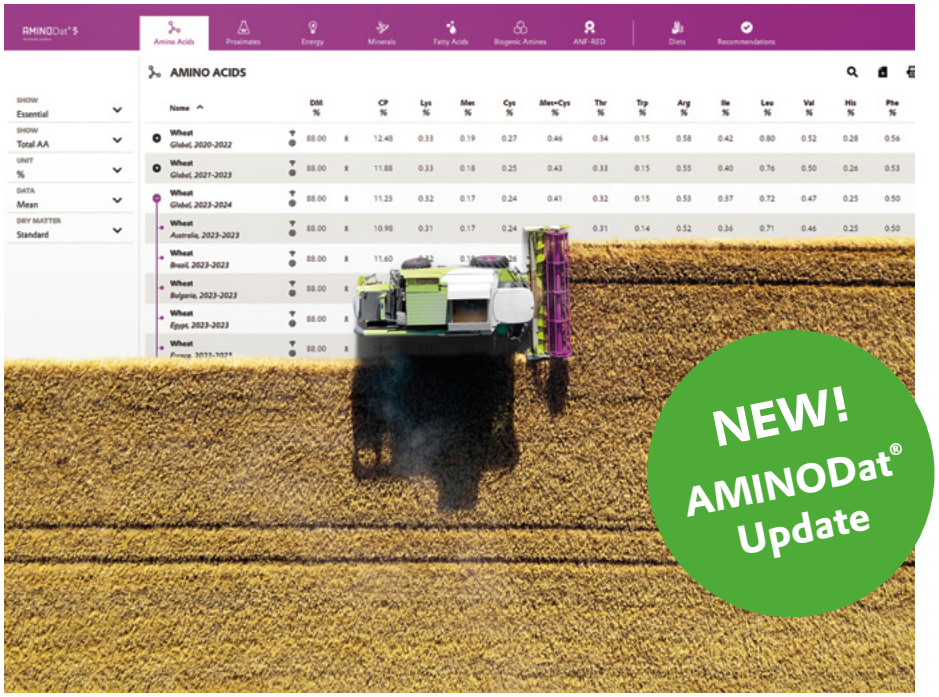
2025 CANADIAN FEED INGREDIENT REPORT

Jefo
Life, made easier



EVONIK
Leading Beyond Chemistry

Dear Customer,

Jefo Nutrition, in collaboration with Evonik Animal Nutrition, is pleased to present the 2025 Canadian Feed Ingredient Crop Survey Report. Building on last year's inaugural survey, this second annual report continues our commitment to delivering reliable, Canada-specific insights into the nutritional quality of feed ingredients used in livestock production.

The 2025 survey includes analyses of amino acids, crude protein, crude fat, crude fiber, sugars, starch, and ash for major feed ingredients, including wheat, barley, corn, canola meal, soybean meal, and field peas, as well as key by-products such as corn DDGS, wheat middlings, bakery meal, and meat and bone meal (MBM). Regional segmentation of wheat, corn, and soybean meal highlights important variability and emerging trends.

KEY HIGHLIGHTS OF THE 2025 REPORT:

Corn: Regional variability in nutrient composition persisted, with generally strong starch levels and variable crude protein, reinforcing the need for ingredient monitoring in energy and amino acid formulation.

Soybean Meal: Nutrient composition was largely consistent with 2024; however, source variability remained evident. Contrary to last year, soybean meal of U.S. origin tended to exhibit lower trypsin inhibitor activity (TIA) than some domestic sources, particularly in Manitoba.

Canola Meal and Barley: Canola meal continued to show stable protein content, while barley maintained favorable starch and fiber characteristics, supporting their continued use in Canadian diets.

Wheat: Wheat showed regional differences in crude protein, with higher levels in Western Canadian provinces compared to Eastern provinces. Overall composition was comparable to last year, confirming wheat's value as an energy ingredient while highlighting the importance of accounting for variability at higher inclusion rates.

By-Products and Alternative Ingredients: Field peas maintained consistent protein and starch profiles. Corn DDGS and wheat middlings showed variable nutrient composition, with several DDGS samples, particularly from Manitoba, exhibiting signs of heat damage, indicated by reactive lysine to total lysine ratios below 70%.

Jefo's commitment to scientific excellence ensures that this report is supported by rigorous sampling and analytical methods. Samples were collected from across Canada and analyzed using Evonik's AMINONIR® laboratory services, providing high-quality, standardized data you can trust. We sincerely thank our partners and collaborators who contributed samples and supported this initiative.

We hope this report supports informed formulation decisions and improved animal performance. For additional details or technical support, please contact the Jefo technical team.

Thank you for your continued trust and collaboration. Together, we are shaping the future of animal nutrition in Canada.

Yours sincerely,

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Corn

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Region	n	STAT	Crude Protein	Crude Fat	Crude Fiber	Ash	Starch	ADF	NDF	Sugar	Phos-phorus	Phytate P	Gross Energy	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
All Regions (Canada & USA)	91	Mean (%)	7.67	3.60	1.83	1.31	64.89	2.70	10.35	1.60	0.25	0.18	3904	0.16	0.17	0.33	0.24	0.27	0.06	0.37	0.26	0.88	0.36	0.22	0.36
		SD	0.56	0.23	0.15	0.08	1.28	0.23	0.72	0.25	0.01	0.01	16.06	0.01	0.01	0.02	0.02	0.02	0.00	0.03	0.02	0.09	0.03	0.02	0.03
		CV (%)	7.35	6.43	8.34	5.84	1.97	8.63	6.92	15.32	5.67	5.67	0.41	7.75	6.51	7.10	6.31	7.42	5.24	7.83	8.15	10.00	7.42	7.40	9.28
		Min (%)	6.45	3.20	1.60	1.20	60.80	2.00	8.70	1.10	0.22	0.17	3869	0.13	0.15	0.28	0.22	0.23	0.06	0.31	0.21	0.67	0.31	0.19	0.28
		Max (%)	9.51	4.40	2.40	1.50	67.50	3.30	12.00	2.30	0.29	0.22	3940	0.20	0.21	0.41	0.29	0.34	0.07	0.48	0.32	1.14	0.45	0.27	0.47
Eastern Canada (ON. QC)	56	Mean (%)	7.41	3.53	1.80	1.30	65.53	2.61	10.20	1.50	0.25	0.19	3898	0.15	0.17	0.32	0.24	0.27	0.06	0.36	0.25	0.85	0.35	0.21	0.35
		SD	0.43	0.24	0.16	0.07	0.96	0.20	0.77	0.21	0.01	0.01	14.20	0.01	0.01	0.02	0.01	0.02	0.00	0.03	0.02	0.08	0.02	0.01	0.03
		CV (%)	5.87	6.69	9.07	5.54	1.46	7.80	7.58	13.84	5.82	5.82	0.36	6.60	5.69	6.14	5.50	6.70	4.84	7.15	7.64	9.65	6.68	6.45	8.97
		Min (%)	6.45	3.20	1.60	1.20	63.30	2.00	8.70	1.10	0.22	0.17	3869	0.13	0.15	0.28	0.22	0.23	0.06	0.31	0.21	0.67	0.31	0.19	0.28
		Max (%)	8.56	4.40	2.40	1.50	67.50	3.00	12.00	2.10	0.29	0.22	3932	0.19	0.21	0.41	0.29	0.34	0.07	0.48	0.32	1.14	0.45	0.27	0.47
Western Canada (AB, BC, MB, SK)	34	Mean (%)	8.09	3.70	1.89	1.33	63.81	2.85	10.62	1.76	0.24	0.18	3915	0.17	0.18	0.35	0.26	0.29	0.06	0.39	0.27	0.93	0.38	0.23	0.38
		SD	0.51	0.19	0.12	0.08	1.02	0.21	0.54	0.22	0.01	0.01	12.88	0.01	0.01	0.02	0.01	0.02	0.00	0.02	0.02	0.07	0.02	0.01	0.03
		CV (%)	6.28	5.02	6.49	5.96	1.61	7.39	5.12	12.70	5.48	5.48	0.33	5.83	5.03	5.37	4.61	6.07	4.18	5.56	6.62	8.00	6.00	6.00	7.59
		Min (%)	7.22	3.40	1.60	1.20	60.80	2.50	9.60	1.40	0.22	0.17	3889	0.15	0.16	0.31	0.23	0.26	0.06	0.36	0.24	0.79	0.34	0.21	0.33
		Max (%)	9.51	4.10	2.20	1.50	65.40	3.30	12.00	2.30	0.28	0.21	3940	0.20	0.20	0.40	0.29	0.34	0.07	0.45	0.32	1.11	0.45	0.27	0.46
USA (MI)	2	Mean (%)	7.45	3.65	1.80	1.20	65.40	2.60	9.95	1.65	0.24	0.18	3909	0.16	0.17	0.33	0.24	0.27	0.06	0.36	0.25	0.86	0.35	0.22	0.35
		SD	0.14	0.21	0.00	0.00	0.85	0.00	0.35	0.07	0.01	0.01	9.19	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.03	0.01	0.01	0.01
		CV (%)	1.90	5.81	0.00	0.00	1.30	0.00	3.55	4.29	4.20	4.22	0.24	5.00	2.10	2.61	2.69	1.86	3.57	3.92	3.11	2.97	2.41	3.61	2.62
		Min (%)	7.35	3.50	1.80	1.20	64.80	2.60	9.70	1.60	0.23	0.17	3902	0.15	0.17	0.32	0.23	0.26	0.06	0.35	0.25	0.84	0.35	0.21	0.34
		Max (%)	7.55	3.80	1.80	1.20	66.00	2.60	10.20	1.70	0.25	0.18	3915	0.16	0.17	0.33	0.24	0.27	0.06	0.37	0.26	0.87	0.36	0.22	0.36
2024 CROP*	56	Mean (%)	7.25	3.63	1.77	1.23	65.00	2.64	10.02	1.95	0.24	0.18	3903	0.15	0.17	0.32	0.24	0.26	0.06	0.35	0.24	0.83	0.34	0.21	0.35
2025 CROP*	91	Mean (%)	7.67	3.60	1.83	1.31	64.89	2.70	10.35	1.60	0.25	0.18	3904	0.16	0.17	0.33	0.24	0.27	0.06	0.37	0.26	0.88	0.36	0.22	0.36

Dry matter of corn is standardized at 88 %.
*Data comparison all regions for CROP YEARS 2024 & 2025

Digestibility Coefficients[1] (%)												
	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
Swine	87	81	84	74	78	73	88	85	88	82	86	87
Poultry	94	87	91	88	86	84	89	96	92	93	95	92

[1] AMINODat®

Soybean Meal (SBM)

AMINONIR®

Region	n	STAT	Crude Protein	Crude Fat	Crude Fiber	Ash	Starch	ADF	NDF	Sugar	Phos-phorus	Phytate P	Gross Energy	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
All Regions (Canada & USA)	63	Mean (%)	44.42	2.07	4.13	6.38	0.63	6.03	10.50	10.93	0.65	0.39	4154	0.59	0.61	1.21	2.73	1.72	0.60	3.19	1.99	3.32	2.08	1.14	2.20
		SD	1.88	0.21	0.60	0.21	0.13	0.73	1.62	0.44	0.03	0.02	16.67	0.02	0.02	0.03	0.11	0.07	0.03	0.14	0.09	0.15	0.09	0.04	0.11
		CV (%)	4.23	10.24	14.50	3.24	20.30	12.05	15.44	4.07	4.39	4.39	0.40	3.13	3.14	2.61	3.98	4.10	4.40	4.47	4.58	4.54	4.28	3.91	4.99
		Min (%)	38.41	1.60	3.10	6.00	0.40	4.60	7.10	10.00	0.57	0.34	4118	0.54	0.56	1.12	2.40	1.50	0.52	2.77	1.70	2.84	1.80	1.00	1.85
		Max (%)	45.92	2.50	5.90	7.00	1.00	7.90	16.20	11.90	0.69	0.41	4192	0.62	0.64	1.27	2.84	1.79	0.63	3.33	2.07	3.45	2.18	1.19	2.31
Eastern Canada (ON. QC)	31	Mean (%)	44.99	1.96	4.21	6.33	0.57	6.13	10.95	10.97	0.65	0.39	4152	0.60	0.61	1.22	2.76	1.74	0.61	3.23	2.01	3.36	2.11	1.15	2.24
		SD	0.76	0.19	0.49	0.19	0.08	0.59	1.63	0.40	0.02	0.01	17.89	0.01	0.01	0.02	0.06	0.03	0.01	0.09	0.04	0.06	0.04	0.02	0.04
		CV (%)	1.70	9.85	11.59	2.92	13.93	9.55	14.90	3.60	2.94	2.94	0.43	1.83	2.36	2.02	2.09	1.79	1.91	2.83	1.86	1.73	1.83	1.76	1.84
		Min (%)	42.74	1.60	3.20	6.00	0.40	4.70	7.20	10.00	0.62	0.37	4120	0.56	0.58	1.15	2.59	1.66	0.58	2.89	1.89	3.17	1.99	1.09	2.10
		Max (%)	45.92	2.40	5.40	7.00	0.70	7.80	16.20	11.80	0.69	0.41	4192	0.62	0.64	1.26	2.84	1.79	0.63	3.33	2.07	3.45	2.18	1.18	2.31
Manitoba	17	Mean (%)	43.25	2.17	4.00	6.45	0.66	5.81	9.62	11.22	0.65	0.39	4156	0.59	0.60	1.22	2.68	1.69	0.59	3.11	1.93	3.23	2.03	1.12	2.13
		SD	3.08	0.13	0.74	0.23	0.15	0.94	1.69	0.31	0.04	0.03	8.47	0.03	0.02	0.04	0.18	0.12	0.04	0.22	0.15	0.25	0.15	0.07	0.18
		CV (%)	7.13	6.01	18.62	3.60	23.43	16.13	17.53	2.79	6.81	6.81	0.20	4.94	3.90	3.34	6.65	6.95	7.60	7.12	7.67	7.83	7.17	6.65	8.52
		Min (%)	38.41	1.90	3.10	6.00	0.50	4.60	7.10	10.60	0.57	0.34	4137	0.54	0.56	1.15	2.40	1.50	0.52	2.77	1.70	2.84	1.80	1.00	1.85
		Max (%)	45.85	2.40	5.20	6.70	0.90	7.20	12.30	11.90	0.69	0.41	4168	0.62	0.63	1.27	2.83	1.79	0.63	3.31	2.06	3.45	2.16	1.19	2.28
USA (IA, IL, MI, ND, SD)	15	Mean (%)	44.59	2.24	4.11	6.39	0.71	6.07	10.57	10.51	0.65	0.39	4159	0.59	0.60	1.19	2.71	1.72	0.60	3.19	1.99	3.32	2.09	1.14	2.21
		SD	1.05	0.15	0.64	0.21	0.12	0.72	1.13	0.37	0.02	0.01	18.87	0.01	0.02	0.03	0.06	0.04	0.01	0.07	0.05	0.08	0.05	0.02	0.06
		CV (%)	2.35	6.92	15.54	3.21	16.64	11.85	10.73	3.48	3.56	3.56	0.45	2.25	3.01	2.24	2.27	2.42	2.33	2.27	2.75	2.55	2.46	2.12	2.73
		Min (%)	41.34	2.00	3.50	6.10	0.50	5.20	9.30	10.00	0.60	0.36	4118	0.55	0.56	1.12	2.52	1.59	0.56	2.97	1.82	3.07	1.93	1.06	2.03
		Max (%)	45.63	2.50	5.90	6.80	1.00	7.90	13.40	11.00	0.69	0.41	4183	0.60	0.63	1.22	2.77	1.76	0.61	3.26	2.04	3.42	2.13	1.16	2.28
2024 CROP*	34	Mean (%)	44.60	2.06	4.52	6.42	0.78	6.62	9.58	10.41	0.63	0.38	4148	0.61	0.64	1.24	2.76	1.73	0.61	3.23	2.00	3.34	2.09	1.15	2.24
2025 CROP*	63	Mean (%)	44.42	2.07	4.13	6.38	0.63	6.03	10.50	10.93	0.65	0.39	4154	0.59	0.61	1.21	2.73	1.72	0.60	3.19	1.99	3.32	2.08	1.14	2.20

Dry matter of soybean meal is standardized at 88%.
*Data comparison all regions for CROP YEARS 2024 & 2025

	Digestibility Coefficients[1] (%)											
	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
Swine	91	85	88	90	87	89	96	90	89	90	91	90
Poultry	90	78	84	89	83	89	91	87	87	86	89	88

[1] AMINODat®

Dried Distillers Grains with Solubles (DDGS)

AMINONIR®

Region	n	STAT	Crude Protein	Crude Fat	Crude Fiber	Ash	Starch	ADF	NDF	Sugar	Phos-phorus	Phytate P	Gross Energy	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
All Regions (Canada & USA)	50	Mean (%)	27.94	8.84	7.45	4.89	4.21	14.04	39.42	1.45	0.82	0.21	4345	0.53	0.53	1.07	0.86	1.02	0.22	1.29	1.00	3.09	1.33	0.74	1.34
		SD	2.10	1.65	0.35	0.49	1.17	1.02	1.96	0.32	0.06	0.01	129.11	0.06	0.04	0.09	0.08	0.08	0.02	0.11	0.09	0.34	0.11	0.07	0.13
		CV (%)	7.52	18.67	4.68	10.00	27.68	7.29	4.98	21.97	7.00	7.00	2.97	10.84	8.36	8.77	9.70	8.30	7.81	8.67	9.24	10.92	8.50	9.25	9.54
		Min (%)	22.96	5.50	6.70	4.30	2.00	12.00	33.90	0.90	0.73	0.18	4047	0.42	0.44	0.88	0.57	0.82	0.18	0.97	0.78	2.30	1.07	0.59	1.04
		Max (%)	31.58	12.00	8.10	6.10	6.70	16.90	43.00	2.10	0.96	0.24	4521	0.62	0.60	1.21	0.99	1.16	0.27	1.48	1.15	3.65	1.51	0.85	1.54
Eastern Canada (ON. QC)	31	Mean (%)	28.43	9.71	7.47	4.66	3.54	14.53	40.16	1.40	0.80	0.20	4411	0.53	0.54	1.08	0.86	1.03	0.23	1.29	1.02	3.20	1.35	0.75	1.38
		SD	2.42	1.77	0.34	0.58	1.27	1.15	2.27	0.37	0.07	0.02	147.13	0.06	0.05	0.11	0.10	0.10	0.02	0.13	0.11	0.40	0.13	0.08	0.15
		CV (%)	8.50	18.19	4.61	12.44	35.78	7.90	5.64	26.21	8.30	8.30	3.34	12.12	9.29	9.83	11.74	9.78	9.09	9.82	10.75	12.36	9.79	10.28	10.84
		Min (%)	25.79	7.40	6.70	4.30	2.00	13.40	37.60	0.90	0.73	0.18	4262	0.45	0.47	0.92	0.57	0.89	0.18	0.97	0.91	2.88	1.20	0.62	1.24
		Max (%)	31.06	12.00	8.10	5.10	5.40	16.90	43.00	1.90	0.89	0.22	4521	0.60	0.59	1.20	0.94	1.14	0.25	1.41	1.13	3.62	1.49	0.84	1.53
USA (MI, SD)	13	Mean (%)	28.77	8.21	7.25	4.94	5.26	12.97	37.61	1.38	0.85	0.21	4319	0.56	0.56	1.13	0.92	1.07	0.23	1.35	1.05	3.18	1.39	0.77	1.39
		SD	1.36	1.06	0.32	0.41	1.16	0.83	2.37	0.37	0.05	0.01	83.54	0.03	0.02	0.04	0.04	0.04	0.01	0.07	0.05	0.18	0.06	0.04	0.07
		CV (%)	4.72	12.91	4.38	8.25	22.04	6.43	6.31	26.71	6.43	6.44	1.93	5.24	4.35	3.98	4.09	4.05	4.67	4.88	4.61	5.70	4.50	4.58	5.13
		Min (%)	26.90	6.90	6.70	4.40	3.50	12.00	33.90	1.00	0.73	0.18	4218	0.53	0.52	1.07	0.85	1.02	0.22	1.24	1.00	2.97	1.32	0.72	1.29
		Max (%)	31.58	9.60	7.90	5.50	6.70	14.50	41.10	2.10	0.94	0.23	4449	0.62	0.60	1.21	0.99	1.16	0.27	1.48	1.15	3.65	1.51	0.85	1.54
2024 CROP*	24	Mean (%)	28.21	9.29	7.63	5.09	3.83	14.10	40.72	1.40	0.80	0.20	4366	0.52	0.53	1.07	0.85	1.02	0.21	1.27	0.99	3.18	1.34	0.76	1.33
2025 CROP*	50	Mean (%)	27.94	8.84	7.45	4.89	4.21	14.04	39.42	1.45	0.82	0.21	4345	0.53	0.53	1.07	0.86	1.02	0.22	1.29	1.00	3.09	1.33	0.74	1.34

Dry matter of DDGS is standardized at 88 %.

*Data comparison all regions for CROP YEARS 2024 & 2025

	Digestibility Coefficients[1] (%)											
	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
Swine	83	75	76	63	72	76	81	78	85	77	79	82
Poultry	83	78	81	61	69	81	80	77	84	75	71	78

[1] AMINODat®

Wheat

AMINONIR®

Region	n	STAT	Crude Protein	Crude Fat	Crude Fiber	Ash	Starch	ADF	NDF	Sugar	Phos-phorus	Phytate P	Gross Energy	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
All Regions (Canada)	96	Mean (%)	13.43	2.03	2.19	1.79	58.56	3.15	11.46	2.12	0.34	0.22	3882	0.20	0.28	0.48	0.37	0.37	0.15	0.62	0.44	0.85	0.55	0.29	0.60
		SD	2.37	0.14	0.29	0.14	2.11	0.34	0.74	0.29	0.02	0.01	40.84	0.03	0.04	0.07	0.03	0.05	0.02	0.08	0.08	0.15	0.08	0.05	0.13
		CV (%)	17.62	7.05	13.09	7.68	3.61	10.81	6.47	13.86	6.68	6.68	1.05	14.14	13.66	13.94	9.08	13.24	12.19	13.37	17.79	17.44	15.31	16.24	20.95
		Min (%)	10.17	1.80	1.60	1.50	53.30	2.50	10.10	1.30	0.27	0.17	3831	0.16	0.22	0.39	0.32	0.30	0.13	0.51	0.33	0.64	0.44	0.23	0.43
		Max (%)	19.09	2.40	2.80	2.20	61.70	4.10	13.20	3.00	0.39	0.25	3972	0.26	0.37	0.64	0.44	0.48	0.20	0.82	0.61	1.20	0.75	0.40	0.89
Eastern Canada (ON. QC)	49	Mean (%)	11.71	2.00	2.32	1.84	59.91	3.29	11.68	2.20	0.35	0.23	3852	0.18	0.25	0.43	0.35	0.34	0.14	0.57	0.38	0.74	0.49	0.26	0.51
		SD	1.05	0.12	0.28	0.12	1.17	0.36	0.60	0.27	0.02	0.01	18.27	0.01	0.02	0.03	0.02	0.02	0.01	0.04	0.04	0.07	0.04	0.02	0.06
		CV (%)	8.98	5.91	11.97	6.64	1.95	10.90	5.10	12.30	5.11	5.11	0.47	7.26	7.06	7.04	4.90	6.83	6.99	6.70	9.42	9.05	7.82	8.53	10.97
		Min (%)	10.17	1.80	1.80	1.60	55.00	2.60	10.60	1.60	0.31	0.20	3831	0.16	0.22	0.39	0.32	0.30	0.13	0.51	0.33	0.64	0.44	0.23	0.43
		Max (%)	16.82	2.40	2.80	2.20	61.70	4.10	13.00	3.00	0.39	0.25	3928	0.24	0.33	0.57	0.42	0.44	0.18	0.74	0.56	1.07	0.68	0.37	0.77
Western Canada (AB. MB. SK)	47	Mean (%)	15.25	2.06	2.05	1.74	57.12	3.00	11.22	2.03	0.33	0.22	3913	0.22	0.30	0.52	0.39	0.40	0.17	0.68	0.50	0.96	0.62	0.33	0.70
		SD	1.97	0.16	0.23	0.14	1.97	0.24	0.80	0.30	0.02	0.02	33.57	0.02	0.03	0.06	0.03	0.04	0.01	0.08	0.06	0.12	0.07	0.04	0.10
		CV (%)	12.93	7.94	11.41	7.81	3.45	7.98	7.16	14.90	7.06	7.05	0.86	11.08	10.91	11.16	8.88	10.79	8.17	11.35	12.51	12.56	11.63	11.87	14.60
		Min (%)	11.84	1.80	1.60	1.50	53.30	2.50	10.10	1.30	0.27	0.17	3851	0.17	0.24	0.42	0.32	0.32	0.14	0.53	0.39	0.75	0.48	0.26	0.52
		Max (%)	19.09	2.40	2.70	2.10	61.00	3.50	13.20	2.50	0.38	0.24	3972	0.26	0.37	0.64	0.44	0.48	0.20	0.82	0.61	1.20	0.75	0.40	0.89
Ontario	28	Mean (%)	11.46	2.01	2.38	1.87	59.99	3.38	11.84	2.25	0.35	0.23	3848	0.18	0.25	0.42	0.35	0.33	0.14	0.56	0.37	0.73	0.48	0.26	0.49
		SD	1.18	0.13	0.27	0.11	1.37	0.32	0.56	0.32	0.02	0.01	18.48	0.01	0.02	0.03	0.02	0.03	0.01	0.04	0.04	0.07	0.04	0.02	0.06
		CV (%)	10.30	6.54	11.52	5.79	2.29	9.43	4.69	14.10	5.55	5.54	0.48	8.39	7.97	8.05	5.91	7.88	7.36	7.61	10.74	10.27	8.91	9.68	12.26
		Min (%)	10.17	1.80	1.80	1.70	55.00	2.70	10.70	1.60	0.31	0.20	3832	0.16	0.22	0.39	0.32	0.30	0.13	0.51	0.33	0.64	0.44	0.23	0.43
		Max (%)	16.82	2.40	2.80	2.20	61.70	4.00	13.00	3.00	0.39	0.25	3928	0.24	0.33	0.57	0.42	0.44	0.18	0.74	0.56	1.07	0.68	0.37	0.77
Quebec	21	Mean (%)	12.04	1.98	2.24	1.80	59.80	3.19	11.47	2.13	0.35	0.23	3858	0.18	0.26	0.44	0.35	0.34	0.14	0.58	0.39	0.76	0.50	0.27	0.52
		SD	0.76	0.10	0.27	0.13	0.83	0.39	0.59	0.18	0.02	0.01	16.78	0.01	0.01	0.02	0.01	0.02	0.01	0.03	0.03	0.05	0.03	0.02	0.04
		CV (%)	6.30	4.95	11.95	7.15	1.39	12.21	5.17	8.29	4.64	4.63	0.43	5.47	5.45	5.34	3.00	4.79	5.56	5.13	6.98	6.71	5.72	6.48	8.45
		Min (%)	10.88	1.80	1.80	1.60	58.10	2.60	10.60	1.80	0.32	0.21	3831	0.16	0.23	0.39	0.33	0.31	0.13	0.53	0.35	0.68	0.46	0.24	0.46
		Max (%)	13.19	2.20	2.70	2.00	61.30	4.10	12.60	2.50	0.38	0.25	3891	0.19	0.27	0.47	0.37	0.37	0.16	0.61	0.43	0.83	0.54	0.29	0.59
Alberta	17	Mean (%)	14.50	1.99	2.01	1.71	57.66	2.95	11.08	2.16	0.32	0.21	3900	0.21	0.29	0.50	0.37	0.39	0.16	0.65	0.48	0.92	0.59	0.32	0.66
		SD	2.25	0.16	0.22	0.11	2.27	0.19	0.75	0.22	0.03	0.02	39.56	0.03	0.04	0.07	0.04	0.05	0.02	0.09	0.07	0.14	0.08	0.05	0.12
		CV (%)	15.55	7.93	10.82	6.16	3.94	6.47	6.77	10.32	8.75	8.74	1.01	13.22	12.81	13.06	10.45	12.90	9.89	13.33	15.47	15.11	13.74	14.66	17.78
		Min (%)	11.84	1.80	1.60	1.50	53.30	2.50	10.10	1.80	0.27	0.17	3851	0.17	0.24	0.42	0.32	0.32	0.14	0.53	0.39	0.75	0.48	0.26	0.52
		Max (%)	18.28	2.30	2.40	1.90	61.00	3.30	12.80	2.50	0.37	0.24	3972	0.26	0.35	0.61	0.43	0.46	0.19	0.78	0.59	1.14	0.71	0.39	0.85
Manitoba	17	Mean (%)	15.80	2.14	2.12	1.81	56.92	3.08	11.27	1.80	0.35	0.22	3923	0.23	0.32	0.55	0.41	0.42	0.17	0.72	0.52	1.00	0.64	0.35	0.72
		SD	1.10	0.17	0.24	0.15	1.68	0.26	0.92	0.31	0.02	0.01	18.16	0.01	0.02	0.03	0.02	0.02	0.01	0.04	0.03	0.07	0.04	0.02	0.06
		CV (%)	6.98	7.93	11.23	8.02	2.96	8.52	8.15	17.35	4.44	4.44	0.46	5.04	5.74	6.11	5.29	5.89	4.88	5.84	5.38	6.95	6.63	5.59	8.17
		Min (%)	14.03	1.90	1.80	1.60	54.10	2.60	10.10	1.30	0.32	0.21	3896	0.21	0.29	0.50	0.37	0.39	0.16	0.66	0.46	0.89	0.58	0.31	0.63
		Max (%)	19.09	2.40	2.70	2.10	59.50	3.50	13.20	2.30	0.38	0.24	3968	0.25	0.37	0.64	0.44	0.48	0.20	0.82	0.56	1.20	0.75	0.37	0.89
Saskat-chewan	13	Mean (%)	15.55	2.06	2.02	1.68	56.64	2.96	11.34	2.17	0.33	0.21	3919	0.22	0.31	0.53	0.39	0.41	0.17	0.69	0.51	0.98	0.62	0.33	0.71
		SD	2.31	0.12	0.25	0.13	1.86	0.25	0.74	0.17	0.02	0.01	37.30	0.03	0.04	0.07	0.03	0.05	0.01	0.08	0.07	0.14	0.08	0.04	0.12
		CV (%)	14.82	5.66	12.30	7.53	3.29	8.58	6.51	7.95	5.78	5.78	0.95	12.58	12.03	12.47	8.88	11.70	8.69	12.32	14.04	14.09	12.62	13.01	16.29
		Min (%)	11.97	1.90	1.70	1.50	53.50	2.60	10.10	1.90	0.30	0.19	3868	0.18	0.25	0.43	0.33	0.33	0.15	0.55	0.40	0.76	0.50	0.27	0.53
		Max (%)	18.72	2.20	2.50	1.90	59.90	3.50	12.70	2.40	0.35	0.23	3969	0.26	0.36	0.63	0.44	0.48	0.19	0.82	0.61	1.18	0.74	0.40	0.87
2024 CROP*	71	Mean (%)	13.81	1.96	2.17	1.77	58.42	2.72	11.83	1.88	0.31	0.20	3885	0.20	0.29	0.49	0.37	0.38	0.16	0.64	0.46	0.88	0.57	0.30	0.63
2025 CROP*	96	Mean (%)	13.43	2.03	2.19	1.79	58.56	3.15	11.46	2.12	0.34	0.22	3882	0.20	0.28	0.48	0.37	0.37	0.15	0.62	0.44	0.85	0.55	0.29	0.60

Dry matter of wheat is standardized at 88%.
*Data comparison all regions for CROP YEARS 2024 & 2025

Wheat – *continued*

AMINONIR®

Digestibility Coefficients[1] (%)												
	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
Swine	90	92	91	85	88	87	95	93	93	90	92	95
Poultry	92	93	93	87	89	88	89	98	94	93	92	96

[1] AMINODat®

Wheat Middlings

AMINONIR®

Region	n	STAT	Crude Protein	Crude Fat	Crude Fiber	Ash	Starch	ADF	NDF	Sugar	Phos-phorus	Phytate P	Gross Energy	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
All Regions (Canada & USA)	38	Mean (%)	16.71	4.07	8.17	4.87	22.81	10.61	35.46	5.08	0.97	0.77	3911	0.24	0.34	0.58	0.67	0.53	0.25	1.15	0.51	1.01	0.76	0.44	0.65
		SD	0.75	0.26	0.71	0.39	3.44	0.90	3.18	0.50	0.09	0.07	22.76	0.01	0.01	0.02	0.04	0.02	0.01	0.06	0.02	0.05	0.03	0.02	0.03
		CV (%)	4.50	6.37	8.64	7.98	15.09	8.44	8.97	9.90	9.14	9.14	0.58	4.74	3.26	3.95	6.08	4.47	3.68	5.32	4.73	4.51	4.39	4.21	5.20
		Min (%)	14.77	3.70	6.50	4.10	16.50	8.60	29.70	3.30	0.76	0.61	3866	0.22	0.31	0.52	0.55	0.48	0.22	0.93	0.45	0.89	0.68	0.38	0.57
		Max (%)	18.06	4.70	9.50	5.60	30.20	12.20	41.70	6.10	1.11	0.89	3977	0.26	0.35	0.61	0.76	0.58	0.27	1.26	0.55	1.09	0.82	0.48	0.71
2024 CROP*	24	Mean (%)	17.10	3.84	7.73	4.95	25.20	10.08	34.98	4.50	0.92	0.74	3899	0.24	0.33	0.58	0.67	0.54	0.25	1.18	0.52	1.02	0.76	0.45	0.66
2025 CROP*	38	Mean (%)	16.71	4.07	8.17	4.87	22.81	10.61	35.46	5.08	0.97	0.77	3911	0.24	0.34	0.58	0.67	0.53	0.25	1.15	0.51	1.01	0.76	0.44	0.65

Dry matter of wheat middling is standardized at 88 %.
*Data comparison all regions for CROP YEARS 2024 & 2025

Digestibility Coefficients[1] (%)												
	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
Swine	76	72	74	47	63	73	73	72	73	62	77	72
Poultry	81	76	78	78	73	79	78	81	79	77	79	79

[1] AMINODat®

Barley

AMINONIR®

Region	n	STAT	Crude Protein	Crude Fat	Crude Fiber	Ash	Starch	ADF	NDF	Sugar	Phos-phorus	Phytate P	Gross Energy	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
All Regions (Canada)	46	Mean (%)	11.21	2.04	4.46	2.69	51.96	5.80	17.87	2.03	0.36	0.20	3811	0.18	0.23	0.41	0.40	0.36	0.14	0.54	0.38	0.74	0.54	0.23	0.55
		SD	1.08	0.16	0.43	0.25	1.47	0.55	1.39	0.38	0.03	0.02	23.58	0.02	0.02	0.04	0.03	0.03	0.01	0.05	0.04	0.08	0.06	0.03	0.08
		CV (%)	9.64	8.05	9.62	9.40	2.82	9.47	7.79	18.74	9.06	9.06	0.62	9.81	8.93	8.97	7.03	9.58	8.42	9.41	11.69	11.07	10.46	10.66	15.10
		Min (%)	7.84	1.50	3.70	2.10	48.10	4.90	15.20	0.80	0.27	0.15	3770	0.14	0.18	0.32	0.32	0.27	0.11	0.41	0.27	0.52	0.40	0.17	0.34
		Max (%)	13.14	2.40	5.80	3.10	54.50	7.20	21.50	2.70	0.43	0.24	3856	0.24	0.31	0.55	0.50	0.48	0.16	0.72	0.55	1.04	0.75	0.33	0.87
Western Canada (AB. MB. SK)	41	Mean (%)	11.30	2.06	4.37	2.68	52.11	5.73	17.58	2.07	0.35	0.19	3813	0.18	0.24	0.42	0.40	0.37	0.14	0.54	0.39	0.75	0.55	0.24	0.56
		SD	1.00	0.15	0.33	0.26	1.33	0.46	1.07	0.32	0.03	0.02	23.31	0.02	0.02	0.04	0.03	0.03	0.01	0.05	0.04	0.08	0.05	0.02	0.08
		CV (%)	8.83	7.14	7.49	9.86	2.56	7.95	6.10	15.63	9.01	9.01	0.61	9.48	8.45	8.54	6.59	9.13	7.89	9.02	11.25	10.53	10.05	10.31	14.59
		Min (%)	9.48	1.70	3.70	2.10	48.90	4.90	15.20	1.40	0.27	0.15	3773	0.15	0.20	0.35	0.35	0.31	0.12	0.47	0.31	0.62	0.45	0.19	0.43
		Max (%)	13.14	2.40	5.00	3.10	54.50	6.70	20.50	2.70	0.42	0.23	3856	0.24	0.31	0.55	0.50	0.48	0.16	0.72	0.55	1.04	0.75	0.33	0.87
Alberta	6	Mean (%)	11.43	2.10	4.20	2.67	52.55	5.48	16.87	2.18	0.35	0.19	3817	0.18	0.24	0.42	0.40	0.37	0.14	0.54	0.39	0.75	0.54	0.24	0.56
		SD	1.56	0.09	0.42	0.10	1.53	0.37	0.91	0.21	0.02	0.01	27.45	0.02	0.02	0.04	0.03	0.04	0.02	0.06	0.05	0.10	0.07	0.03	0.10
		CV (%)	13.62	4.26	9.99	3.87	2.92	6.77	5.42	9.79	5.35	5.35	0.72	11.48	9.83	10.21	8.23	11.34	11.69	10.91	14.19	12.69	12.47	12.77	17.20
		Min (%)	9.48	2.00	3.70	2.60	50.70	5.10	15.20	2.00	0.32	0.18	3783	0.15	0.21	0.37	0.35	0.32	0.12	0.47	0.32	0.63	0.46	0.20	0.44
		Max (%)	13.14	2.20	4.90	2.80	54.30	6.10	17.90	2.60	0.37	0.20	3848	0.20	0.26	0.46	0.43	0.41	0.16	0.60	0.45	0.86	0.62	0.27	0.67
Manitoba	12	Mean (%)	10.82	2.02	4.49	2.78	52.21	6.04	18.34	1.89	0.37	0.21	3799	0.18	0.23	0.41	0.40	0.36	0.14	0.54	0.38	0.74	0.54	0.23	0.54
		SD	0.67	0.15	0.29	0.13	0.84	0.42	1.03	0.27	0.02	0.01	13.81	0.02	0.03	0.05	0.03	0.04	0.01	0.06	0.06	0.10	0.07	0.03	0.11
		CV (%)	6.20	7.29	6.56	4.74	1.61	7.04	5.61	14.28	6.13	6.13	0.36	12.65	11.87	11.63	8.36	11.98	6.50	11.84	15.09	13.85	13.73	13.88	20.40
		Min (%)	9.54	1.70	4.00	2.60	50.70	5.20	16.40	1.40	0.34	0.19	3773	0.15	0.20	0.35	0.36	0.31	0.12	0.47	0.31	0.62	0.45	0.19	0.43
		Max (%)	11.98	2.30	5.00	3.00	53.30	6.70	20.50	2.50	0.42	0.23	3822	0.24	0.31	0.55	0.50	0.48	0.15	0.72	0.55	1.04	0.75	0.33	0.87
Saskat-chewan	22	Mean (%)	11.47	2.06	4.37	2.63	51.92	5.67	17.48	2.11	0.34	0.19	3819	0.18	0.24	0.42	0.40	0.37	0.14	0.55	0.39	0.76	0.55	0.24	0.56
		SD	0.94	0.16	0.31	0.33	1.52	0.43	0.89	0.35	0.03	0.02	24.37	0.01	0.01	0.03	0.02	0.03	0.01	0.04	0.03	0.06	0.04	0.02	0.06
		CV (%)	8.21	7.88	7.18	12.50	2.92	7.53	5.07	16.47	10.09	10.10	0.64	7.47	6.20	6.54	5.45	7.27	7.51	7.28	8.61	8.50	7.56	7.91	10.82
		Min (%)	9.70	1.90	3.90	2.10	48.90	4.90	16.10	1.50	0.27	0.15	3774	0.16	0.21	0.37	0.36	0.31	0.12	0.48	0.32	0.62	0.46	0.20	0.45
		Max (%)	12.93	2.40	4.90	3.10	54.50	6.50	19.40	2.70	0.40	0.22	3856	0.20	0.26	0.45	0.44	0.41	0.16	0.62	0.44	0.86	0.61	0.27	0.65
2024 CROP*	45	Mean (%)	11.13	2.31	5.04	2.40	51.60	5.49	18.08	1.12	0.34	0.19	3838	0.18	0.24	0.41	0.41	0.37	0.14	0.54	0.38	0.74	0.54	0.23	0.54
2025 CROP*	46	Mean (%)	11.21	2.04	4.46	2.69	51.96	5.80	17.87	2.03	0.36	0.20	3811	0.18	0.23	0.41	0.40	0.36	0.14	0.54	0.38	0.74	0.54	0.23	0.55

Dry matter of barley is standardized at 88 %.
*Data comparison all regions for CROP YEARS 2024 & 2025

	Digestibility Coefficients[1] (%)											
	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
Swine	82	82	82	76	79	79	86	81	82	79	84	83
Poultry	90	81	82	83	76	80	79	85	83	82	81	81

[1] AMINODat®

Canola Meal

AMINONIR®

Region	n	STAT	Crude Protein	Crude Fat	Crude Fiber	Ash	ADF	NDF	Sugar	Phos-phorus	Phytate P	Gross Energy	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
All Regions (Canada & USA)	53	Mean (%)	36.50	3.92	11.57	7.11	17.70	27.17	7.38	1.02	0.61	4100	0.71	0.84	1.55	1.92	1.55	0.50	2.22	1.45	2.52	1.86	0.95	1.46
		SD	0.69	0.53	0.48	0.21	0.72	1.22	0.25	0.03	0.02	26.09	0.01	0.03	0.04	0.05	0.03	0.01	0.05	0.03	0.05	0.03	0.02	0.03
		CV (%)	1.89	13.59	4.14	2.90	4.09	4.48	3.35	2.87	2.87	0.64	2.04	3.13	2.61	2.81	1.70	2.33	2.13	1.92	2.02	1.69	2.18	1.86
		Min (%)	34.38	3.00	9.60	6.80	15.30	24.40	6.80	0.94	0.56	4043	0.67	0.77	1.44	1.79	1.46	0.48	2.12	1.37	2.38	1.78	0.90	1.40
		Max (%)	38.31	4.70	12.50	7.60	19.00	29.40	7.90	1.08	0.65	4155	0.75	0.90	1.64	2.04	1.60	0.53	2.33	1.53	2.65	1.95	1.00	1.54
Eastern Canada (ON. QC)	36	Mean (%)	36.35	4.00	11.59	7.08	17.84	27.36	7.40	1.01	0.61	4104	0.71	0.84	1.54	1.91	1.54	0.50	2.21	1.45	2.51	1.86	0.94	1.46
		SD	0.66	0.47	0.51	0.17	0.72	1.32	0.21	0.03	0.02	27.85	0.01	0.02	0.04	0.04	0.03	0.01	0.05	0.03	0.05	0.03	0.02	0.02
		CV (%)	1.81	11.83	4.40	2.38	4.03	4.81	2.84	2.83	2.82	0.68	1.98	2.80	2.39	2.34	1.69	2.05	2.07	1.78	1.90	1.64	1.95	1.68
		Min (%)	34.38	3.00	9.60	6.80	15.30	24.40	7.10	0.94	0.56	4043	0.67	0.77	1.44	1.79	1.46	0.48	2.12	1.37	2.38	1.78	0.90	1.40
		Max (%)	37.32	4.70	12.50	7.50	19.00	29.40	7.90	1.06	0.64	4155	0.73	0.87	1.60	2.00	1.58	0.51	2.32	1.50	2.60	1.92	0.98	1.50
Western Canada (MB. SK)	17	Mean (%)	36.80	3.74	11.54	7.17	17.40	26.78	7.33	1.04	0.62	4092	0.72	0.85	1.57	1.94	1.55	0.50	2.24	1.47	2.53	1.88	0.96	1.47
		SD	0.67	0.62	0.42	0.26	0.66	0.89	0.31	0.02	0.01	20.43	0.01	0.03	0.04	0.07	0.03	0.01	0.05	0.03	0.05	0.03	0.02	0.03
		CV (%)	1.83	16.53	3.65	3.68	3.80	3.33	4.28	1.81	1.81	0.50	2.06	3.42	2.75	3.38	1.67	2.62	2.08	1.93	2.13	1.62	2.46	2.09
		Min (%)	35.71	3.00	10.80	6.80	16.30	25.20	6.80	1.01	0.60	4062	0.69	0.81	1.50	1.85	1.51	0.49	2.17	1.42	2.45	1.83	0.92	1.42
		Max (%)	38.31	4.60	12.20	7.60	18.60	28.10	7.80	1.08	0.65	4121	0.75	0.90	1.64	2.04	1.60	0.53	2.33	1.53	2.65	1.95	1.00	1.54
2024 CROP*	19	Mean (%)	37.53	4.25	11.17	6.87	16.69	25.64	7.61	1.01	0.61	4146	0.73	0.88	1.61	2.01	1.59	0.52	2.31	1.49	2.61	1.92	0.98	1.50
2025 CROP*	53	Mean (%)	36.50	3.92	11.57	7.11	17.70	27.17	7.38	1.02	0.61	4100	0.71	0.84	1.55	1.92	1.55	0.50	2.22	1.45	2.52	1.86	0.95	1.46

Dry matter of canola meal is standardized at 88 %.
*Data comparison all regions for CROP YEARS 2024 & 2025

	Digestibility Coefficients[1] (%)											
	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
Swine	83	73	75	74	73	78	85	77	79	74	82	79
Poultry	85	76	80	80	73	82	87	79	82	79	83	82

[1] AMINODat®

Field Peas

AMINONIR®

Region	n	STAT	Crude Protein	Crude Fat	Crude Fiber	Ash	Starch	ADF	NDF	Sugar	Phos-phorus	Phytate P	Gross Energy	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
All Regions (Canada)	5	Mean (%)	19.27	1.80	5.98	3.14	44.46	7.86	12.38	4.06	3400.00	1530.20	3896	0.19	0.30	0.48	1.47	0.75	0.19	1.49	0.82	1.41	0.91	0.47	0.95
		SD	0.22	0.07	0.18	0.09	0.34	0.21	0.41	0.05	39.68	17.96	7.85	0.00	0.01	0.01	0.03	0.00	0.00	0.03	0.01	0.03	0.01	0.01	0.01
		CV (%)	1.17	3.93	2.99	2.85	0.77	2.64	3.35	1.35	1.17	1.17	0.20	2.54	2.51	1.25	1.82	0.51	0.85	1.79	1.32	1.87	0.80	1.50	1.38
		Min (%)	18.93	1.70	5.80	3.10	44.00	7.70	11.90	4.00	3344.00	1505.00	3883	0.18	0.29	0.47	1.43	0.75	0.18	1.47	0.81	1.38	0.90	0.46	0.94
		Max (%)	19.56	1.90	6.20	3.30	44.80	8.20	12.90	4.10	3444.00	1550.00	3903	0.19	0.31	0.49	1.50	0.76	0.19	1.54	0.83	1.44	0.92	0.47	0.97
2024 CROP*	7	Mean (%)	22.44	1.62	5.40	3.20	41.92	6.76	11.80	4.00	0.36	0.16	3933	0.20	0.30	0.51	1.59	0.81	0.21	2.02	0.90	1.58	1.03	0.53	1.05
2025 CROP*	5	Mean (%)	19.27	1.80	5.98	3.14	44.46	7.86	12.38	4.06	3400.00	1530.20	3896	0.19	0.30	0.48	1.47	0.75	0.19	1.49	0.82	1.41	0.91	0.47	0.95

Dry matter of field peas is standardized at 88 %.
*Data comparison all regions for CROP YEARS 2024 & 2025

Digestibility Coefficients[1] (%)												
	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
Swine	77	71	73	84	78	70	90	81	80	78	82	80
Poultry	78	71	74	87	80	75	89	81	80	78	84	81

[1] AMINODat®

Rye

AMINONIR®

Region	n	STAT	Crude Protein	Crude Fat	Crude Fiber	Ash	Starch	ADF	NDF	Sugar	Phos-phorus	Phytate P	Gross Energy	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
All Regions (Canada)	5	Mean (%)	9.49	1.54	1.78	2.00	54.70	2.98	13.72	4.92	0.32	0.21	3786	0.16	0.20	0.36	0.36	0.31	0.10	0.50	0.31	0.57	0.44	0.21	0.42
		SD	0.69	0.11	0.11	0.07	1.13	0.20	0.54	0.36	0.01	0.01	9.29	0.01	0.01	0.02	0.01	0.02	0.00	0.02	0.02	0.04	0.03	0.01	0.04
		CV (%)	7.26	7.40	6.15	3.54	2.07	6.88	3.94	7.24	2.50	2.50	0.25	6.24	6.61	6.72	2.83	5.11	4.20	4.82	7.46	7.09	6.54	6.71	8.49
		Min (%)	8.96	1.40	1.70	1.90	53.00	2.80	13.00	4.40	0.31	0.20	3778	0.15	0.19	0.34	0.35	0.30	0.09	0.48	0.29	0.53	0.42	0.20	0.39
		Max (%)	10.64	1.70	1.90	2.10	56.00	3.30	14.40	5.30	0.32	0.21	3797	0.17	0.23	0.40	0.37	0.34	0.10	0.54	0.34	0.63	0.49	0.23	0.48

Dry matter of rye is standardized at 88 %.

Digestibility Coefficients[1] (%)												
	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
Swine	79	77	78	70	70	74	82	74	78	73	77	80
Poultry	79	84	82	80	78	81	84	81	85	81	73	82

[1] AMINODat®

Meat and Bone Meal (MBM)

AMINONIR®

Region	n	STAT	Crude Protein	Crude Fat	Ash	Phos-phorus	Gross Energy	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
All Regions (Canada)	16	Mean (%)	49.62	10.59	24.76	3.59	4018	0.75	0.46	1.21	2.50	1.63	0.38	3.26	1.56	3.02	2.09	0.98	1.69
		SD	4.64	2.04	5.47	1.15	362.78	0.12	0.06	0.19	0.30	0.20	0.08	0.23	0.27	0.38	0.24	0.14	0.19
		CV (%)	9.34	19.26	22.10	32.13	9.03	16.39	13.16	15.62	12.13	12.23	21.31	7.10	17.07	12.46	11.27	13.98	11.24
		Min (%)	41.92	7.10	18.20	2.35	3138	0.49	0.31	0.80	1.87	1.18	0.19	2.92	0.99	2.19	1.59	0.61	1.23
		Max (%)	56.20	13.50	37.70	6.40	4467	0.96	0.54	1.51	3.05	1.95	0.48	3.65	1.96	3.58	2.44	1.16	1.94
2024 CROP*	45	Mean (%)	52.68	12.26	19.14	2.25	4404	0.86	0.50	1.38	2.84	1.90	0.44	3.52	1.83	3.47	2.33	1.12	1.92
2025 CROP*	16	Mean (%)	49.62	10.59	24.76	3.59	4018	0.75	0.46	1.21	2.50	1.63	0.38	3.26	1.56	3.02	2.09	0.98	1.69

Dry matter of meat and bone meal is standardized at 88 %.
*Data comparison all regions for CROP YEARS 2024 & 2025

Digestibility Coefficients[1] (%)												
	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
Swine	81	62	78	79	79	82	88	82	82	82	81	84
Poultry	74	39	63	72	67	67	78	72	73	72	73	73

[1] AMINODat®

Bakery Meal

AMINONIR®

Region	n	STAT	Crude Protein	Crude Fat	Crude Fiber	Ash	Starch	ADF	NDF	Sugar	Phos-phorus	Gross Energy	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
All Regions (Canada & USA)	38	Mean (%)	11.82	10.33	2.86	3.62	38.49	4.24	8.88	11.03	0.32	4242	0.17	0.22	0.40	0.31	0.35	0.12	0.55	0.42	0.83	0.52	0.25	0.54
		SD	1.51	1.35	0.78	0.51	4.46	1.07	2.28	2.06	0.07	68.16	0.03	0.03	0.05	0.06	0.05	0.01	0.09	0.06	0.13	0.07	0.04	0.07
		CV (%)	12.80	13.07	27.20	14.19	11.57	25.18	25.66	18.67	22.32	1.61	14.77	13.34	13.54	18.02	13.20	10.80	16.86	13.47	15.08	13.47	14.96	12.55
		Min (%)	9.65	7.80	1.80	3.00	31.70	2.90	5.50	7.20	0.24	4136	0.14	0.17	0.32	0.25	0.30	0.11	0.47	0.35	0.65	0.44	0.19	0.44
		Max (%)	14.03	12.60	4.20	4.70	46.20	5.90	11.90	13.90	0.43	4361	0.22	0.27	0.48	0.41	0.44	0.15	0.74	0.51	1.09	0.65	0.31	0.64

Dry matter of rye is standardized at 88 %.

Digestibility Coefficients[1] (%)												
	MET	CYS	M+C	LYS	THR	TRP	ARG	ILE	LEU	VAL	HIS	PHE
Swine	84	78	81	66	75	85	87	82	85	81	81	85
Poultry	81	77	79	69	74	-	78	81	81	78	77	77

[1] AMINODat®

Soy Products and DDGS Quality Report

AMINONIR®

The processing conditions of soybean meal and DDGS were assessed using traditional laboratory assays, including Protein Solubility in KOH, Trypsin Inhibitor Activity and Reactive Lysine. Evonik has expanded its near-infrared spectroscopy (NIRS) portfolio to include AMINONIR® RED 2.0, a service that predicts the quality of heat-exposed soy products and corn-based DDGS based on these traditional laboratory assays. The data presented in this report was developed using the parameters predicted by AMINONIR® RED 2.0 on newly harvested soybean meal and DDGS samples in 2025.

Material	n Obs	Variable	Mean	Std Dev	CV	Minimum	Maximum
DDGS, Corn	50	Protein Solubility in KOH (%)	31.0	5.01	16.17	24.3	42.6
		Reactive Lysine (%)	0.63	0.09	14.46	0.29	0.77
		Reactive Lysine/Total Lysine Ratio (%)	68.5	5.18	7.57	56.9	75.5
Soybean Meal	63	Protein Solubility in KOH (%)	79.8	2.99	3.74	68.2	85.7
		Trypsin Inhibitor Activity (mg/g)	2.61	1.91	73.29	0.80	9.30
		Reactive Lysine (%)	2.37	0.10	4.02	2.12	2.53
		Reactive Lysine/Total Lysine Ratio (%)	87.6	1.28	1.46	82.5	89.8

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