



## GMO Technical Data Sheet

X-SOY 600 is CJ Selecta's soy protein concentrate. It is an innovative vegetable protein, with high quality, widely used as a functional ingredient for aqua feeds, piglets feeds, starter chickens diets, pet food and calf milk replacers.

CJ Selecta's X-SOY 600 has low allergenic proteins and antinutritional factors content, affecting positively animals performance.

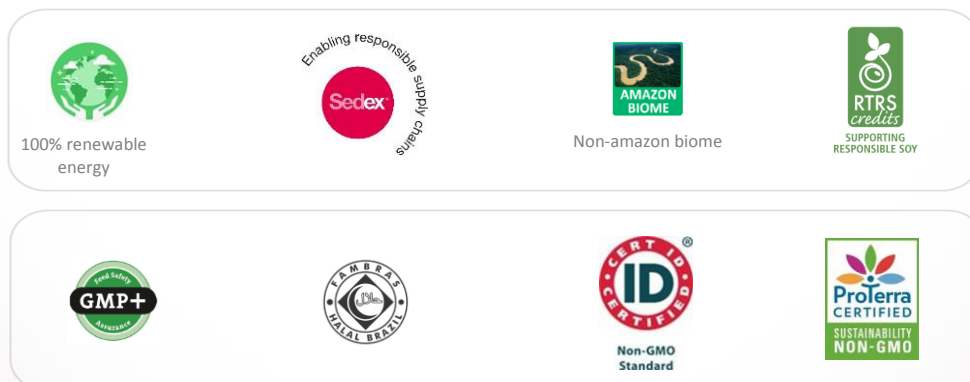
CJ Selecta's X-SOY 600 is produced from genetically modified soybeans (GMO). Events: *Agrobacterium sp.*, *Bacillus thuringiensis*; *Arabidopsis thaliana* and *Streptomyces viridochromogenes*.

Product Composition (as is)*	Guarantee levels	Typical values	Energy <sup>(1)</sup>	
Crude protein (Dry matter basis)	65%	65%	Gross energy	4471 kcal/kg
Crude protein	60%	60%		
Moisture	10% (max)	7%	<b>Amino acids <sup>(1)</sup></b>	<b>Total (%)</b>
Fat	0.4% (min)	1%	Alanine	2.68
Ash	7% (max)	6%	Arginine	4.59
Crude fiber	5% (max)	4.5%	Aspartic acid <sup>(2)</sup>	7.02
NDF	12%	12%	Glutamic acid <sup>(2)</sup>	11.27
ADF	7%	7%	Cystine	0.92
			Phenylalanine	3.18
<b>Antinutritional Factors (ANF)</b>			Glycin	2.60
Trypsin inhibitor activity	< 1.00 mg/g		Histidine	1.67
Beta-conglycinin	< 3.0 mg/kg		Isoleucine	2.79
Glycinin	< 2.0 mg/kg		Leucine	4.68
Raffinose	< 0.6%		Lysine	3.87
Stachyose	< 1.6%		Methionine	0.85
			Prolin	3.14
<b>Contaminants</b>			Serine	3.52
Salmonella	Absent/25g		Tyrosin	2.35
Mycotoxins	Absent		Threonine	2.47
Dioxin	Absent		Tryptophan	0.81
			Valine	3.01
<b>Packaging</b>			Met + Cys	1.77
Bags	25 kg		Phe + Tyr	5.53
Bigbags	1000 & 1200 kg		Gly + Ser	6.12
Bulk				
<b>Shelf life</b>	24 months			
<b>Particle size</b>	2 mm			
<b>Storage</b>	Store on pallets in a covered, dry and ventilated place			



<b>Fatty acids</b>	<b>g/100g</b>	<b>Minerals<sup>(1)</sup></b>	<b>g/100g</b>
Palmitic acid C16:0	0.31	Calcium	0.40
Stearic acid C18:0	0.08	Total phosphorous	0.73
Elaidic acid C18:1 n-9	0.40	Phytic phosphorous	0.45
Linoleic acid C18:2 n-6	0.91	Available phosphorous	0.27
Linolenic acid C18:3 n-3	0.10	Potassium	2.18
		Sodium	0.02
		Magnesium	0.29
		Sulfur	0.57
			<b>mg/kg</b>
		Manganese	38.3
		Iron	150
		Copper	32.6
		Zinc	24
		Selenium	0.28
			<b>mg/kg</b>
		<b>Vitamins</b>	
		Biotin	0.26
		Folacin	0.60
		Nacin	28.0
		Pantothenic acid	16.3
		Vitamin B6	6.00
		Riboflavin	2.90
		Thiamin	6.0
		Vitamin E	2.40
<b>Lipid class composition (% total lipid)</b>	<b>g/100g</b>		
Wax/sterol esters	0.032		
Triacylglycerols	0.848		
Free fatty acids	0.140		
Sterols/cholesterol	0.188		
<i>Total neutral lipids</i>	1.208		
Glycolipid 3	0.102		
Glycolipid 2	0.035		
Glycolipid 1	0.010		
Phosphatidylethanolamine	0.190		
Phosphatidylglycerol/cardiolipin	0.027		
Phosphatidylinositol	0.101		
Phosphatidylserine	0.034		
Phosphatidylcholine	0.150		
Sphingomyelin	0.008		
Lysophosphatidylcholine	0.008		
Pigmented material	0.132		
<i>Total polar lipids</i>	0.797		
<b>Suggested inclusion levels</b>			
Aquafeed	7 to 20%		
Pet food	5 to 33%		
Poultry	3 to 6%		
Piglet	3 to 12%		

X-SOY 600 is produced through an aqueous alcohol extraction of defatted soy flakes. This extraction process removes soluble carbohydrate, lectins, trypsin inhibitors, glycinin, beta-conglycinin, saponins and oligosaccharides that are considered to be antinutritional factors (ANF's) that naturally occurs in soybeans.



\*- VALUES ARE EXPRESSED IN AS IS BASIS. TYPICAL VALUES REPRESENT THE MEAN VALUES OF CJ SELECTA'S ROUTINE ANALYSES. THESE INFORMATION ARE BASED ON TECHNICAL DATA WHICH CJ SELECTA BELIEVES TO BE RELIABLE. CJ SELECTA DOES NOT WARRANT THAT THE INFORMATION CONTAINED IN THIS DOCUMENT IS ABSOLUTELY ACCURATE, EVEN IF AN EFFORT IS MADE TO ENSURE THAT THEY ARE ACCURATE AS POSSIBLE. CJ SELECTA RESERVES THE RIGHT TO MAKE CHANGES TO THESE INFORMATION. CJ SELECTA ENCOURAGES ITS COSTUMERS TO SEARCH FOR UPDATES ABOUT THESE INFORMATION PERIODICALLY.

REVISED IN: APRIL, 29<sup>TH</sup> 2019.

<sup>1</sup> ROSTAGNO, H.S. ET AL. BRAZILIAN TABLES FOR POULTRY AND SWINE. 4<sup>TH</sup> ED. VIÇOSA: DEPARTAMENTO DE ZOOTECNIA, UFV, 2017. <sup>2</sup>- CJ SELECTA INTERNAL DATA.