

A photograph of several cows in a barn. They are standing behind a dark green metal fence. The cows are mostly black with white markings on their faces and legs. Some have small green ear tags. The background is dark, suggesting a stable environment.

PRIMJENA CNCPS SUSTAVA ANALIZA I FORMIRANJE OBROKA POMOĆU AMTS

Pero Gnjidić

17.02.2022.

Poznavanje kvalitete voluminoze ključan faktor – situacija

1. Nepostojanje raspoloživih analiza krmiva (eventualno vrlo oskudne analize)
2. Nepostojanje svijesti o potrebi analiziranja kvalitete krmiva
3. „Procjena“ na temelju „iskustva“ – odabir iz baze krmiva u programu
4. Korištenje podataka iz dostupne literature za nedostajuća krmiva
5. Eventualna korekcija „ključnih“ parametara temeljem vlastite procjene
6. Velika mogućnost odstupanja od stvarne situacije
7. Upitna vjerojatnost/realizacija postizanja željene (moguće) proizvodnje

Hranidba – situacija

1. Dominantno hranjenje „iz ruke”
2. Kvaliteta voluminoze dominantno slabija
3. Neizbalansirani obroci
4. Korištenje proteinskih krmiva nedovoljno
5. Nekritičko (preobilno) korištenje žitarica
6. Zdravstveni problemi uvjetovani neprikladnom hranidbom (češće acidoze, rjeđe višak proteina)
7. Rezultat: niska proizvodnja mlijeka, zdravstveni problemi, loša reprodukcija, negativna selekcija...

SASTAVLJANJE OBROKA NEKAD

Sano

Sano - Futter GmbH Grafenwald 1 84180 Loiching Telefon: 08744 / 96010 Telefax: 08744 / 960199	Pero Gnjidic Trg kralja Tomislava 3 32270 Zupanja 091/38-32-127, 032/832-127																																																																																																																																																																																																																								
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SANO ZAGREB d.o.o. Jakusevecka 49 10020 ZAGREB Telefon: 01/ 66 09 851, 66 09 852 Telefax: 01/ 66 09 728	Pero Gnjidic Trg kralja Tomislava 3/4 32270 Zupanja 00385 / 32 / 832 127 ----- Datum: 25.10.99 -----																																																																																																																																																																															
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2004. G. TEHNIKA KOJA OLAKŠAVA RAD I POBOLJŠAVA REZULTATE - TMR

Sano



KASNIJE – TERENSKA NIR ANALIZA

Sano



INFORMACIJA O OSNOVAMA KEMIJSKOG SASTAVA



Kukuruzna silaža

DONA D'ONOFRIO / **Dona d'Onofrio**

Dinamica Generale
Agri NIR
Analyzer

Via Mondadori 15
46025 Poggio Rusco
Mantova - ITALY
tel. ++39 - 0386 - 52134

Customer Cod: 33
Company: DINAMICA

Sample ID: 21
NIR family: 1

"Corn Silage"

	%AsIs	%DM
Moisture:	64.8	35.2
Starch:	7.3	20.7
Protein:	2.7	7.6
RDF:	9.1	26.0
NDF:	15.6	44.2
Ash:	1.5	4.1
Crude Fat:	0.8	2.3

13:49:42 - 2/03/2013
Machine S/N: 1ZZ264WN

DONA D'ONOFRIO / **Dona d'Onofrio**

Dinamica Generale
Agri NIR
Analyzer

Via Mondadori 15
46025 Poggio Rusco
Mantova - ITALY
tel. ++39 - 0386 - 52134

Customer Cod: 33
Company: DINAMICA

Sample ID: 22
NIR family: 1

"Corn Silage"

	%AsIs	%DM
Moisture:	63.5	36.5
Starch:	7.6	20.8
Protein:	2.8	7.6
RDF:	9.3	25.5
NDF:	16.0	43.9
Ash:	1.5	4.0
Crude Fat:	0.9	2.4

13:52:13 - 2/03/2013
Machine S/N: 1ZZ264WN

DONA D'ONOFRIO / **Dona d'Onofrio**

Dinamica Generale
Agri NIR
Analyzer

Via Mondadori 15
46025 Poggio Rusco
Mantova - ITALY
tel. ++39 - 0386 - 52134

Customer Cod: 33
Company: DINAMICA

Sample ID: 24
NIR family: 1

"Corn Silage"

	%AsIs	%DM
Moisture:	61.6	38.4
Starch:	9.9	25.8
Protein:	2.9	7.5
RDF:	9.0	23.5
NDF:	16.0	41.7
Ash:	1.5	3.9
Crude Fat:	1.0	2.6

13:58:30 - 2/03/2013
Machine S/N: 1ZZ264WN

DONA D'ONOFRIO / **Dona d'Onofrio**

Dinamica Generale
Agri NIR
Analyzer

Via Mondadori 15
46025 Poggio Rusco
Mantova - ITALY
tel. ++39 - 0386 - 52134

Customer Cod: 33
Company: DINAMICA

Sample ID: 23
NIR family: 1

"Corn Silage"

	%AsIs	%DM
Moisture:	62.7	37.3
Starch:	9.3	25.0
Protein:	2.8	7.4
RDF:	8.9	23.9
NDF:	15.6	42.0
Ash:	1.5	4.0
Crude Fat:	0.9	2.4

13:56:22 - 2/03/2013
Machine S/N: 1ZZ264WN

Sijeno lucerne

SANO
AgriNIR
Analyzer

Industrijska 1, Potok
44314 Popovaca
HRVATSKA
tel. ++385 44 568 000

Customer Cod: 2
Company: SANO HR

Sample ID: 917
NIR family: 4

"Sijeno Lucerne"

	%AsIs	%DM
Vlaga:	13.7	86.3
Skrob:	n.a.	n.a.
S.Protein:	11.6	13.5
ADF:	26.0	30.1
NDF:	40.6	47.0
Pepeo:	8.5	9.8
S. Mast:	1.2	1.4

18:27:22 - 8/02/2017
Machine S/N: 1ZZ264WN

INTENZITET PROIZVODNJE MLIJEČNIH KRAVA STALNO SE POVEĆAVA

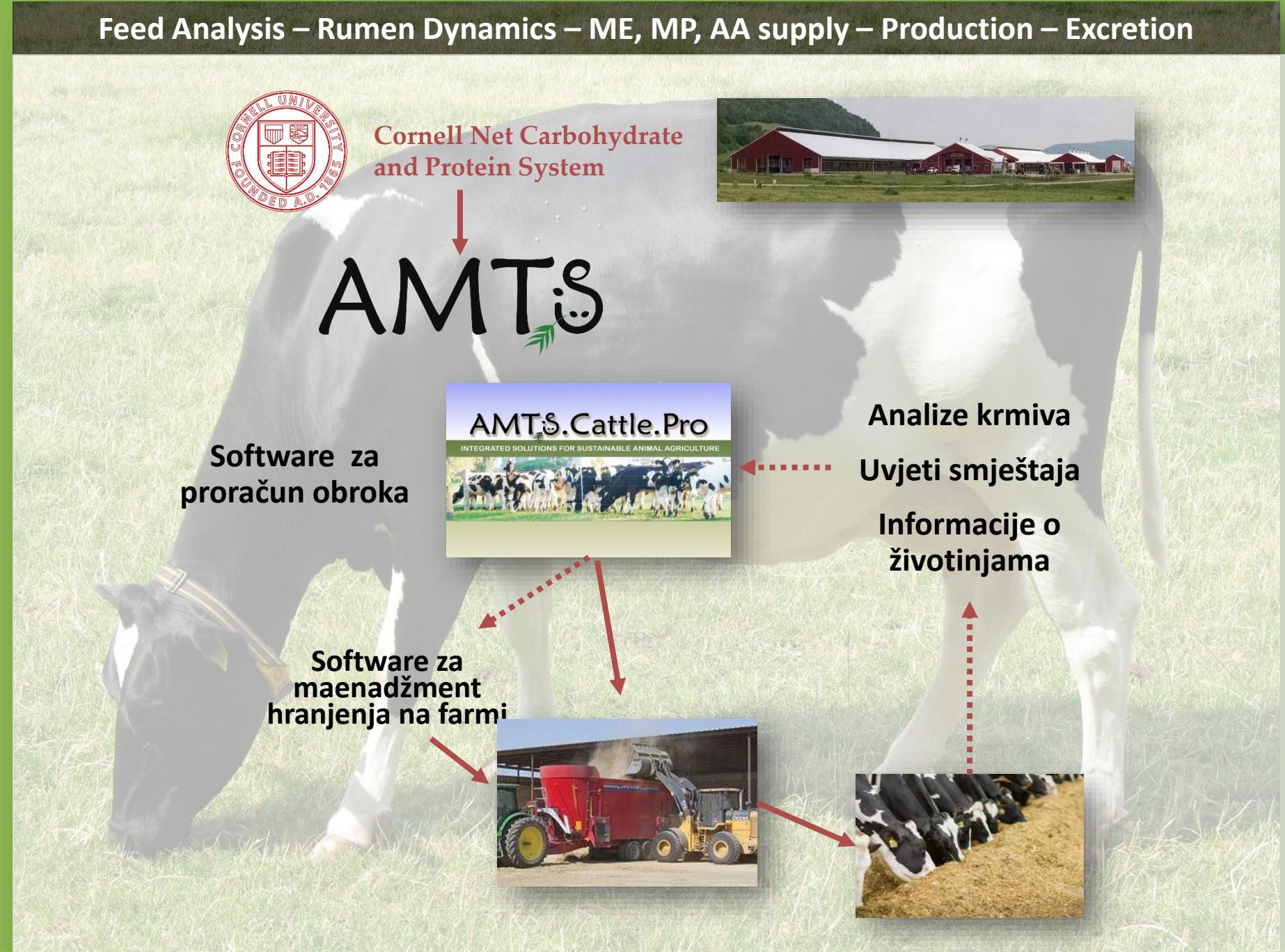
Sano

- Genetika
- Kvaliteta voluminoze
- Management
- Precizna hranidba



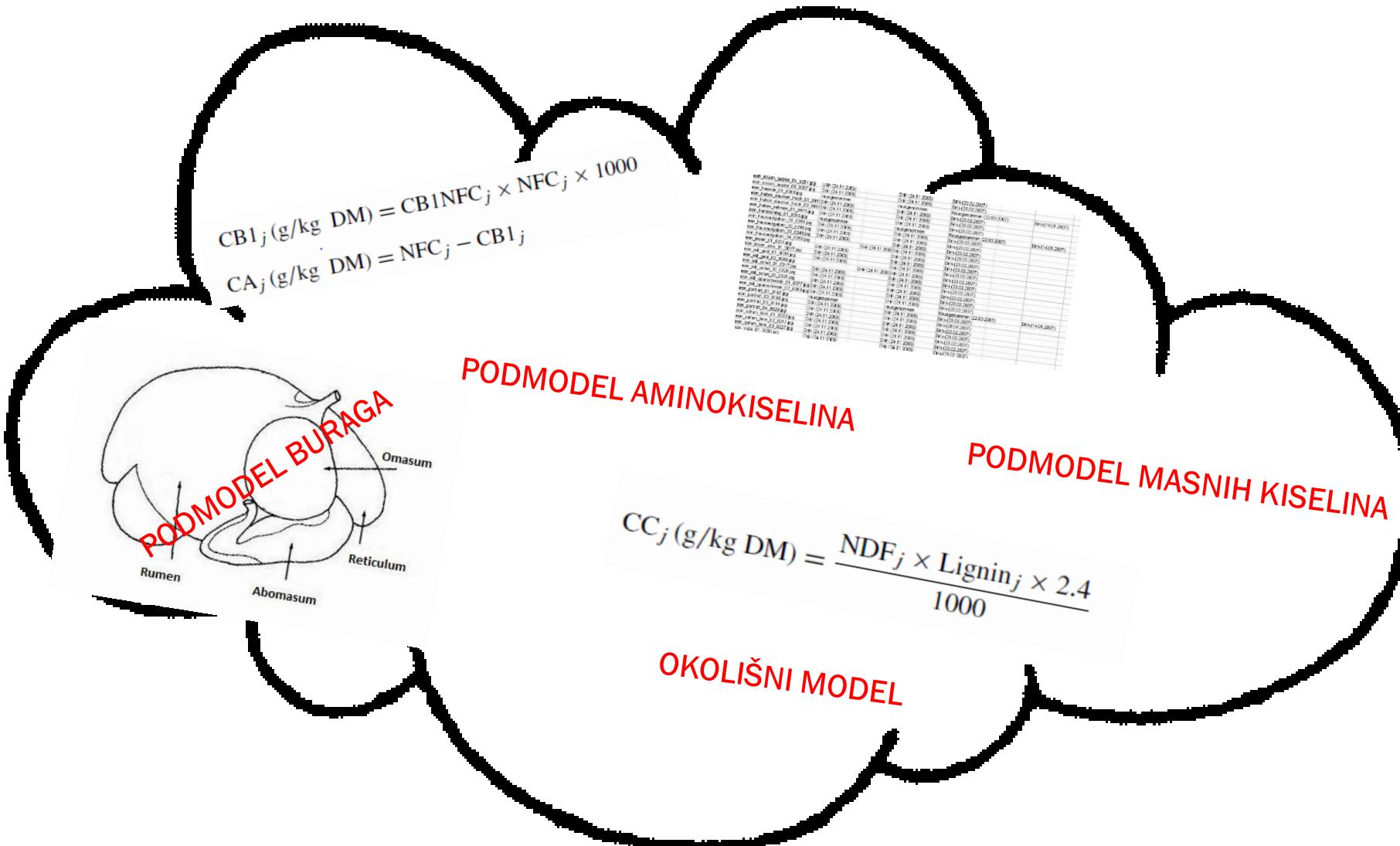
Što je CNCPS?

- CNCPS je kratica za **Cornell Net Carbohydrate and Protein System**
- AMTS.Cattle.Pro je softver s najrelevantnijim CNCPS proračunima
- AMTS.Cattle.Pro integrira podatke o kvaliteti krmiva pri sastavljanju obroka uzimajući u obzir kemijska i dinamička svojstva krmiva



CNCPS - CORNELL NET CARBOHYDRATE AND PROTEIN SYSTEM

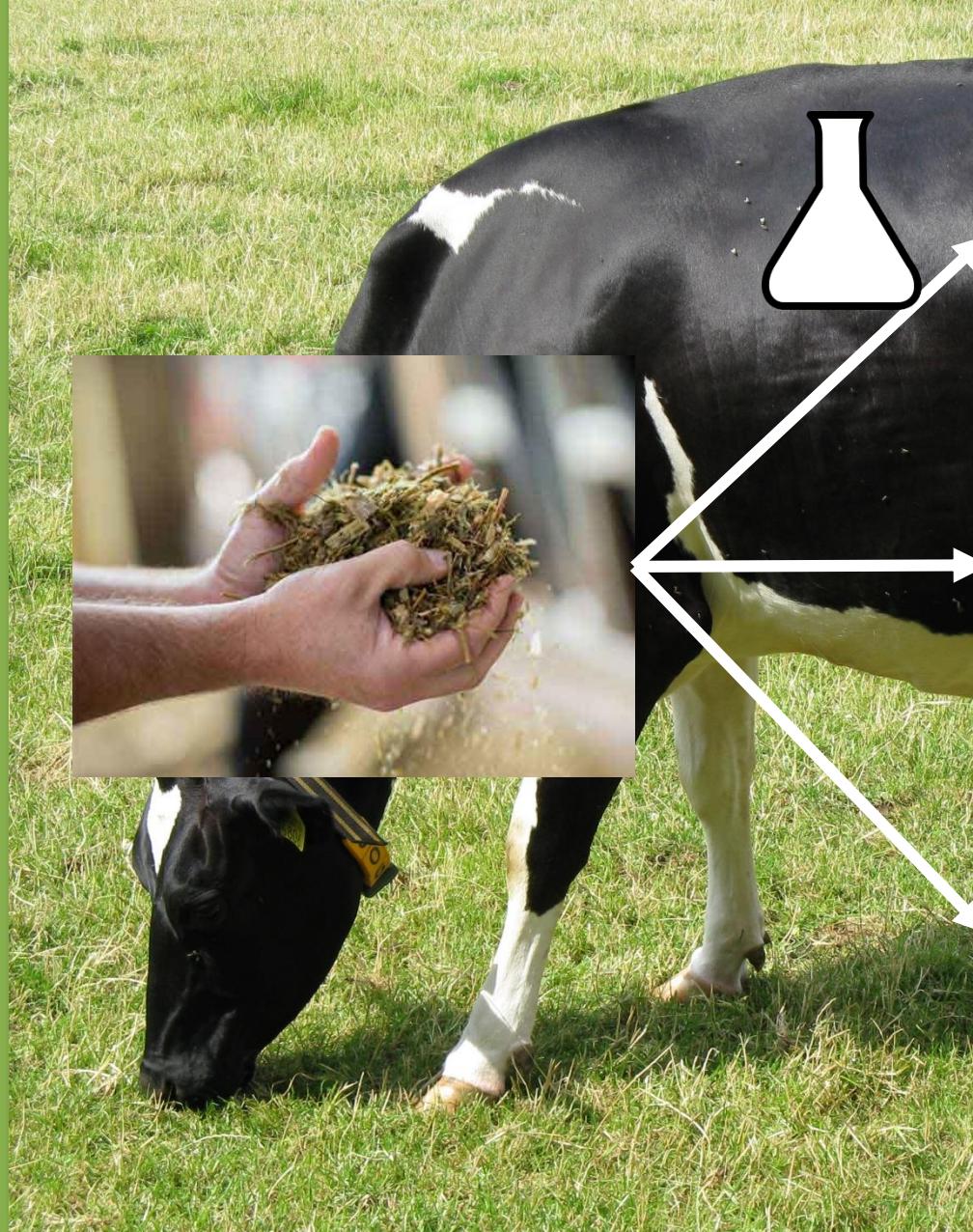
Sano



Analize hrane prema CNCPS

- Uzroci krmiva testiraju se u laboratoriju
- Analize uključuju određivanje kemijskog sastava
- Uz to određuje se probavljivost ugljikohidrata
- Važno je dovoljno često analizirati krmiva

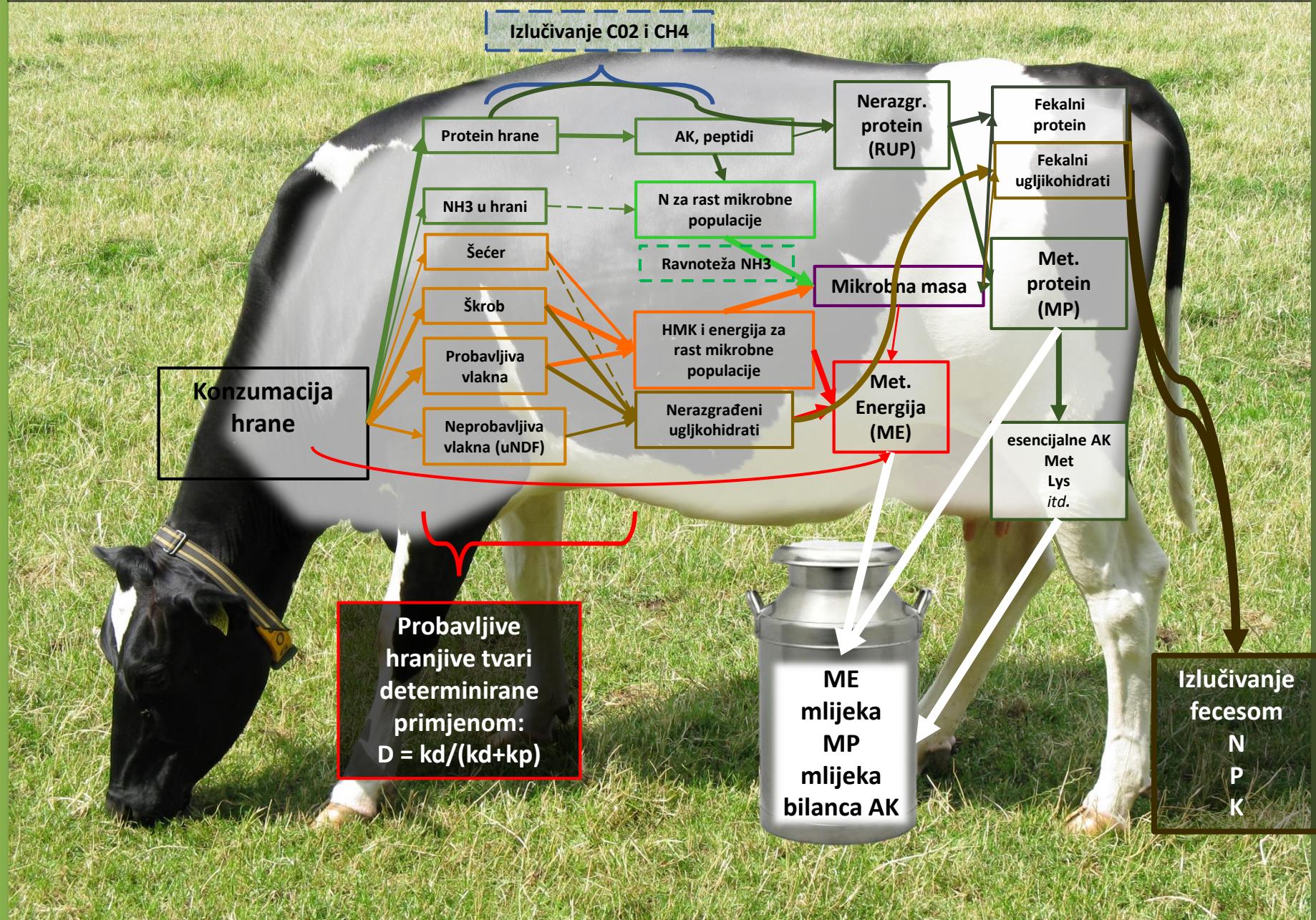
Feed Analysis – Rumen Dynamics – ME, MP, AA supply – Production – Excretion



Frakcije ugljikohidrata	Frakcije proteina
Hlapive masne kiseline	Amonijak
Šećeri	Razgradivi protein
Škrob	Nerazgradivi protein
Vlakna	Neiskoristivi protein
Probavljivost	
Probavljivost škroba	
Probavljivost vlakana (NDFd)	
Ostale karakteristike	
Minerali	
Aminokiseline	
Masne kiseline	
Pepeo	

- Primjena najnovijeg CNCPS modela
- Dinamički sistem koji omogućuje interakciju između krmiva i mikrobne populacije
- Precizan sistem koji predviđa proizvodnju temeljem raspoložive hrane na farmi, osobina krava na farmi, u raspoloživim uvjetima držanja

Feed Analysis – Rumen Dynamics – ME, MP, AA supply – Production – Excretion

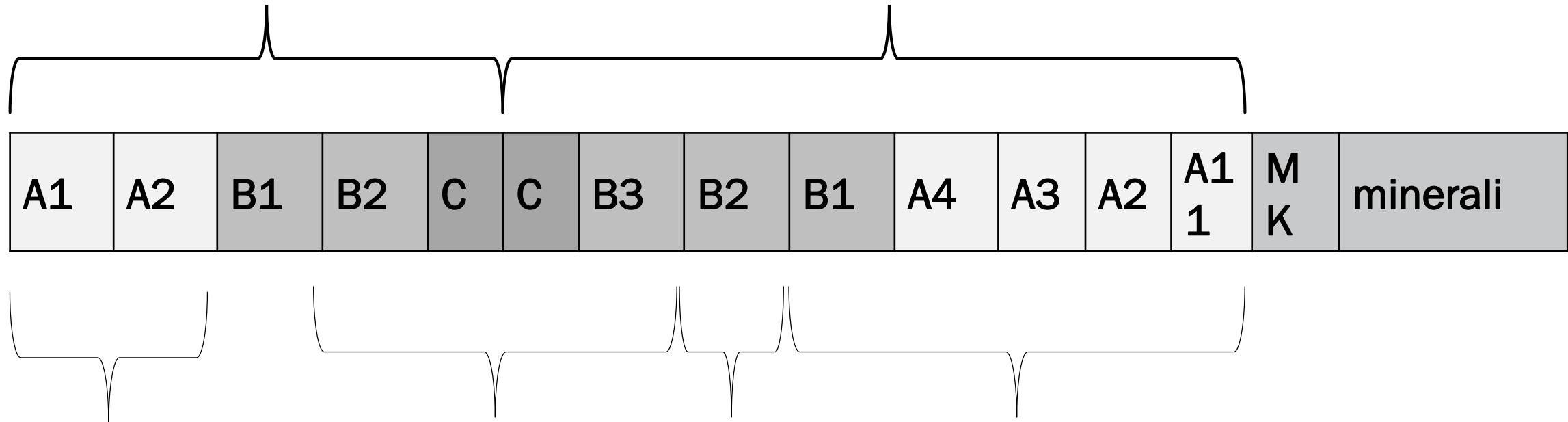


SASTAV VOLUMINOZNIH KRMIVA PREMA CNCPS

Sano

Sirovi protein

Ugljikohidrati



Topivi N i protein

NDF

topiva
vlakna

Ne strukturni ugljikohidrati

SANO LAB - KRMIVA I ANALITIČKI PAKETI

Sano

Kopiju rezultata šaljite na:	Ime & Email 1: p.g@sanoeu.com					
	Ime & Email 2:					
Odgovorni Sano savjetnik:	GNJIDIĆ					
Uzorak						
Vrsta uzorka: Obavezna težina:	Kukuruzna silaža 700 - 1.000 g	Travna silaža 600 - 1.000 g	Silaža lucerne 600 - 1.000 g	Sijeno (trava ili lucerna) 150 - 400 g	Silaža cijele biljke žitarica (pšenica,raž,zob,tritikal) 700 - 1.000 g	Žitarice ili sačme 90 g
	Silirano zrno kukuruza 700 - 1.000 g	Silirani klip kukuruza 700 - 1.000 g	Silirani repini rezanci 700 - 1.000 g	TMR 700 - 1.000 g		
Otkos:	<input type="radio"/> 1.Otkos	<input type="radio"/> 2.Otkos	<input type="radio"/> 3.Otkos	<input type="radio"/> 4.Otkos	<input type="radio"/> 5.Otkos	Godina 2021
Da li su korišteni aditivi prilikom siliranja?	DA	Naziv aditiva:	LABACSL DUO			
Broj silosa:	1					
Datum/Vrijeme uzorkovanja:	09.02.2022.					
Analiza:	NIR+ <input checked="" type="checkbox"/>	445,20 kn + PDV	Metoda mokre kemije (uključen NIR+)	<input type="checkbox"/>	742 kn +PDV	
	NIR+ X <input type="checkbox"/>	637,00 kn+ PDV	Minerali-XRF	<input type="checkbox"/>	259,00 kn +PDV	
	NIR analiza žitarica i sačmi <input type="checkbox"/>		90,00 kn +PDV			
Datum i potpis	09.02.2022. Pero Gnjidic					

Poznavanje kvalitete voluminoze ključan faktor – situacija

1. Moguća kvalitetna analiza krmiva – SANO LAB
2. Razvijanje svijesti farmera o potrebi detaljnog poznavanja kvalitete krmiva
3. Detaljni podaci o kemijskom sastavu i dinamičkim svojstvima krmiva
4. Velika podudarnost sa stvarnom situacijom
5. Vjerojatnost/realizacija postizanja željene (moguće) proizvodnje puno veća

KVALITETNA KUKURUZNA SILAŽA

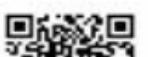
Sano



KUK SIL, SILOS BR 1,#HR0000006808#

SAMPLE INFORMATION				MINERALS	
Lab ID:	31573 098	Version:	1.0	Ash (%DM)	3.36
Crop Year:		Series:		Calcium (%DM)	0.21
Feed Type:	CORN SILAGE	Cutting#:		Phosphorus (%DM)	0.24
Package:	BASIC NIR			Magnesium (%DM)	0.20
NIR ANALYSIS RESULTS				Potassium (%DM)	0.79
Moisture			66.0	Sulfur (%DM)	0.12
Dry Matter			34.0	Sodium (%DM)	
PROTEINS				Chloride (%DM)	
Crude Protein			7.4	Iron (PPM)	
Adjusted Protein			7.4	Manganese (PPM)	
Soluble Protein			55.5	Zinc (PPM)	
Ammonia (CPE)	16.3		9.1	Copper (PPM)	
ADF Protein (ADICP)			0.67	Molybdenum (PPM)	
NDF Protein (NDICP)			11.1	QUALITATIVE	
NDR Protein (NDRCP)			0.82	pH	3.76
Rumen Degr. Protein			12.3	Total VFA (%DM)	7.89
Amino Acid Protein, Total			0.91	Lactic Acid (%DM)	6.18
FIBER				Lactic as % of Total VFA	78
ADF			61.3	Acetic Acid (%DM)	1.71
aNDF		43.3	27.0	Butyric Acid (%DM)	
NDR (NDF w/o sulfite)			44.0	1, 2 Propanediol (%DM)	0.26
Crude Fiber				Nitrate Ion (%DM)	
Lignin			8.46	Nitrate-Nitrogen, ppm	
NDF Digestibility (12 hr)	30.1	13.0	31.1	Soil Contamination Probability	Probable low to none
NDF Digestibility (24 hr)				NIR Statistical Confidence	Excellent prediction potential
NDF Digestibility (30 hr)	48.4	20.9	48.1	ENERGY & INDEX CALCULATIONS	
NDF Digestibility (72 hr)			21.1	TDN (%DM)	70.0
NDF Digestibility (120 hr)	59.5	25.7	59.0	Net Energy Lactation (mj/kg)	6.67
NDF Digestibility (240 hr)	62.0	26.8	61.6	Net Energy Maintenance (mj/kg)	7.32
uNDF (12 hr)	69.9	30.3		Net Energy Gain (mj/kg)	4.73
uNDF (30 hr)	51.6	22.4	51.9	ME (mj/kg)	11.16
uNDF (120 hr)	40.6	17.6	41.0	AA Protein as % of Total Protein	62.6
uNDF (240 hr)	38.0	16.5	38.4	NDF Dig. Rate (Kd, %HR, Van Amburgh, Lignin*2.4)	2.94
CARBOHYDRATES				NDF Dig. Rate (Kd, %HR, uNDF)	4.2
Silage Acids			18.3	Starch Dig. Rate (Kd, %HR, Mertens)	22.8
Ethanol Soluble CHO (ESC-Sugar)			7.9	Relative Feed Value (RFV)	
Water Soluble CHO (WSC-Sugar)			2.0	Relative Forage Quality (RFQ)	
Starch			2.2	Milk per Ton (kg/tonne)	1508
Soluble Starch			70.1	Dig. Organic Matter Index (kg/tonne)	
Soluble Fiber			30.3	Non Fiber Carbohydrates (%DM)	43.2
Starch Dig. (7 hr, 4 mm)	77.7		13.6	Non Structural Carbohydrates, ESC (%DM)	31.2
Crude Fat			5.87	Non Structural Carbohydrates, WSC (%DM)	32.5
Fatty Acids, Total			2.95	DCAD (meq/100gdm)	
C16:0			2.39	RFC - Fill Index	2.24
C18:0			0.43	Summative Index % (Mass Balance)	101.1
C18:1			0.06		
C18:2			0.42		
C18:3			1.20		
			0.15		

Additional sample information submitted



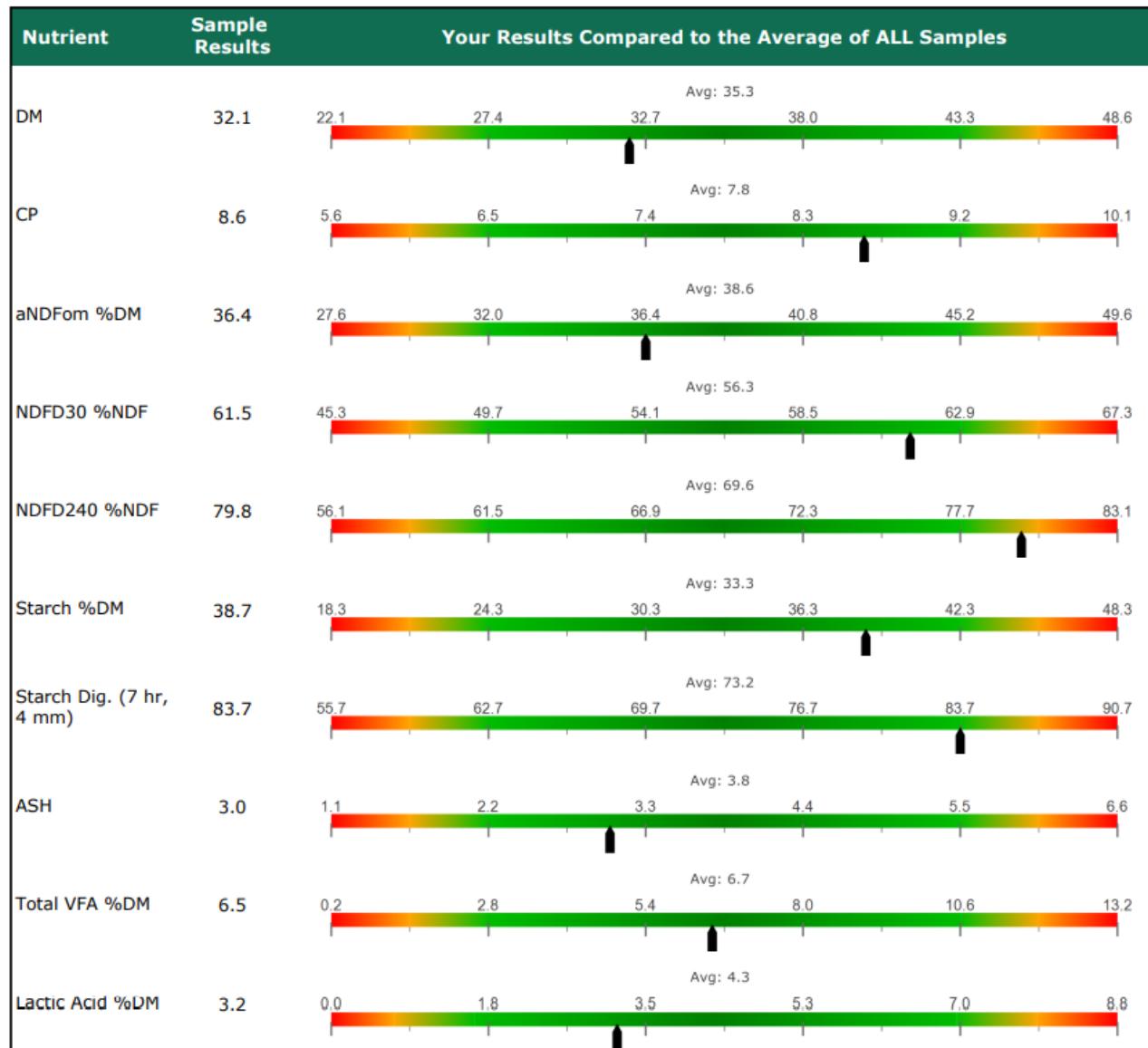
NAJAVAŽNIJI PARAMETRI KUKURUZNE SILAŽE

Sano

Analytischer Befund	Einheit	Durchschnittswerte
TS	%	32,5
aNDFom	% TS	40
Stärke	% TS	32,5
NDFDom 30h	% NDFom	60
NDFDom 120h	% NDFom	70
NDFDom 240h	% NDFom	75
Stärke Verd. (7 hr, 4 mm)	% Stärke	80
XP	% TS	7,5
XL	% TS	2,5
XA	% TS	4
FFS	% TS	8
WSC/ESC	% TS	2
ADICP	% XP	8
NDICP	% XP	12
Lösl. Protein	% XP	45

Nutrient Comparison for : CORN SILAGE

Sano



The graphs above represent 2 years of CVAS data. Green represents 86.6% of population data; orange represents 8.8% of population data; Red represents 3.4% of population data. The black pointer indicates your data relative to the population distribution.

of population data; Red represents 3.4% of population data. The black pointer indicates your data relative to the population distribution.

PROBAVLJIVOST ŠKROBA

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	Current Feed Value	New Version	Difference
Feed Name	Mais (Mehl)	Mais (Mehl)	--
Source	pfissore	pfissore	--
Source ID	01040	01040	--
ADF (%DM)	4.00	4.00	0 %
aNDFom (%DM)	9.00	9.00	0 %
CHO-B1 kd (%/hr) [Starch]	30.00	13.09	-56 %
CHO-B3 kd (%/hr) [Avail. NDF]	6.00	6.00	0 %
uNDF (%DM)	0.00	0.00	0 %
dStarch2 (%Starch)	45.12	23.03	-49 %
dStarch7 (%Starch)	87.75	60.00	-32 %
pef (%)	25.00	25.00	0 %

PROBAVLJIVOST ŠKROBA

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ME & MP Production

	Milk (kg)	Fat (%)	TP (%)
Trq:	40.0	3.80	3.12
ME:	37.6	N/A	N/A
MP:	42.7	N/A	N/A

ME & MP Production

	Milk (kg)	Fat (%)	TP (%)
Trq:	40.0	3.80	3.12
ME:	37.4	-0.2 kg	N/A
MP:	39.9	-2.8 kg	N/A

ČEMU SLUŽE REZULTATI ANALIZA?

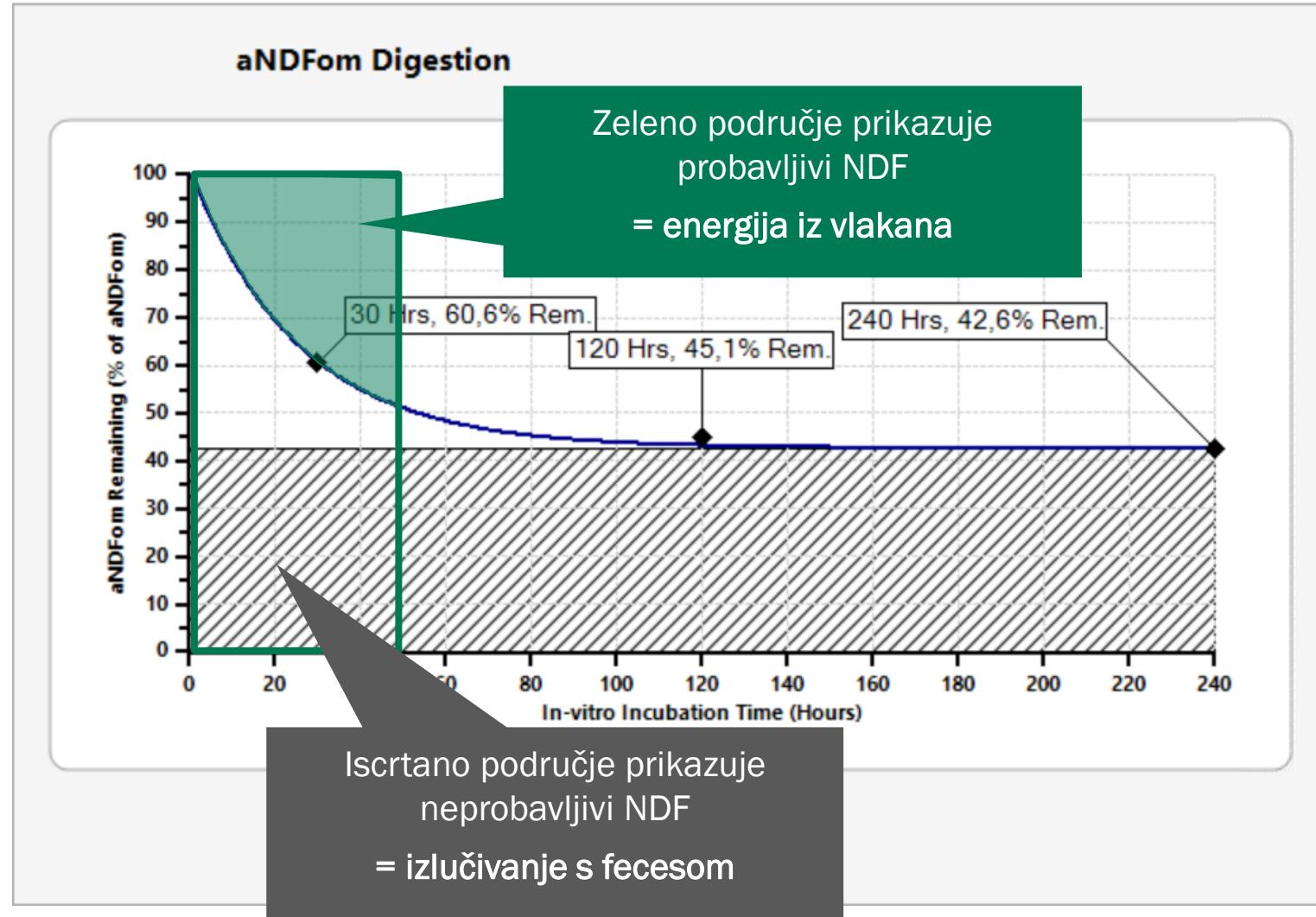
Sano

- 1. Sastavljanje obroka na temelju pouzdanih podataka o krmivima
- 2. Ocjena trenutka košnje/spremanja silaže i preporuke za buduća spremanja silaže
- 3. Ocjena kvalitete hibrida/sorti
- 4. Ocjena kvalitete fermentacije i preporuke za poboljšanje
- 5. Ocjena higijene spremanja silaže i posljedične preporuke

HRANJIVE TVARI I PROBAVLJIVOST

Sano

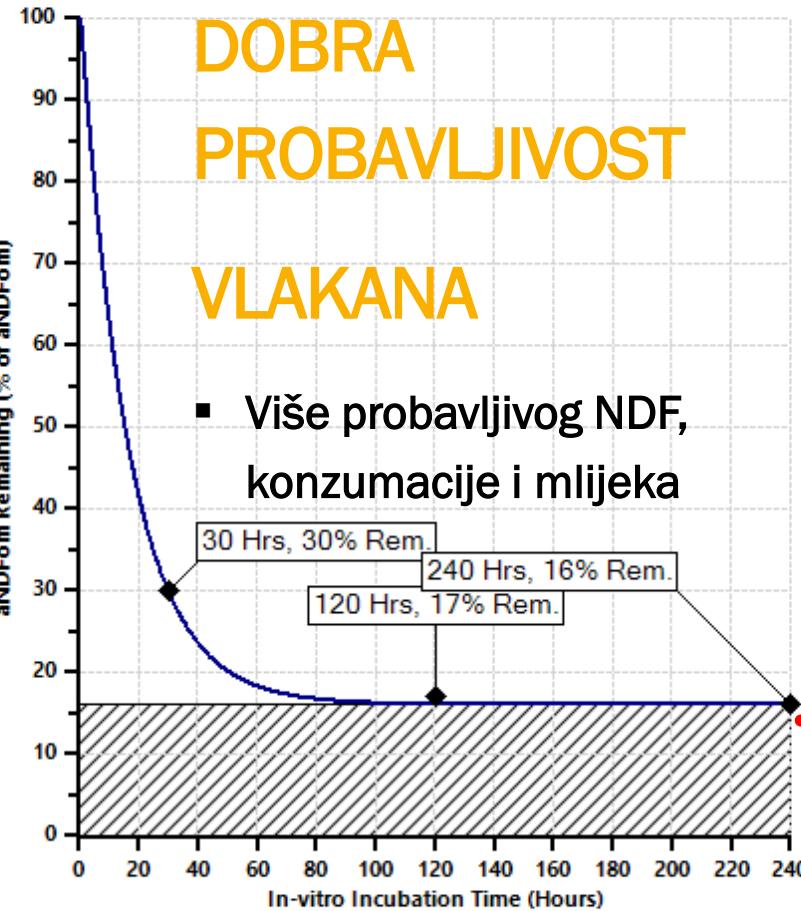
	CP-:	CHO-:	
NPN			
NH ₃ Harnstoff	A1	A1	Acetat Propionat Butyrat
Nitrat			Lactat
Peptide	A2	A2	Malat
		A3	Zucker Fruktane
		A4	Stärke
Albumine Globuline	B1	B1	Pectin
Gluteline	B2	B2	Hemi-cellulose
Extensine	B3	B3	Cellulose
Lignin N Tannin N	C	C	Lignin
Lösliches Protein			
NDF			Faser Kohlehydrate (FC)
löslicher N			Nicht Faser Kohlehydrate (NFC) Nicht Struktur Kohlehydrate (NSC: Zellinhaltsstoffe)
löslicher N			Struktur Kohlehydrate (SC: Zellwand)
löslicher N			
Rohasche			
Rohfett			



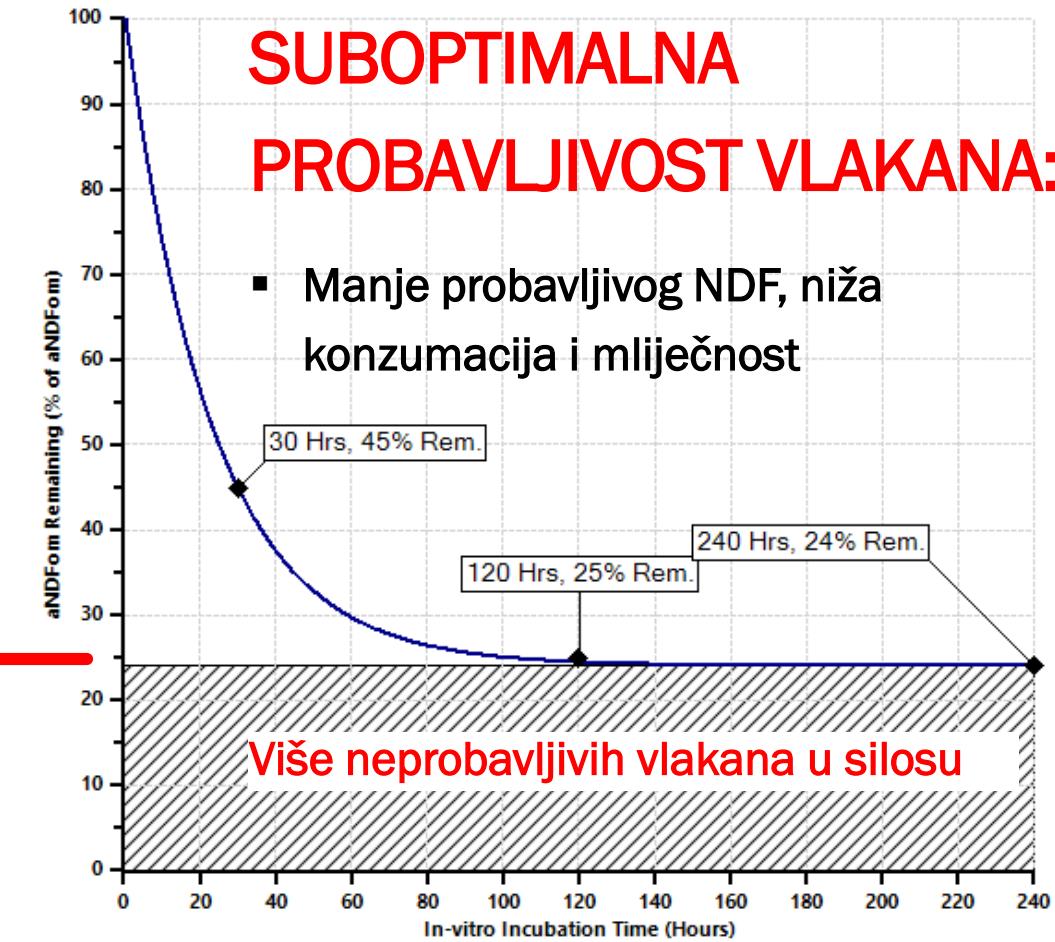
PPROBAVLJIVOST TRAVNIH SILAŽA

Sano

aNDFom Digestion - Grassilage TOP 35DM 55 NDF 16 XP



aNDFom Digestion - Grassilage POOR 35DM 55 NDF 16XP



— Predicted ◆ Observed

— Predicted ◆ Observed

SILAŽA LJULJA, SILOS 3#HR0000005135#

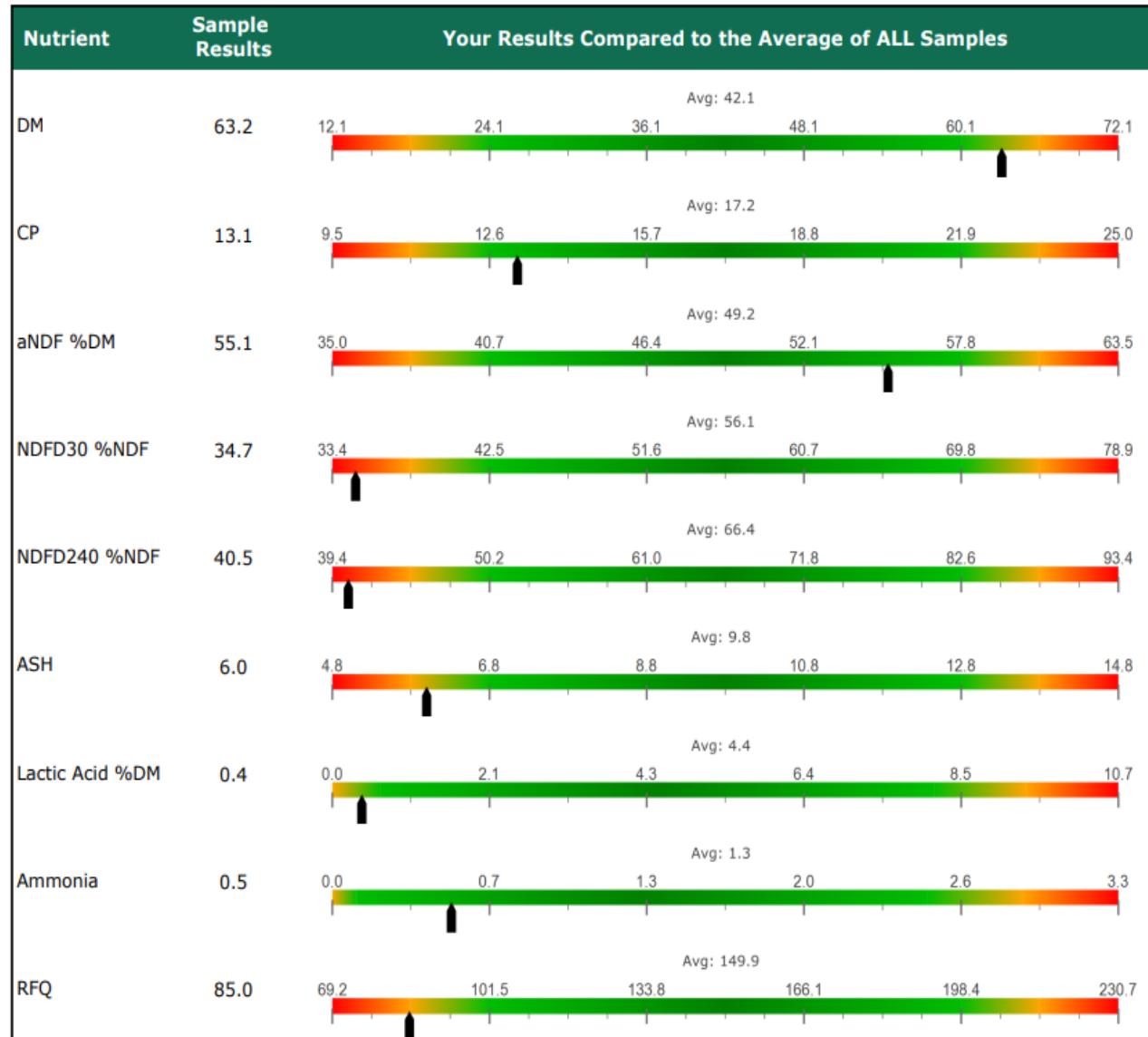
SAMPLE INFORMATION				MINERALS			
Lab ID:	31137 178	Version:	1.0	Ash (%DM)	9.44		
Crop Year:	2021	Series:		Calcium (%DM)	0.57		
Feed Type:	MIXED FORAGE	Cutting#:	1	Phosphorus (%DM)	0.47		
Package:	NIR Wet Minerals, Cl, S			Magnesium (%DM)	0.17		
NIR ANALYSIS RESULTS				Potassium (%DM)	4.66		
Moisture	75.6			Sulfur (%DM)	0.22		
Dry Matter	24.4			Sodium (%DM)	0.12		
PROTEINS				Chloride (%DM)	0.57		
Crude Protein				Iron (PPM)	389		
Adjusted Protein				Manganese (PPM)	116		
Soluble Protein		72.3	15.5	Zinc (PPM)	31		
Ammonia (CPE)	14.7	10.6	2.27	Copper (PPM)	14		
ADF Protein (ADICP)		3.8	0.82	Molybdenum (PPM)			
NDF Protein (NDICP)		7.3	1.57	QUALITATIVE			
NDR Protein (NDRCP)				pH	3.25		
Rumen Degr. Protein		86.1	18.4	Total VFA (%DM)	17.43		
Amino Acid Protein, Total		59.3	12.69	Lactic Acid (%DM)	13.05		
FIBER				Lactic as % of Total VFA	75		
	%NDFom	NDFom %DM	% NDF	Acetic Acid (%DM)	3.52		
ADF			67.4	Butyric Acid (%DM)	0.86		
aNDF		42.9		1, 2 Propanediol (%DM)			
NDF (NDF w/o sulfite)				Nitrate Ion (%DM)			
Crude Fiber				Nitrate-Nitrogen, ppm			
Lignin			5.40	Soil Contamination Probability	Probable low to none		
NDF Digestibility (12 hr)	74.4	31.9	74.1	NIR Statistical Confidence	Good prediction potential		
NDF Digestibility (24 hr)				ENERGY & INDEX CALCULATIONS			
NDF Digestibility (30 hr)	87.0	37.3	86.1	TDN (%DM)	70.6		
NDF Digestibility (72 hr)				Net Energy Lactation (mj/kg)	6.73		
NDF Digestibility (120 hr)	96.1	41.2	95.1	Net Energy Maintenance (mj/kg)	7.42		
NDF Digestibility (240 hr)	98.0	42.0	97.0	Net Energy Gain (mj/kg)	4.81		
uNDF (12 hr)	25.6	11.0		ME (mj/kg)	11.27		
uNDF (30 hr)	13.0	5.6	13.9	AA Protein as % of Total Protein	59.3		
uNDF (120 hr)	3.9	1.7	4.9	NDF Dig. Rate (Kd, %HR, Van Amburgh, Lignin*2.4)	8.76		
uNDF (240 hr)	2.0	0.9	3.0	NDF Dig. Rate (Kd, %HR, uNDF)	6.1		
CARBOHYDRATES				Starch Dig. Rate (Kd, %HR, Mertens)			
Silage Acids			81.5	Relative Feed Value (RFV)	141		
Ethanol Soluble CHO (ESC-Sugar)			4.0	Relative Forage Quality (RFQ)	255		
Water Soluble CHO (WSC-Sugar)			1.2	Milk per Ton (kg/tonne)	1945		
Starch		0.3	0.1	Dig. Organic Matter Index (kg/tonne)	208		
Soluble Starch				Non Fiber Carbohydrates (%DM)	21.4		
Soluble Fiber		20.6	4.40	Non Structural Carbohydrates, ESC (%DM)	1.0		
Starch Dig. (7 hr, 4 mm)				Non Structural Carbohydrates, WSC (%DM)	1.3		
Crude Fat			5.80	DCAD (meq/100gdm)	94.6		
Fatty Acids, Total			3.23	Summative Index % (Mass Balance)	100.1		
C16:0			0.46				
C18:0			0.04				
C18:1			0.10				
C18:2			0.56				
C18:3			1.80				
Unsaturated Fatty Acids (RUFLAL)			2.46				
Fatty Acids (% Fat)			55.7				

Additional sample information, submitted documents and lab pictures linked to QR code



Nutrient Comparison for : MIXED FORAGE WET

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The graphs above represent 2 years of CVAS data. Green represents 86.6% of population data; orange represents 8.8% of population data; Red represents 3.4% of population data. The black pointer indicates your data relative to the population distribution.

AMTS = PRECIZNA HRANIDBA

Sano

Dubinska analiza krmiva + detaljni podaci o životinjama koje hranimo

=

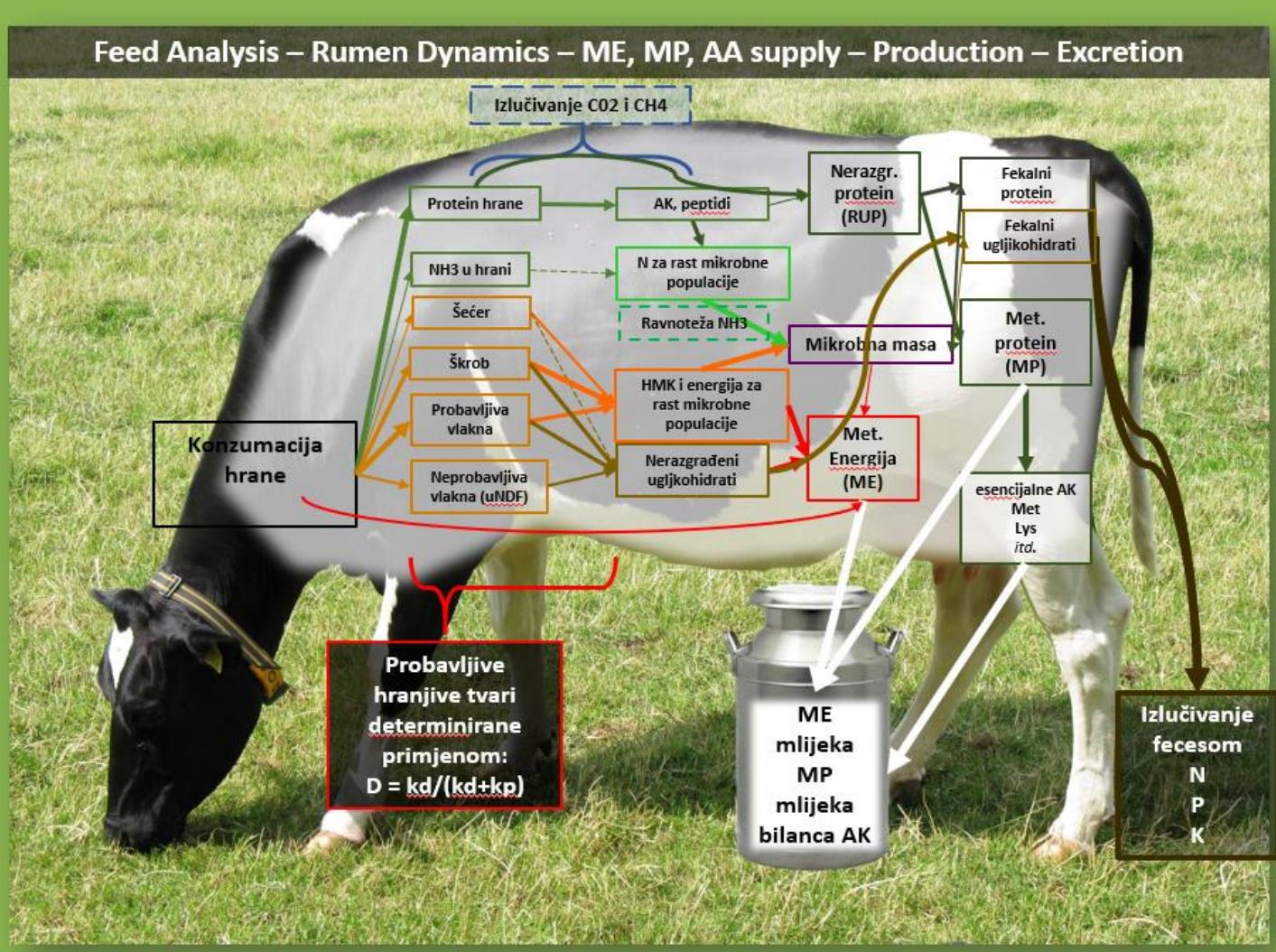
Precizna hranidba prema životnim i proizvodnim fazama





AMTS.Cattle.Pro

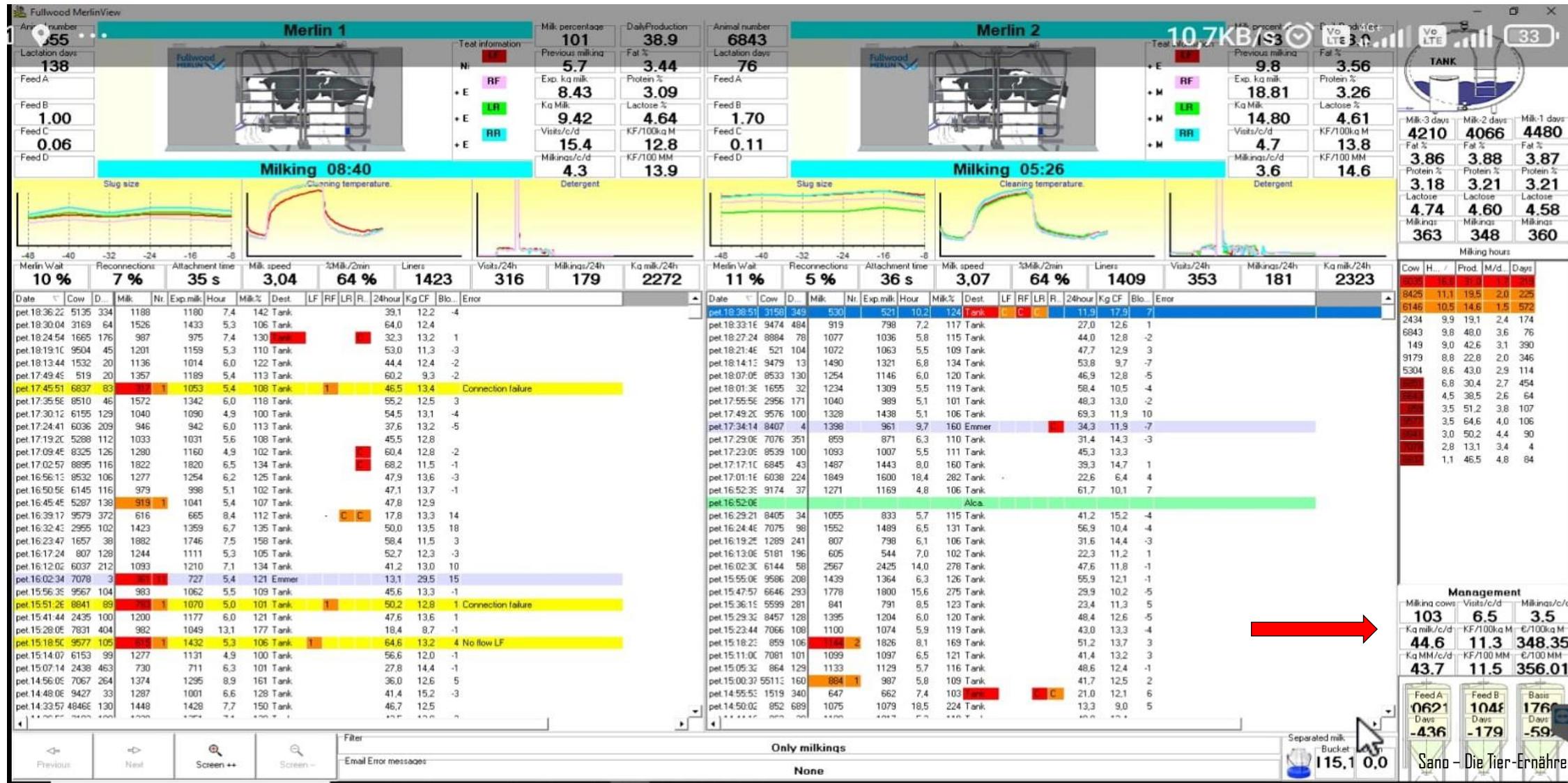
- Primjena najnovijeg CNCPS modela
- Dinamički sistem koji omogućuje interakciju između krmiva i mikrobne populacije
- Precizan sistem koji predviđa proizvodnju temeljem raspoložive hrane na farmi, osobina krava na farmi, u raspoloživim uvjetima držanja



**PRIMJERI REZULTATA
POSTIGNUTIH PRIMJENOM
CNCPS SUSTAVA ANALIZA,
PRECIZNIM OBLIKOVANJEM
OBROKA ZA KRAVE I
UKUPNIM SAVJETOVANJEM**

VISOKA PROIZVODNJA MLJEKA

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VISOKA PROIZVODNJA, ZDRAVLJE VIMENA...

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38 HR 7200447015	URNE	5	39	54,6 (40,5)	3,39	3,19	4,74	8,91	5	(35)	1,06	20	18.4.2020	TOURISTE	0069
39 HR 9102016849	RUŽICA	5	207	38,0 (37,7)	3,68	3,47	4,62	9,05	28	(14)	1,06	25	26.10.2020	RANGER	1378
40 HR 1102016827	NELA	6	96	43,5 (42,5)	3,67	3,46	4,81	9,21	7	(11)	1,06	31	5.2.2021	HARRISON	0892
41 HR 4102016844	SIVA	6	170	38,8 (35,7)	4,43	3,72	4,61	9,31	71	(75)	1,19	22	9.2.2021	WINGS	8768

DNEVNI IZVJEŠTAJ, SLUŽBA: ispisano 19.3.2021. 14:54:25

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Hrvatska agencija za
poljoprivredu i hranu

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Centar za stočarstvo
Vinkovačka cesta 63c, 31000 Osijek
web: <http://www.hapih.hr>
e-mail:cs@hapih.hr



42 HR 4200447001	VESNA	6	57	57,4 (48,9)	3,32	3,25	4,95	9,12	4	(3)	1,02	22	1.4.2020	VENUSAUR	1348
43 HR 8102016842	ANA	6	174	47,9 (36,1)	3,70	3,32	4,46	8,71	15	(11)	1,11	30	3.2.2021	AXXON	1407
44 HR 4102016831	DRAŽENK	7	271	40,0 (34,6)	3,64	3,75	4,66	9,34	16	(23)	0,97	24	21.8.2020	RANGER	1378
45 HR 1102016801	MILKA	8	189	42,7 (53,6)	3,49	3,67	4,75	9,33	24	(11)	0,95	30	28.10.2020	RANGER	1378
46 HR 0101651819	SANJA	9	28	40,7 (0,0)	3,85	3,11	4,70	8,69	29	(0)	1,24	27	18.4.2020	BORNEO	0065
46 - krava sa uzorkom mlijeka		3,2	142,5	39,1	38,7	3,90	3,58	4,63	9,18	81	46	1,1	24	Ukupno mlijeko (kg): 1798	

UDIO KOMPONENTI MLJEKA PO PROIZVODnim GRUPAMA

Proizvodnja	Krava	DKM kg	mm %	Bjel %	BSS x1000	Lakt %	IMB	Urea mg/100 ml
15,1 - 25 kg	6	21,2	4,67	4,22	203	4,62	1,11	23
25,1 - 35 kg	10	30,8	3,91	3,78	24	4,64	1,03	24
iznad 35 kg	27	45,4	3,66	3,36	81	4,62	1,09	26
1. lak. 1 - 100 dana	6	32,8	3,83	3,11	218	4,71	1,23	23
1. lak. 101 - 250 dana	4	34,9	3,18	3,34	32	4,69	0,95	26
1. lak. iznad 250 dana	4	22,8	4,63	4,43	25	4,68	1,05	27
ostale lak. 1 - 100 dana	12	45,8	3,43	3,26	18	4,67	1,05	22
ostale lak. 101 - 250 dana	12	43,4	4,16	3,68	143	4,54	1,13	27
ostale lak. iznad 250 dana	5	32,7	3,78	3,85	38	4,57	0,98	27

* nisu uključene krave bez podataka o laboratorijskoj analizi

UZ GENETIKU I ZDRAVLJE JE PREDUVJET VISOKE PROIZVODNJE

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ZAKLJUČCI:

1. ZA PRECIZNU HRANIDBU I OSIGURANJE ZDRAVLJA, USPJEŠNE REPRODUKCIJE I VISOKE PROIZVODNJE POTREBNO JE POZNAVATI KARAKTERISTIKE KRMIVA.

2. ZA EFIKASNO KORIŠTENJE PODATAKA DOBIVENIH ANALIZOM POTREBAN JE I KOMPLEMENTARAN SOFTVER.



HVALA NA PAŽNJI!

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