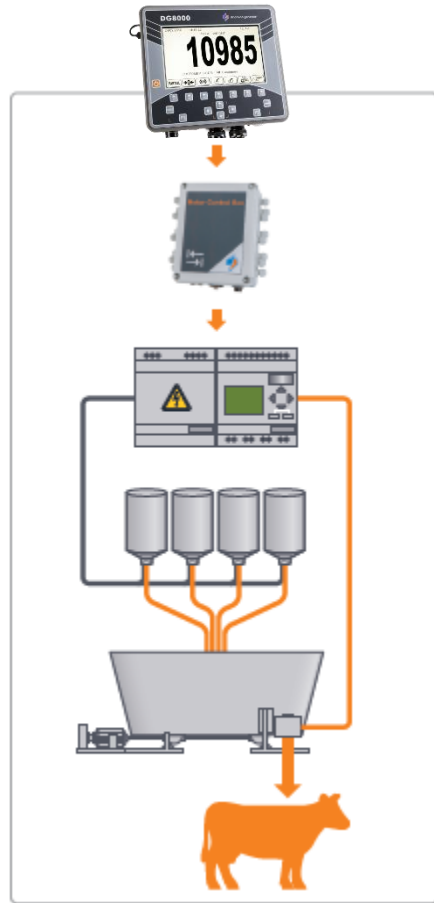
Electronic device based on RFID technology that allows to control the exact quantity unloaded for each single pen. Distribution tracking allows to keep under control the distribution phase; in fact is possible to control the operators performances. Delivering the right quantity of TMR means decreasing feed refusal thus reducing feeding costs. On DTM IC software are available all the reports generated by the distribution tracking system.

## MAIN BENEFIT:

- Track delivered TMR for each pen and keep distribution under control
- Operator accuracy monitoring for continuous process improvement
- Delivering the right quantity of TMR means decreasing feed refusal thus reducing feeding costs.



# MOTOR CONTROL BOX



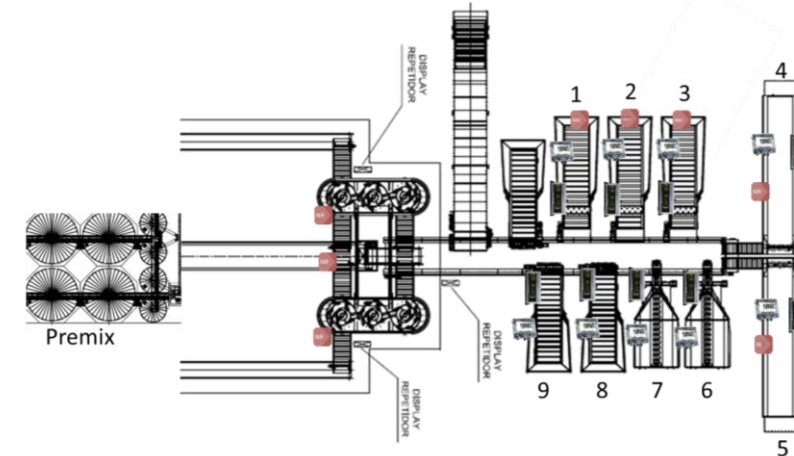
The Motor Control Box is the one-stop solution to control **animal feed AUTOMATION plants**. With the Motor Control Box, driving functions like open the doors, start belts and control material discharge from silos to name but a few, become easier and quicker.

## 1) AUTOMATIC LOADING PROCESS

The system is designed to control and automatically manage ingredients stocked in silos to get the best possible TMR quality.

## 2) AUTOMATIC DISTRIBUTION PROCESS

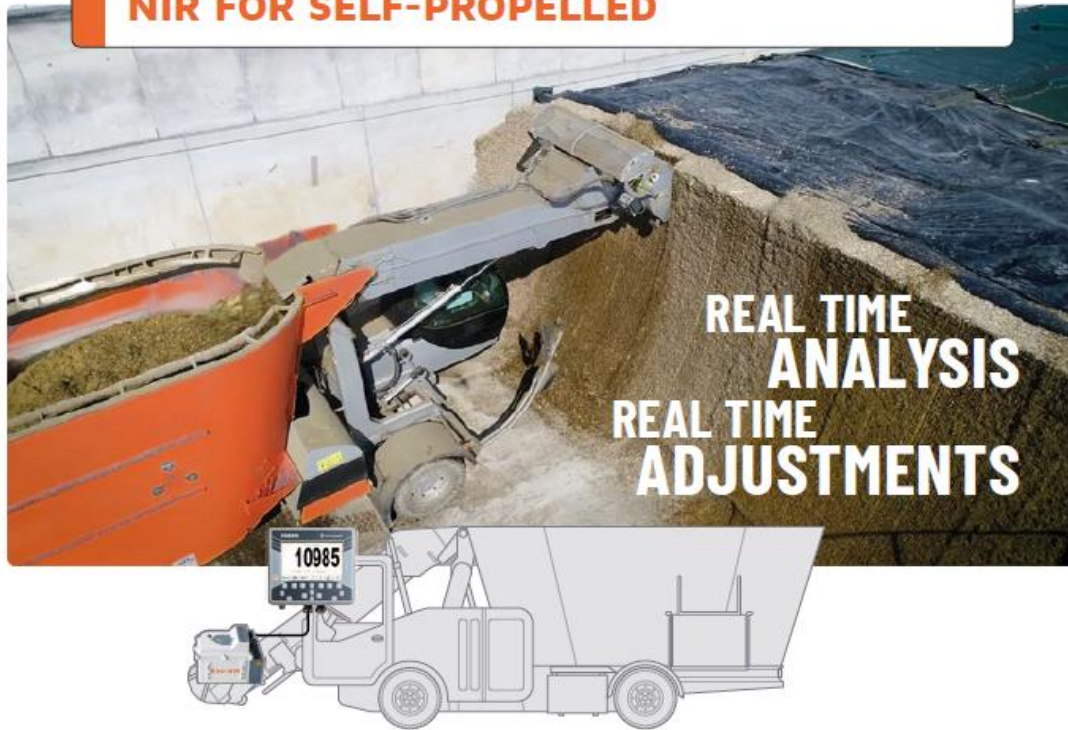
The Motor Control Box sets the control of the TMR distribution from the feed mixer right in front of cows. Thanks to the DTM Feeding Management Software, programs can be set directly from the office



Each motor control box can control up to 16 relè. It is possible to connect more motor control box in sequence

# NIR – REAL TIME ANALYSIS

## NIR FOR SELF-PROPELLED



EvoNIR measures **in real time** dry matter and key nutrients (protein, ADF, NDF, ash, crude fat, starch, etc). The system recalculates in real time the weight to be loaded to ensure a **consistent ration**. All data are stored in the DTM cloud feeding software.

- Increasing milk production thanks to a correct management of feeding process
- Management of forages variability (weather conditions)
- Management of the refused level
- Improvement of cows health-behaviour

## NIR ON TANK



EvoNIR installed on the tub of the feed mixer can continuously monitor the quality of the mixture. Real time analysis with adjustment guarantees an **homogenous** and **constant** TMR in line with consultants formulation.

- Homogeneity index
- Define the correct time to stop mixing
- TMR Analysis
- H<sub>2</sub>O adjustment

# FORAGE VARIABILITY

## DRY MATTER IN A CORN SILAGE BUNKER



***IF YOU KNOW IT  
YOU CAN MANEAGE IT***

**IDEAL RECIPE** set by nutritionist: 1000 kg of corn silage with DM 34%. It means 340 kg of DM.

If I am loading from point **A** I am loading **387 kg** of DM

If I am loading from point **B** I am loding **304 kg** of DM

...quite a **BIG DIFFERENCE**...



## Final comments

### The system has allowed to:

- rationalize of rations and dietary management: **greater constancy of the dry matter distributed , greater constancy of the nutrients content,**
  - analytic values for feed in order to rework the recipes if the variations in feed suggest a control or a revised version.
- **Improve health and welfare**, especially for fresh cows;
- **Improve the health status of breast** (lower number of cells);
- increase the productive response on a equal quantity of ingested foods, and therefore to improve the efficiency ;

These results contributed to **improving the economic performances; this** improvement is obtained thanks to effect on the difference between the feed cost and the profits.

Other profits are:

- **Ongoing monitoring of feed and better tradeoff of the recipes**
- **Health** (medicines cost, manpower,...) and welfare
- **Environment**



<b>Ration Cost</b>		
Herd	200	
	Without dg precisionFEEDING™	With dg precisionFEEDING™
Cost Ration/day	€ 7.04	€ 6.96
Daily Ration Cost	€ 1,408	€ 1,392
Monthly Ration Cost	€ 42,803	€ 42,316.8
Monthly Savings	€ 487	
<b>Milk Sales Revenues</b>		
<b>Milk Price (€/kg)</b>	€ 0.44	
	Without dg precisionFEEDING™	With dg precisionFEEDING™
Average daily milk production per head*	29.96 Kg	32.5 Kg
Daily milk production per herd	5992 Kg	6500 Kg
Daily revenue	€ 2,636.48	€ 2,860
Increase Revenue/Day	€ 223.52	
Increase Revenue/Month	€ 6,795	
<b>Total Monthly Margin Increase</b>	<b>€ 7,282</b>	

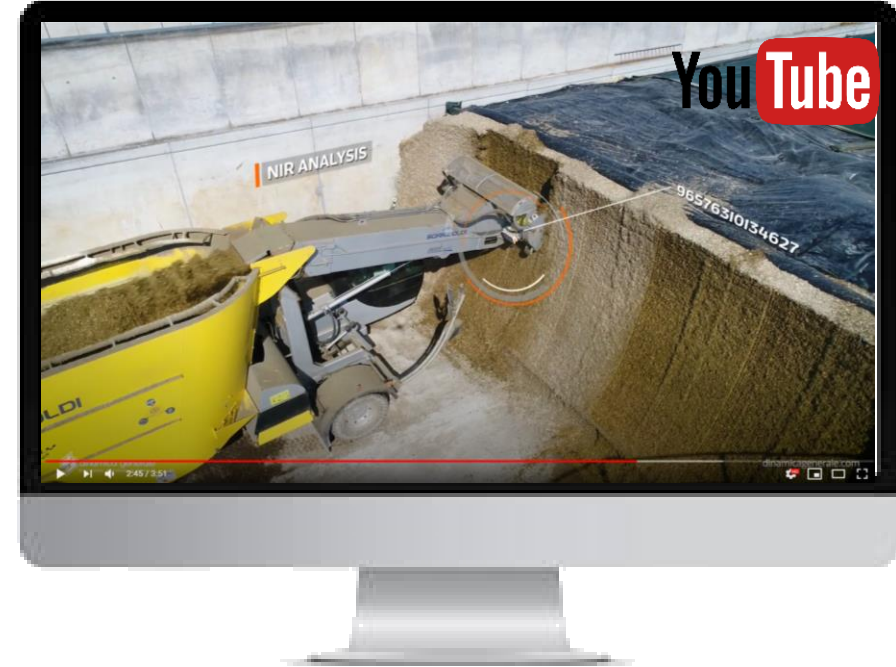
# INCREASING Precision Decreasing TMR refusal

## Economic impact of reducing feed refusal

Cows	Cost Kg/DM	TMR Refusals,%	TMR refusal Kg/DM	Daily Refusals cost of 250 (US/day)	Annual cost 250cows (US/day)	Annual Cost per Cow (U\$/day)	Annual Cost 1000 Cows (U\$/day)	Saving
250	0.24	<b>5%</b>	<b>337.78</b>	81.89	29,890.87	119.56	<b>119,563.49</b>	
250	0.24	<b>3%</b>	202.67	49.14	17,934.52	71.74	71,740.00	47,825.00
250	0.24	<b>2%</b>	135.31	32.81	<b>11,974.01</b>	<b>47.90</b>	<b>47,896.06</b>	<b>71,667.43</b>
250	0.24	<b>1%</b>	67.58	16.38	<b>5,978.17</b>	<b>23.91</b>	<b>23,912.70</b>	<b>95,650.79</b>

# NIR – REAL TIME ANALYSIS

## NIR ON SELF PROPELLED





# NIR – REAL TIME ANALYSIS

## NIR ON TANK



<https://www.youtube.com/watch?v=0UGuaNfQ2io>

# DTM FEEDING SW



*Your farm's data  
has a story to tell...*



**DTM** is an advanced feeding **IN CLOUD** management software that combined with DG scales create a professional package that drives your **precision feeding system**. The comprehensive program helps farmers monitor and control feed costs, inventory, ration adjustments and other critical on-farm processes like feeder performance.

# DTM FEEDING SW – VERSIONS

## DTM Core advanced



Software solution **developed** to manage **medium farms daily** operations



## DTM Core professional



Software solution **developed** to manage **large farms daily** operations and **contractors**



## DTM Core IC

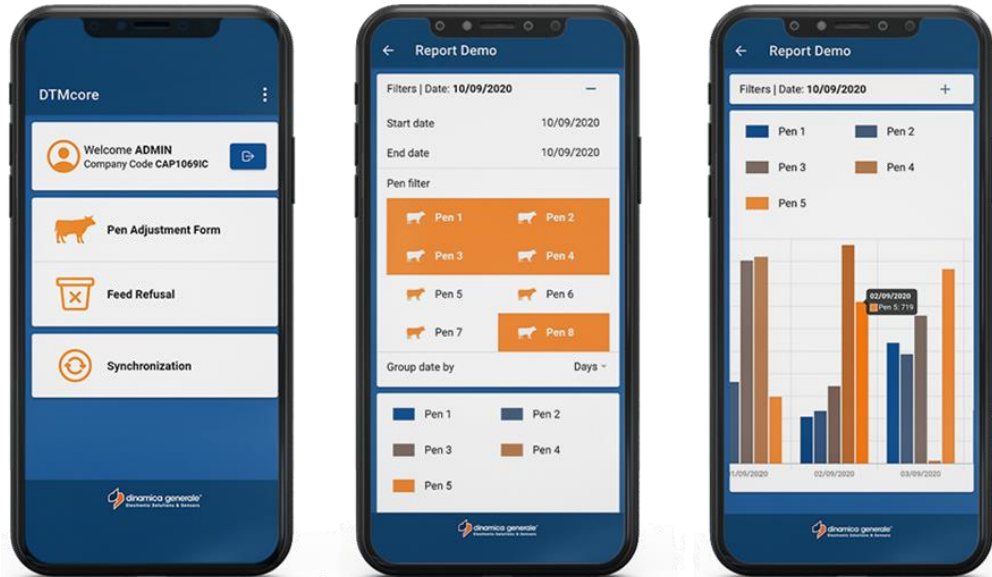


The most complete feeding management software solutions **designed for structured** and **demanding farms**



Compare  
DTM  
versions

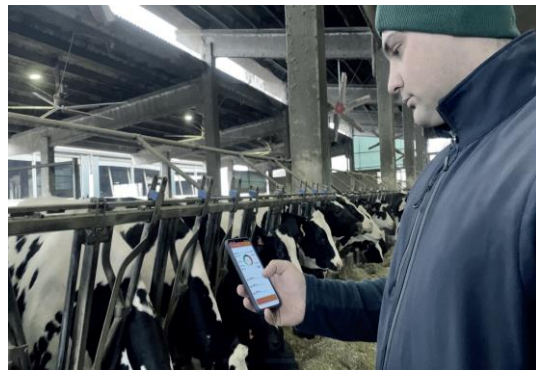
# DTM Core APP



**DTM Core APP** allows to make quick changes to feeding programs directly from your mobile and check **feeding data**:

- Change DM of each components
- Change n. of cows for each pen
- Change feeding rations in %
- Refused management per pen
- Create new recipes and batches

The new programming is sent directly to the scale, without the need to go modify data in the DTM sw.



DTM Core App



Web App



Feed mixer

# DTM Report (loading)

## Batch

Id Batch	Batch	Date	Start Time	End Time	Recipe Code	Recipe	Pens # Fed	Weight / Cow
1	2/3/6 Manhã	05/12/2019	08.53.27	09.39.16	8	Produção MP	3	49,80

## Loaded

ID	Date	Start Time	End Time	Customer	Feeder
2.814	05/12/2019	08.53.27	09.13.15	Barão&Barão Lda	Humberto

Ingredient Id	Ingredient	Target Weight	Target Weight on Scale	% correction (by NIR Analysis)	Target Weight (with correction)	Loaded	Error (%)	Load % Error (ABS)	Programmed Cost	Loading Cost	Overfeed Cost	Start Time	End Time
19	PRE MIX	1.693,67	1.694,00	0,00	1.694,00	1.725,00	1,83	-	414,01 €	421,59 €	7,58 €	08.53.36	08.55.21
16	Barão 1 MP	466,37	466,46			475,00		-	144,60	147,25	2,65		
8	Milho Moído	736,38	736,52			750,00		-	128,89	131,25	2,36		
10	Semêa Arroz	122,73	122,75			125,00		-	19,03	19,38	0,35		
15	Soja 44	368,19	368,26			375,00		-	121,53	123,75	2,22		
22	Fenosilg Azevém	613,65	614,00	-1,94	602,08	605,00	0,48	--	36,84 €	36,30 €	-0,54 €	08.55.26	08.59.49
21	Silagem de Milho	3.190,98	3.191,00	11,27	3.550,75	3.560,00	0,26	--	159,55 €	178,00 €	18,45 €	08.59.54	09.06.27
5	Levedura Cerveja	490,92	491,00	0,00	491,00	510,00	3,87	--	17,19 €	17,85 €	0,67 €	09.06.32	09.10.51
7	Melaço	122,73	123,00	0,00	123,00	125,00	1,63	--	25,22 €	25,63 €	0,41 €	09.10.56	09.13.15
		6.111,95	6.113,00	5,69	6.460,83	6.525,00	0,99	0,99	652,80	679,37	26,56		

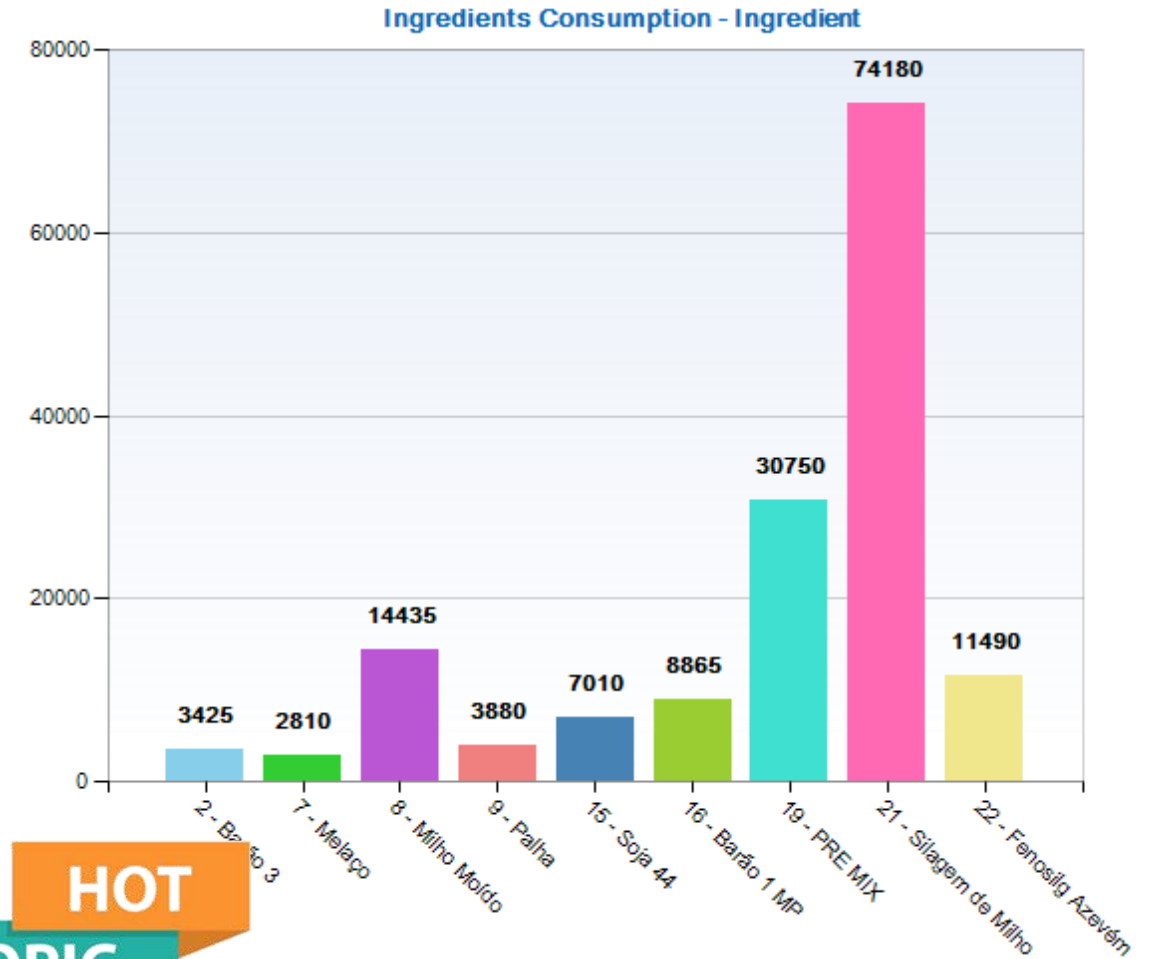
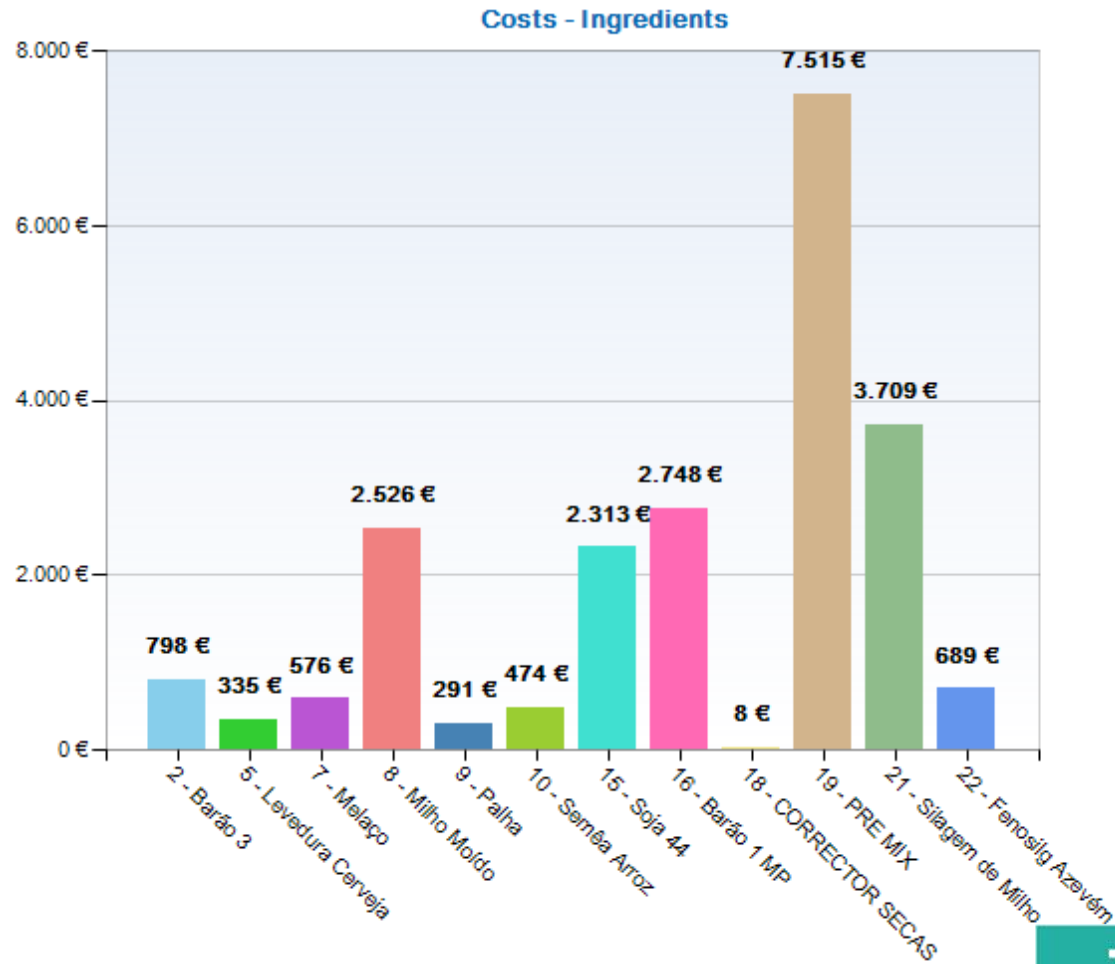
# DTM Report (unloading)

## Unloaded

Unload	Date	Start Time	End Time
2.802	05/12/2019	09.13.50	09.39.16

Id	Pen	Target Weight	Load			Unload			Cows # (Theo.)	Cows #	Start Time	End Time
			Target Weight on Scale	Loaded	%	Target Weight on Scale	Unloaded	%				
2	Parque 2	2.393,39	2.393,41	2.555,13	6,76	2.555,00	2.595,00	1,57	89	89	09.32.39	09.34.03
3	Parque 3	2.598,07	2.598,09	2.773,64	6,76	2.774,00	2.755,00	-0,68	94	94	09.35.10	09.36.26
6	Parque 6	1.120,50	1.120,51	1.196,22	6,76	1.197,00	1.185,00	-1,00	60	60	09.36.59	09.39.15
		6.111,96	6.112,01	6.524,99	6,76	6.526,00	6.535,00	0,15	243	243		

# DTM Report (component consumption/costs)



**HOT  
TOPIC**

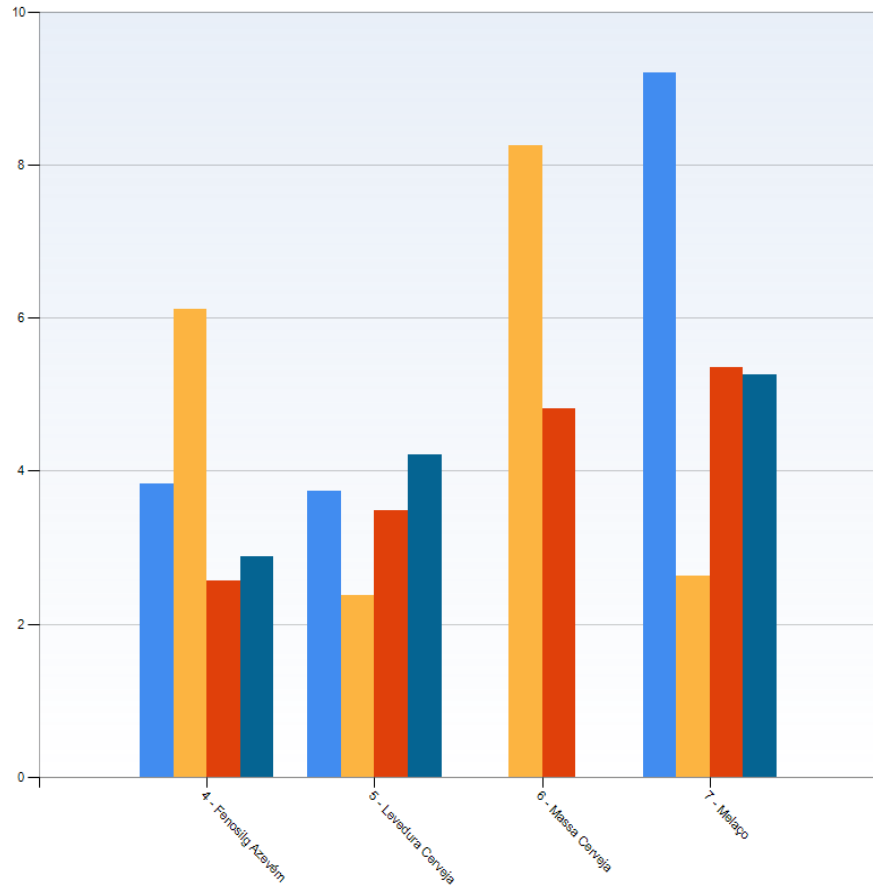
# DTM Report (error operators)

ão, Lda Quinta

Gráficos +

Error operador - Componente

- 1 - André Barão
- 2 - António
- 3 - Ricardo
- 4 - Humberto



Record List

ID	Id Batch	Batch	Date	Start Time	End Time	Recipe Code	Load Recipe	Revision	N°
21.905	21	Rec. Car Touros NULL	21/12/2021	17:21	18:23	11	Recria Carne AZ	12.0	
21.899	4	1/9/5/4/BA Tarde	21/12/2021	17:06	17:45	8	Produção MP	52.0	
21.904	19	RECRIA LEITE	21/12/2021	16:39	17:16	17	Recria Turinas AZ	17.0	
21.898	3	2/3/6 Tarde	21/12/2021	16:29	17:01	8	Produção MP	52.0	
21.903	10	TURINAS PRENHAS	21/12/2021	15:51	16:28	16	Turinas Prenha AZ	15.0	
21.902	24	MANADA CARNE	21/12/2021	14:38	15:35	15	Vacas+Prim Carne AZ	14.0	

Target Weight	Target Weight on Scale	Target Weight (with correction)	Loaded	Error % (Loading)	Load % Error (ABS)	Unloaded	Error % (Unloading)	Overfeed Cost	Programmed Cost	Loading Cost
47389189	47684074	47607466	48493185	1,86	2,52	47392887	-2,27	145.144,49 €	5.557.980,61 €	5.703.125,10 €

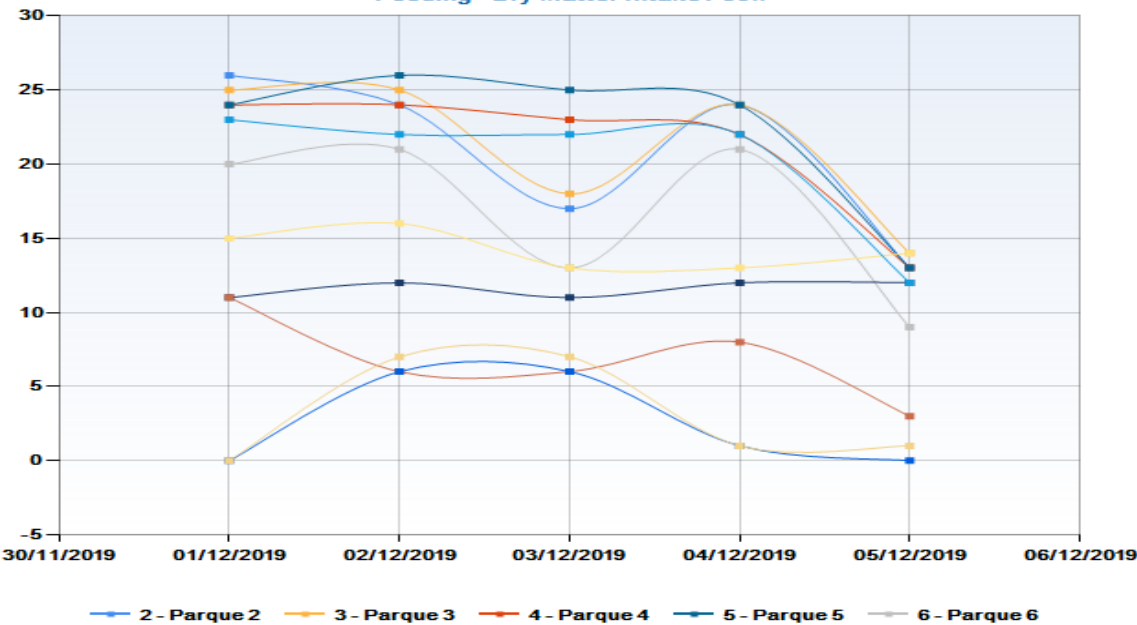
Print Refresh Page 1 of 181 Setup Grid



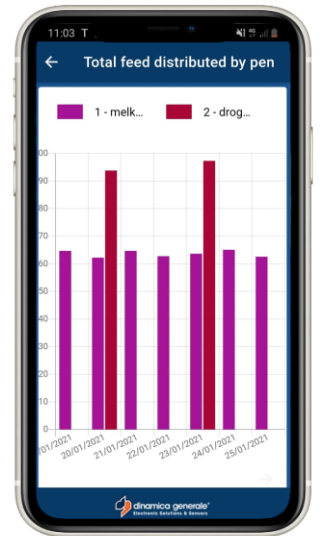
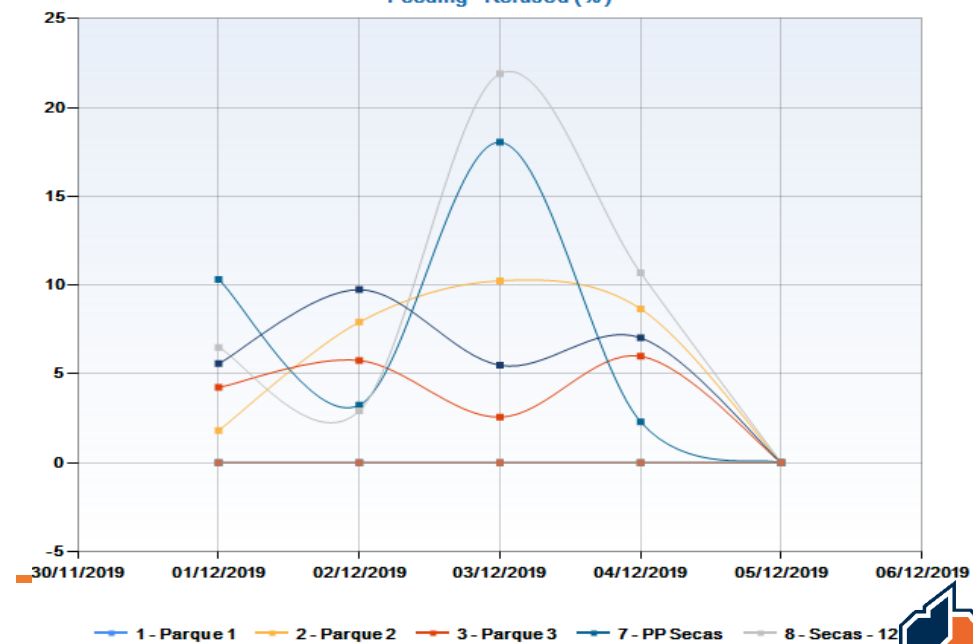
# DTM Report (pen history)

Date	Code	Pen	Daily Feedings	Avg cows #	Adj. %	Target Weight	Target Weight on Scale	Fed	Error (Weight)	Error (%)	TMR D.M. %	Refused (Weight)	Refused (%)	Refused (cow)	Fed (Intake)	Fed (Intake) / cow	D. M. Intake / cow
25/01/2021	1	melkkoeien	2	94	100,00	5413	5853	5883	30	0,51	32,27	0	0,00	0,00	5883	62,59	20,19
24/01/2021	1	melkkoeien	2	95	100,00	5413	6111	6182	71	1,16	32,04	265	4,29	2,79	5917	62,28	19,96
23/01/2021	1	melkkoeien	2	94	100,00	5413	5942	5983	41	0,69	32,16	353	5,90	3,76	5630	59,89	19,26
23/01/2021	2	droge koeien	1	17	100,00	517	1649	1654	5	0,30	41,41	0	0,00	0,00	1654	97,29	40,29
22/01/2021	1	melkkoeien	2	94	100,00	5413	5854	5899	45	0,77	32,30	238	4,03	2,53	5661	60,22	19,45
21/01/2021	1	melkkoeien	2	94	100,00	5413	5986	6080	94	1,57	31,94	310	5,10	3,30	5770	61,38	19,61
20/01/2021	1	melkkoeien	2	94	100,00	5413	5865	5850	-15	-0,26	32,19	357	6,10	3,80	5493	58,44	18,81
20/01/2021	2	droge koeien	1	18	100,00	517	1670	1688	18	1,08	41,02	0	0,00	0,00	1688	93,78	38,47
19/01/2021	1	melkkoeien	2	94	100,00	5413	6041	6080	39	0,65	32,04	440	7,24	4,68	5640	60,00	19,22
				<b>694</b>		<b>38925</b>	<b>44971</b>	<b>45299</b>	<b>328</b>	<b>0,73</b>		<b>1963</b>		<b>20,86</b>	<b>43336</b>	<b>62,44</b>	<b>215,26</b>

Feeding - Dry Matter Intake / cow

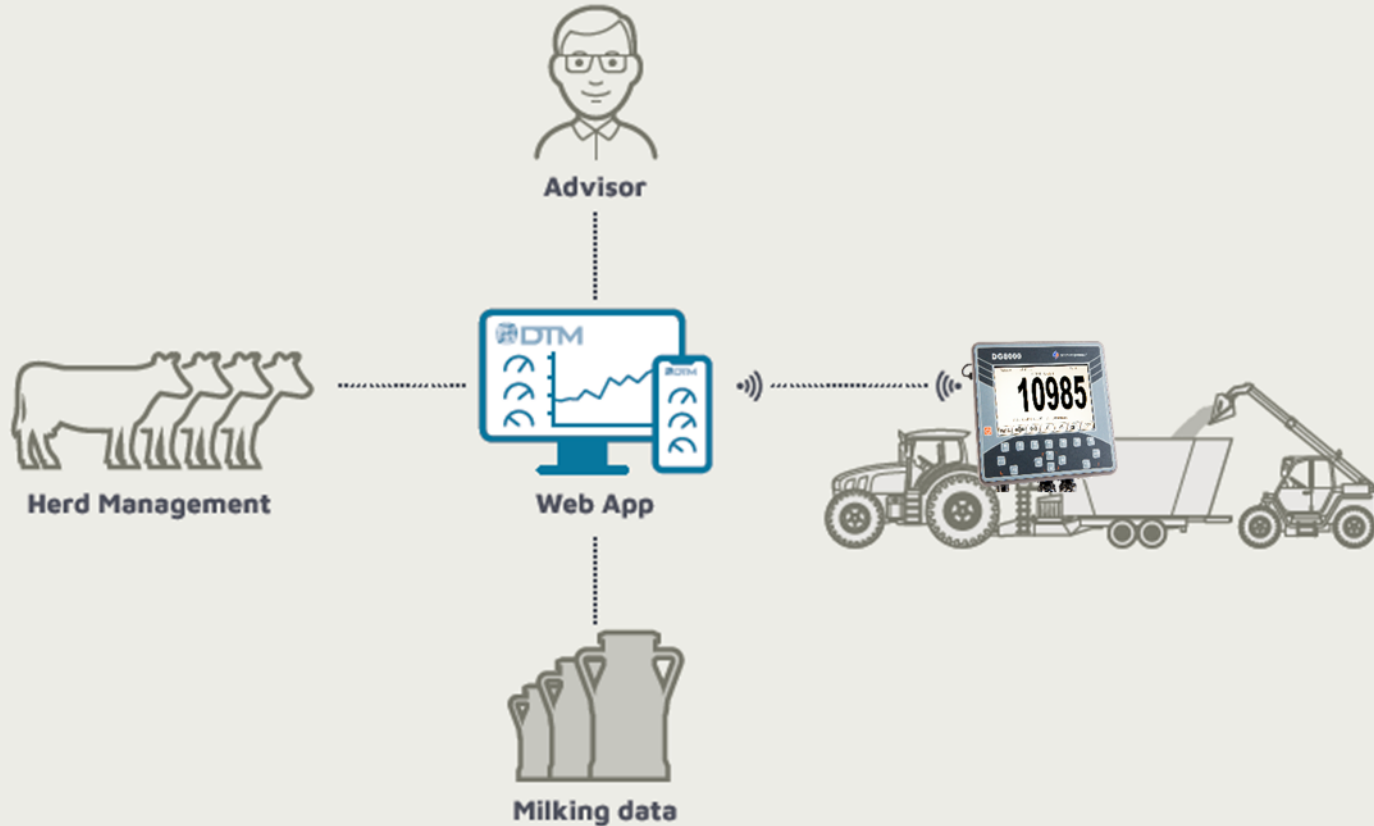


Feeding - Refused (%)



# DTM FEEDING SW - INTEGRATED SOLUTION

## CONNECTED FARM

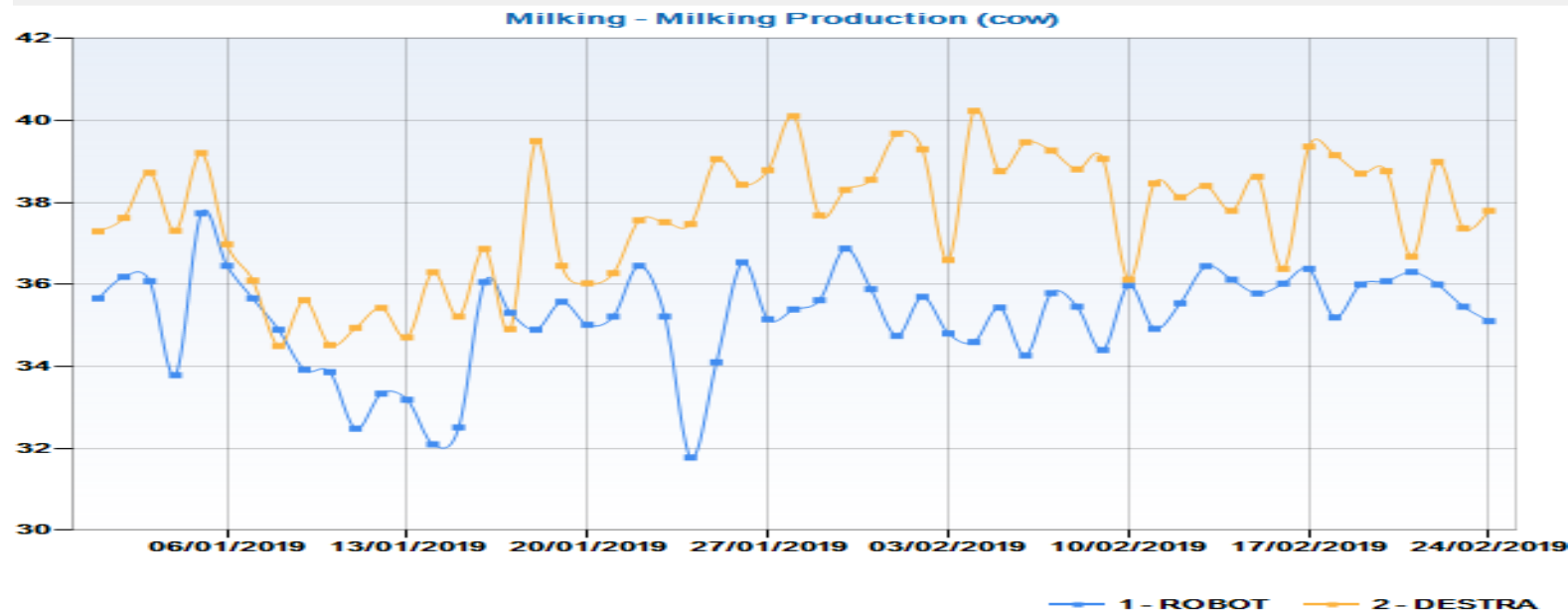


**INTEGRATE YOUR HERD MANAGEMENT SW  
TO AUTOMATIC IMPORT MILK AND COWS DATA**




# DTM Report (milk production/IOFC)

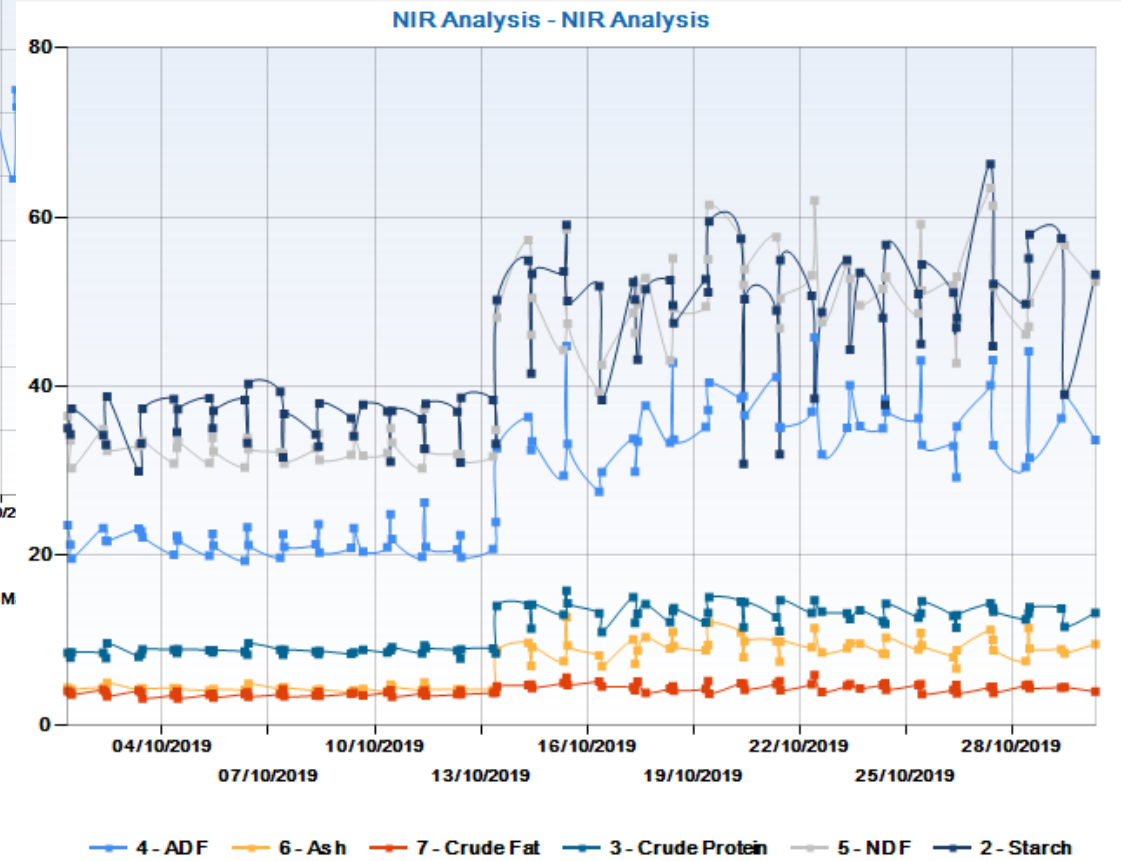
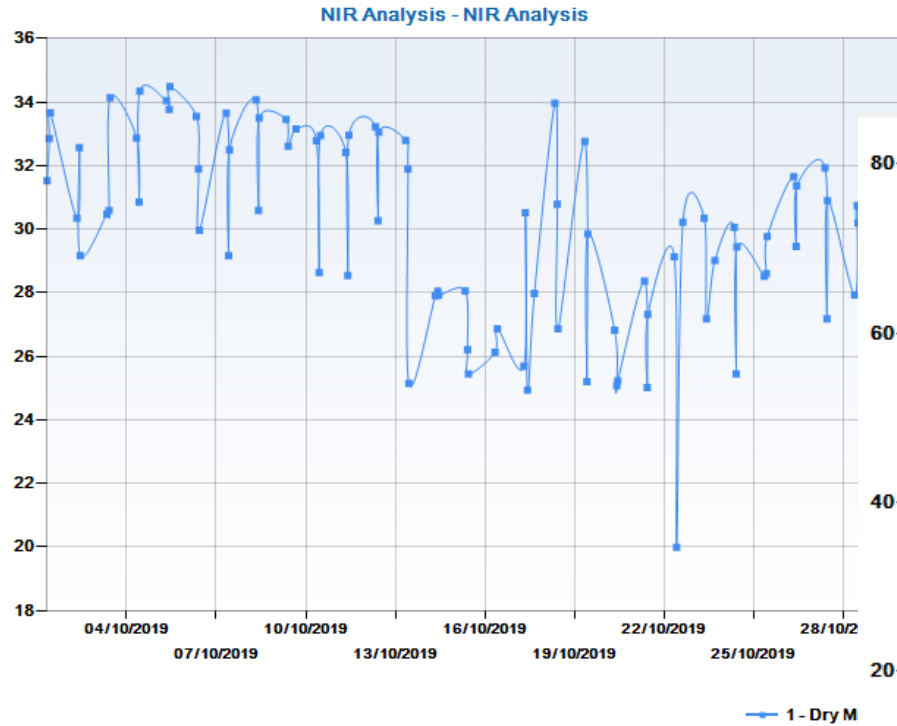
Date	Code	Pen	Pen Type	Avg cows #	Milk Quantity (Total)	Milk Quantity (cow)	Milk Price (U.o.M.)	Milk Yield (Total)	Milk Yield (cow)	Cost / Cow	Feed Efficiency (Milk Prod. / DMI)
24/02/2019	1	ROBOT	Lattazione	125	4.389,00	35,11	0,40 €	1.755,60 €	14,04 €	4,47 €	1,82
24/02/2019	2	DESTRA	Lattazione	90	3.402,00	37,80	0,40 €	1.360,80 €	15,12 €	5,83 €	1,60



# DTM Reports (NIR)

- FEEDING MANAGEMENT
  - HISTORY / REPORT
    - Batch History
    - Pen History
    - Pre Mix History
    - Refused
    - Scheduled Batch
    - Average of Loading
    - Times of the Loading
    - NIR Analysis: Statistics
    - History of Manual
    - Graphs
    - Key Performance Indicator
  - INVENTORY
  - MILK PRODUCTION DATA
  - AGRINIR/X-NIR
- The values of the Weight are in Kg
- 

Graphs



# DATA EXCHANGE

## 4G & WIFI DATA EXCHANGE



**Modem 4G**  
Compatibility with:  
DG600, DG8000-IC

4G Modem allows to transfer data from the weight indicator to DTM software without any limit of distance. Background synch allows to always have updated information for real time data-driven decisions.



**WIFI\_IP COM Kit**  
Compatibility with:  
DG8000, DG8000-IC

Transfer your data wirelessly even without a mobile network in the farm. IP COM solution gives the farmers the possibility to exchange data between the scale and the software in a range of 800 mt.

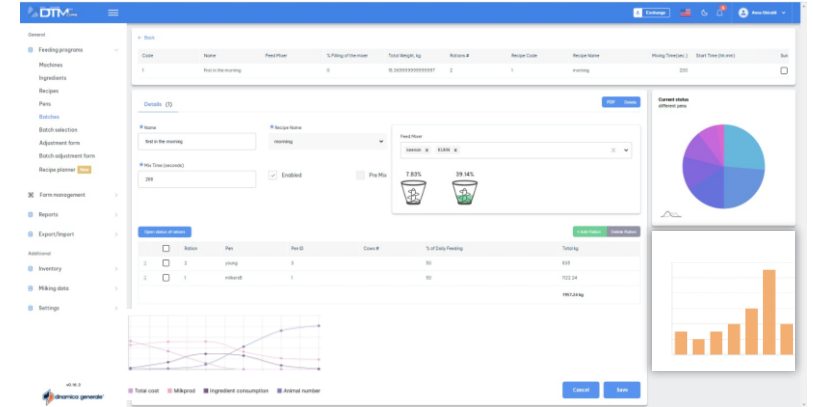
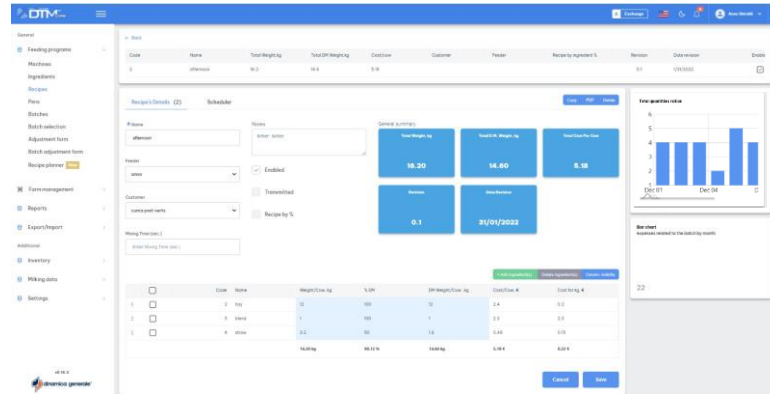
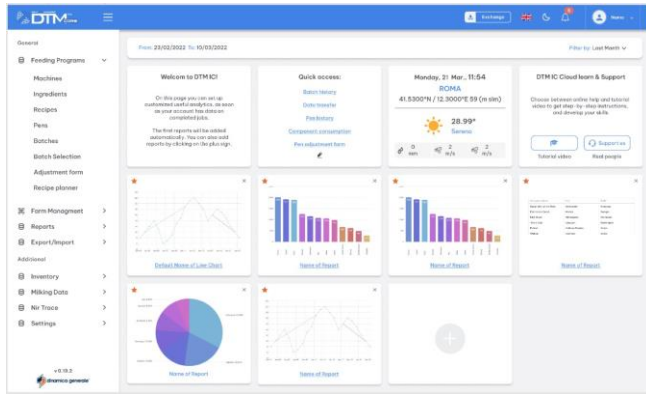


## MULTI MIXER MANAGEMENT



# DTM 8: NEW FEEDING SW

DINAMICA GENERALE IS DEVELOPING A **NEW PLATFORM** OF ITS **DTM SOFTWARE**



increased user experience

more features

customized reports

more integrated

more powerful



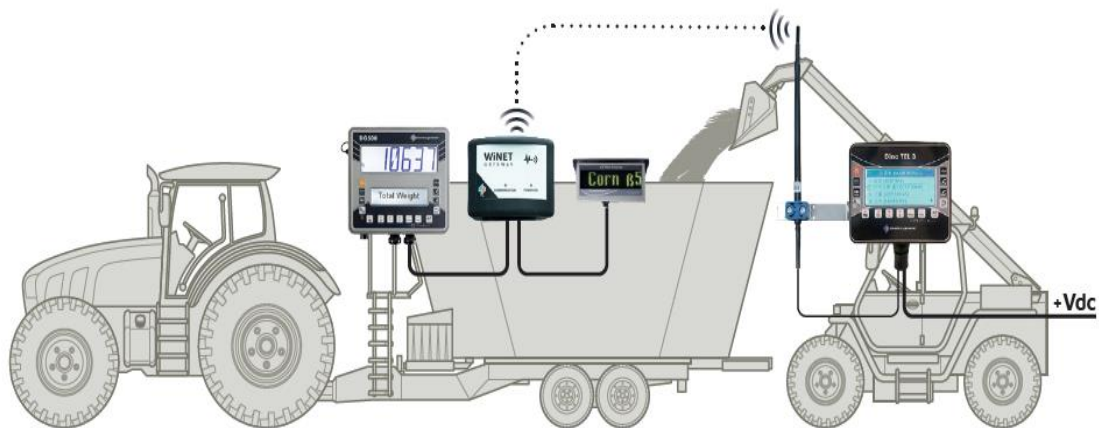
Alert messages

OFFICIALLY LAUNCHED IN



# DG500: CONFIGURATION EXAMPLES

## CONFIG A:



- DG500
- Extra Display
- DinaTEL3

## CONFIG B:



- DG500
- DG Wifi Gateway
- DinaTEL3 APP
- DTM Advanced sw + DTM Core APP

# DG 600: CONFIGURATION EXAMPLES

## CONFIG A:



- DG600
- DG Wifi Gateway
- FarmCHEF

## CONFIG B:

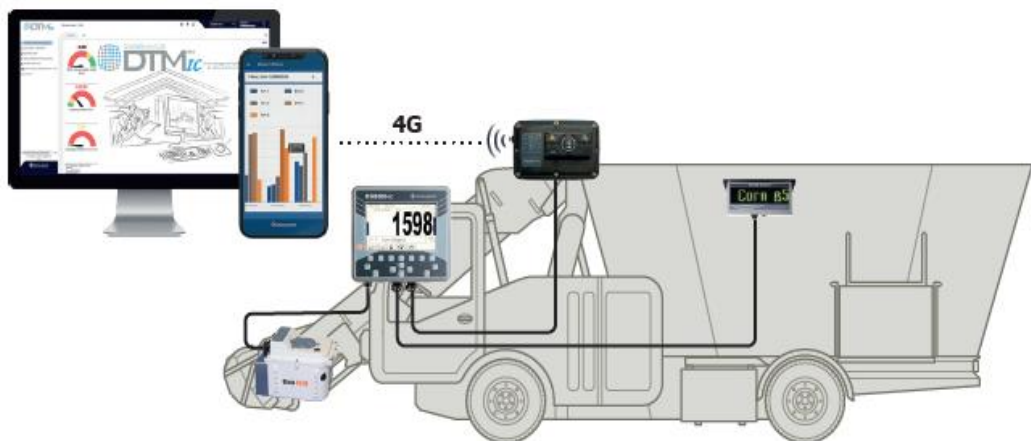


- DG600
- DG Wifi Gateway
- DinaTEL3 APP
- Modem 4G
- DTM Advanced sw + DTM Core APP



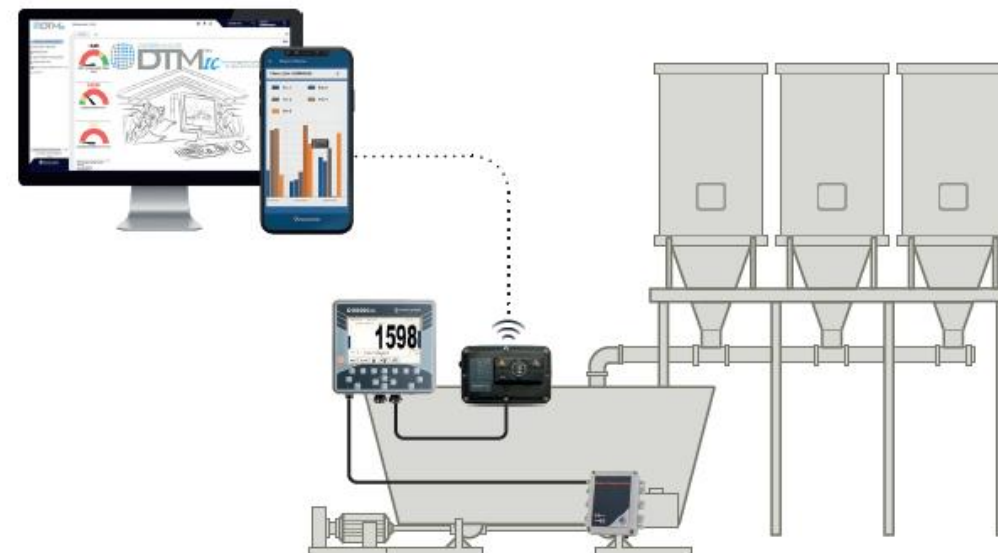
# DG8000 IC: CONFIGURATION EXAMPLES

## CONFIG A:



- DG8000IC
- Extra Display
- EvoNIR (**real time nir analysis**)
- Modem 4G
- DTM IC sw + DTM Core APP

## CONFIG B:



- DG8000IC
- Motor control box for **automation**
- Modem 4G
- DTM IC sw + DTM Core APP



**ON FARM SOLUTIONS**

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**THANK YOU**

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