

Instructions and Definitions
Dry Mill Producers of Ethanol (M311C)

1. **Scope of survey** — This survey covers all establishments generating grain by-products in the dry mill process of ethanol production.
2. **Figures to be reported** — Companies with more than one establishment manufacturing the products covered by this survey are requested to complete a separate report form for each location. If you have not received a separate report form for each of your establishments, please write if you need additional forms. A separate report form is required for each dry mill which your company operates.
 - a. **Materials and oils to be included on this report**
 1. Corn and other grains processed by grinding kernels into coarse flour and fermenting to convert starch to sugar, including those used in the distillation of beverage alcohol, industrial alcohol, fuel alcohol and denaturant volume.
 2. Report all quantities of by-product production and corn grind used during ethanol production whether for your own account or on a toll basis. All establishments reporting corn by-products should report corn grind. Corn grind is a necessary input in the production process of corn by-products.
 - b. **Dry mill co-products**
 1. *Distillers wet grain (DWG) 65%-70% moisture*: The feed product, containing 65 to 70 percent moisture, obtained after the removal of ethanol by distillation from the yeast fermentation of a grain or a grain mixture by separating the resultant coarse grain fraction of the whole stillage not dried.
 2. *Modified distillers wet grain (DWG) 50%-55% moisture*: The feed product, containing 50 to 55 percent moisture, obtained after the removal of ethanol by distillation from the yeast fermentation of a grain or a grain mixture by separating the resultant coarse grain fraction of the whole stillage not dried.
 3. *Distillers dried grains with solubles (DDGS)*: The feed product, containing 65 to 70 percent moisture, is obtained after the removal of ethanol by distillation from the yeast fermentation of a grain or a grain mixture by separating the resultant coarse grain fraction of the whole stillage and then mixing with condensed distillers solubles (70 percent moisture) and drying the entire mixture to about 88 to 90 percent dry matter.
 4. *Distillers dried grains (DDG)*: The feed product obtained after the removal of ethanol by distillation from the yeast fermentation of a grain or a grain mixture by separating the resultant coarse grain fraction of the whole stillage and drying it by methods employed in the grain distilling industry.
 5. *Condensed distillers solubles (CDS)*: The feed product obtained after removal of ethanol by distillation from the yeast fermentation of a grain or a grain mixture by condensing the thin stillage fraction to a semi-solid, containing about 30 percent dry matter. Condensed distiller's solubles can be sold locally to cattle feeders or mixed with distillers wet grain and dried to produce distillers dried grain with solubles.
 6. *Industrial grade corn oil*: Oil extracted during the production of ethanol and used for industrial purposes. Some examples include the manufacture of lubricants, biodiesel fuels, soap, salves, paint, inks, and insecticides.
 7. *Food grade corn oil*: Oil extracted during the production of ethanol and used in products for food preparation. Food grade oil is used in frying oil and is also a key ingredient in margarines.
 8. *Carbon dioxide (CO₂)*: Carbon dioxide is present during the fermentation stage of ethanol production and many ethanol plants collect that carbon dioxide and market it as a co-product. Some uses of carbon dioxide include carbonating beverages, manufacturing dry ice, and flash freezing meat.
 9. *Other co-products*: Report any and all ethanol by-products at the establishment not listed on this form from the dry mill process.