

Estimated Feedstock to Support Producing Ethanol

Unit: mt

Item		2009	2010	2011
Sugarcane	Yeild	66.78	77.11	95
Molasses	Yield	3.01	3.12	4.47
	Domestic Consumption (Liquor/Spirit, Animalfeed, MSG: <i>Monosodium Glutamate</i>)	1.4	1.4	1.4
	Export	0.5	0.5	0.5
	the Rest for Producing Ethanol	1.11	1.22	2.57
	Accounting to Ethanol derived from molasses (ml/d)	0.76	0.83	1.76
	Capacity of Ethanol Plant (<i>derived from Molasses</i>) (ml/d)	1.8	1.8	1.8
Cassava	Yield	30.09	25.03	30.34
	Domestic Consumption (fresh cassava, cassava chip, starch)	9.01	9.18	10.96
	Export	18.66	18.89	19.58
	the Rest for Producing Ethanol	2.42	-3.04	2.56
	Accounting to Ethanol derived from cassava (ml/d)	1.12	—	1.19
	Capacity of Ethanol Plant (<i>derived from cassava</i>) (ml/d)	2.15	4.05	4.05
SUPPLY	Ethanol Derived from Consumption Excess (ml/d)	1.88	0.83	2.95
DEMAND	Compliance to the Fifteen -Year Renewable Energy Development Plan (ml/d)	1.34	2.11	2.96

- Note :
1. As the latest update by Biofuel Development Bureau, DEDE, on 4th Jan 2010
 2. Feedstock/raw material are figure sof reference from OEA (*the Office of Economic Agriculture*) and OCSB (*the Office of Cane and Sugar Board*)
 3. Export data in 2010 are being updated.

Ethanol Production as for Fuel (Ethanol 99.5 %)

	Production (ml)	Average (ml/d)	Production (ml)	Average (ml/d)	Production (ml)	Average (ml/d)	Production (ml)	Average (ml/d)	Production (ml)	Average (ml/d)
Month	2006		2007		2008		2009		2010	
Jan	11.51	0.37	14.87	0.48	30.34	0.98	41.29	1.33	45.10	1.45
Feb	7.86	0.28	11.33	0.40	27.79	0.96	33.69	1.20	39.65	1.42
Mar	7.65	0.25	16.53	0.53	27.54	0.89	39.34	1.27	40.60	1.31
Apr	5.95	0.20	15.17	0.51	40.63	1.31	31.46	1.05	25.20	0.84
May	6.59	0.21	12.41	0.40	26.21	0.85	31.01	1.00		
Jun	12.71	0.42	8.26	0.28	28.66	0.96	35.46	1.18		
Jul	14.23	0.46	14.83	0.48	28.93	0.93	35.60	1.15		
Aug	15.72	0.51	15.56	0.50	31.64	1.02	29.17	0.94		
Sep	14.11	0.47	20.76	0.69	25.45	0.85	31.16	1.04		
Oct	7.24	0.23	20.66	0.67	28.62	0.92	22.25	0.72		
Nov	13.09	0.44	18.33	0.61	24.07	0.80	24.49	0.82		
Dec	18.67	0.60	23.04	0.74	16.33	0.53	45.75	1.48		
Total	135.35	0.37	191.75	0.52	336.21	0.92	400.66	1.10	150.55	2.51

Source: Department of Alternative Energy Development and Efficiency

Update: 15th June 2010

Ethanol Export: 2007-2010 (ml)

Month/Year	2007	2008	2009	2010	Total
Jan	–	5.58	5.24	2.43	13.25
Feb	–	18.18	1.83	9.63	29.64
Mar	–	0.84	–	4.31	5.15
Apr	0.35	8.22	–	8.40	16.97
May	–	5.21	0.30		5.51
Jun	–	8.15	0.09		8.24
Jul	0.36	2.45	0.19		3.00
Aug	2.50	3.30	–		5.80
Sep	–	5.87	0.09		5.96
Oct	3.16	3.00	–		6.16
Nov	3.79	5.00	2.61		11.40
Dec	4.74	–	5.27		10.01
Total	14.90	65.80	15.62	24.77	121.09

Source: Excises Department

Latest update: 1st June 2010

Formulating the Cost of Ethanol Pricing on June 2010

$$\text{Cost of ethanol pricing} = \frac{(P_{\text{Mol}} \times Q_{\text{Mol}}) + (P_{\text{Cas}} \times Q_{\text{Cas}})}{Q_{\text{Total}}}$$

$$= 23.24 \text{ t/l}$$

$$\text{Cost of Ethanol produced from molasses } (P_{\text{Mol}}) = R_{\text{Mol}} + C_{\text{Mol}}$$

$$22.4714 = 16.3464 + 6.125 \quad \text{baht/l}$$

$$\text{Cost of Ethanol produced from cassava } (P_{\text{Cas}}) = R_{\text{Cas}} + C_{\text{Cas}}$$

$$24.6712 = 17.5642 + 7.107 \quad \text{baht/l}$$

Ethanol produced from molasses	=	500.157	l/day
Ethanol producing from cassava	=	268,093	l/day
Total ethanol production	=	768,093	l/day
Price of molasses	=	3.92	baht/kg
Cost of ethanol producing from molasses	=	6.125	baht/l
Price of fresh cassava	=	2.68	baht/kg
Price of cassava chip/strip	=	6.68	baht/kg
Cost of ethanol producing from cassava	=	7.107	baht/l