

' 05

(DDGS)



(rice), (wheat), (Corn),
 (sorghum), (barley), (oats)
 (oilseed)

(Soybean)
 BC7,000
 BC6,500
 가,, BC5,000
 . BC2,300

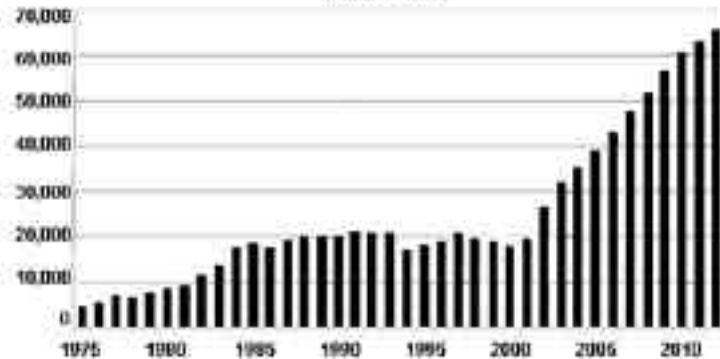
가 . 60% 가 .
 55% .

Land O'lakes,
 Inc. ICM Inc. New Mexico Albuquerque
 2 27 3 2 GEAPS(
)

DDGS

1. 가가 , 가 가 (1) 380 가 150 가 75% 5 , EU, 가 가 2004 150 가 35% 가 (renewable) 가 가 가 (Gasohol)' 350 가 1. (:)

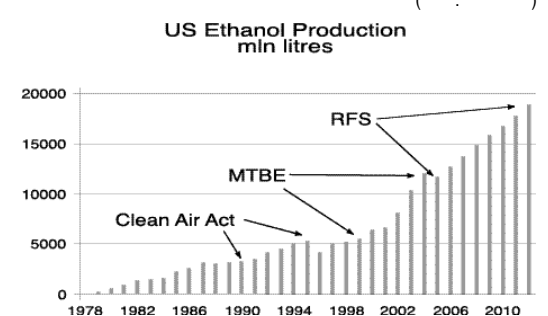
World Fuel Ethanol Production
million litres



DDGS(Distiller's Dried Grains with Solubles)

100% , 2004 (MTBE),
 가 , (RES)
 가 ,
 70 , (MTBE)
 125
 가 , 81 가
 가 15
 16
 가 2007 200 가
 가 GM GMC
 85 15
 'E85' . GM ,
 (SUV) E85
 가 5300
 E85 300 100 가 GM
 , GM 가
 가 (RFS:
 Renewable Fuel Standard)

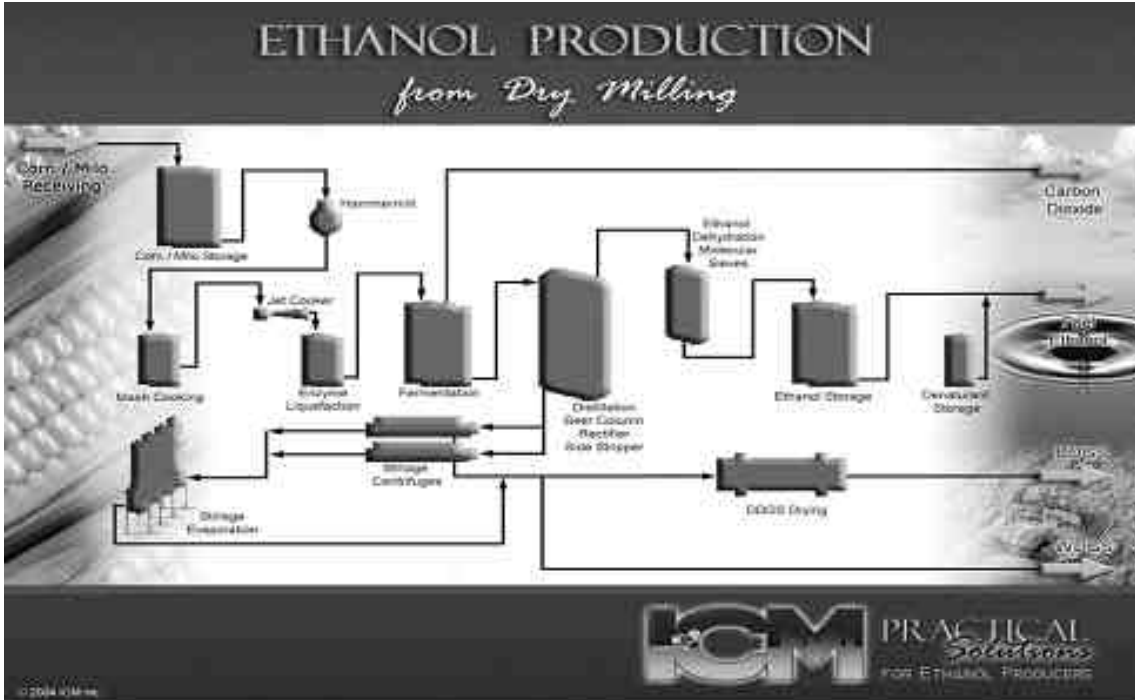
가 가 가
 2.
 (:)
 가 가
 3 (CBOT)
 . GM E85
 가
 (EU)



:Dr. Christoph Berg, World Fuel Ethanol Analysis and Outlook, 2004.4

(2) 1990 (Clean Air Act) 3. DDGS

가 MILL ,
 . DRY MILL(1) WET MILL , DRY MILL
 1) (DRY MILL)



2) DDGS



: www.ICMINC.com

DDGS(2), , OIL, 가

DRY MILL DDGS

DDGS Grinding(),
 Mash(), Fermentation(), Distillation(
) 1Bushel (25.4kg)
 10.2 , DDGS

83

8.2kg, Co2 8.2kg

60%가 DRY MILL

, 40%

DDGS

1980 32

가 WET MIILL

. WET

2005 7

, 2004

3. 2004

Economic Contribution of the Ethanol Industry: 2004

	2004 Expenditure (Mill \$)	2004 Impact		
		Output (Mill \$)	Earnings (Mill \$)	Employment (Jobs)
Corn	\$3,175.9	\$8,759.5	\$2,054.5	89,283
Chemicals	\$279.5	\$844.1	\$201.0	4,967
Electricity	\$276.5	\$645.8	\$142.8	3,548
Natural Gas	\$311.5	\$1,004.3	\$179.9	4,007
Water	\$20.0	\$78.9	\$21.0	606
Labor	\$40.3	\$129.2	\$42.5	1,243
Maintenance	\$166.7	\$528.7	\$107.0	5,262
Insurance	\$94.1	\$270.0	\$94.3	3,046
Overhead	\$205.1	\$699.7	\$264.1	8,988
Subtotal	\$4,582.2	\$12,979.8	\$3,166.8	121,530
Construction	\$700.0	\$2,351.0	\$712.2	21,826
Total		\$15,330.7	\$3,879.1	143,356

: <http://www.ncga.com/ethanol/main/index.htm>

DDGS 44%, 37%, 3%,
16%

76

DDGS

DDGS

4.

가

가

가

가

가

가

3

가

DDGS

가

(3) 2004

DDGS

. 153

가

가
12,000

39

가

DDGS

가

가