

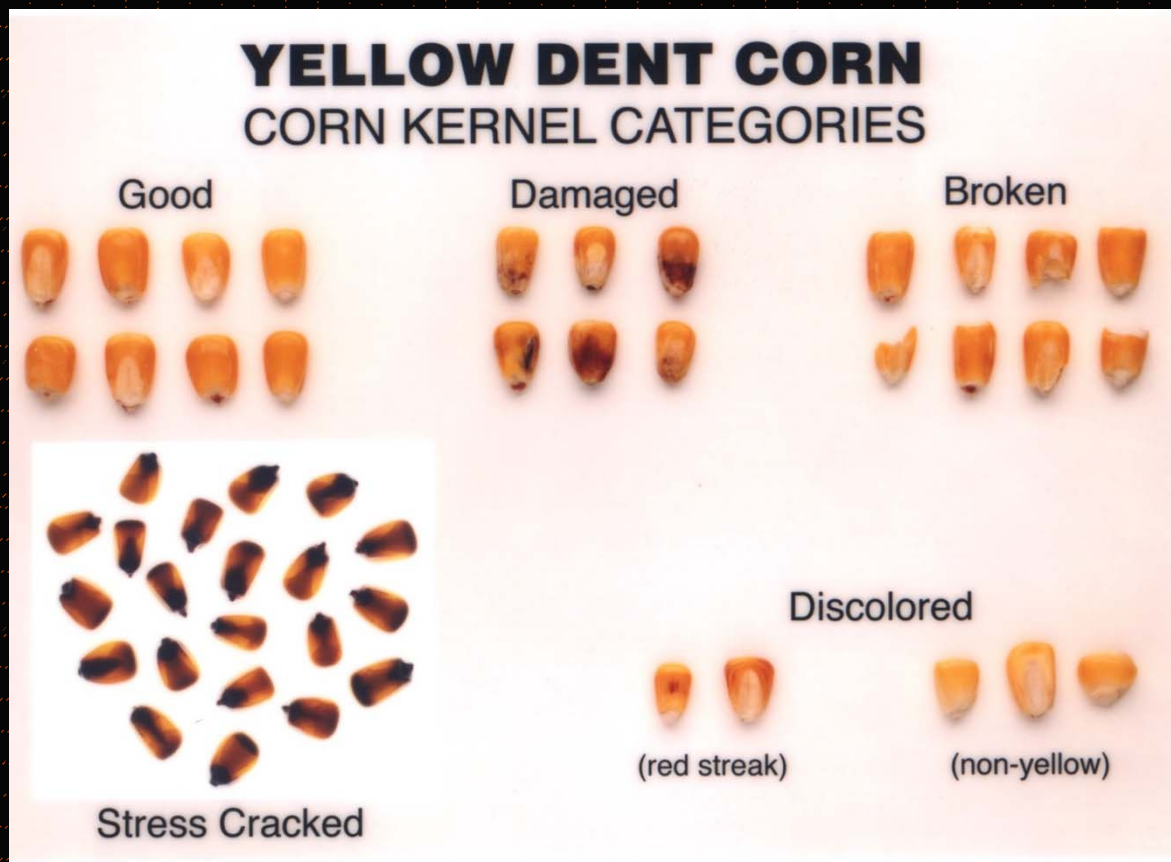
Functions of Ingredients in Tortillas

Kirk O'Donnell

Corn Tortillas

- Corn
- Water
- Lime (Calcium hydroxide)
- Mold inhibitor?
- Gums?
- Acids?

Corn evaluation



Physical Properties of Dent Corn

- Kernels/ear: 800
- Test weight: 56 lb/bu o 69 kg/HI
- Density: 1.26 g/cm³
- 1,000 kernel weight: 260-320 g
- Endosperm Texture: Intermediate-Soft

Flour tortillas

REQUIRED

- Wheat flour*
- Water
- Shortening
- Salt
- Baking Powder
- Dough relaxer
- Mold inhibitor system

OPTIONAL

- Emulsifiers
- Enzymes
- Gums
- Ascorbic acid
- Sugar
- Glycerin
- Flavors/colors

***Gluten-free
Need to change**

Wheat flour

- Hard wheat or soft wheat?
- White flour or whole wheat?
- Effect of moisture
- Effect of protein
- Effect of ash
- Other flour specifications

Water

- Hard water or soft water?
- pH of water
- Amount of water and dough hydration
- Control of dough temperature
- Water activity and shelf life

Shortening

- Includes oils and margarines
- Assists ability to shape
- Provides softness and rollability
- Flavor carrier
- PHOs no longer GRAS
- Issues with cholesterol, saturated fats and trans-fats
- 7 to 15%

Salt

- Used for flavor and structure
- 1 to 2%
- Too much salt _____
- Too little salt _____
- Pressure to reduce sodium content

