



What is the only industry we need to survive? If you said **agriculture**, you are correct. You just can't have an ag-less day! Even baseball needs agriculture. Most people would never connect agriculture with one of America's favorite pastimes! Study the connections below and you'll find that there is NO WAY baseball could exist without agriculture!

► G O M I N N E S O T A T W I N S ! ◀

## BASEBALL CONNECTIONS TO AGRICULTURE

**Baseball Uniforms:** Cotton-based; cotton produced in the southern United States and other parts of the world. Cotton is natural fiber that keeps you cool in the summer. Texas is the leading cotton-producing state.

**Glove or Mitt:** The best are made from natural cowhide; glove softening oils come from animals, fish or plants (mostly soybeans). One cow can provide 12 fielding gloves. Cattle are raised in many states.

**Baseball:** An official baseball has a core (middle) made from four long strands of high quality wool – 150 yards total! The core is surrounded by rubber or cork (cork oak tree from Spain and Portugal) and covered with two pieces of horse or cowhide. It is stitched with exactly 216 stitches. Lower quality baseballs have a core made of cotton yarn. One cow can provide 144 baseballs.

**Baseball Bat:** Today's official bat is a smooth round stick made of one piece of solid wood. Traditionally, wood came from the northern ash tree but today some

players prefer maple wood. Minnesota has 17 million acres of trees!

**Chalk for Lines:** Mined limestone: possibly corn starch as a binder. Lime is also used for sanitation purposes on the floors of Grade A dairy barns and to lower the pH level in agricultural fields.

**Clay:** Used to form pitchers mound. Minnesota is rich in clay loam soils. An example is bentonite clay mined near Morton, MN.

**Home Plate:** Rubber from tropical rubber tree.

**Hot Dogs:** Pork and beef in a wheat bun. Nationally, Minnesota ranks third in pork and second in spring wheat production. The ketchup you love starts as a tomato!

**Nachos:** Corn flour with cheese from dairy cows. Minnesota is a leading producer of both corn and dairy.

**Peanuts:** Grown by peanut farmers in the southern states.

**Pennants:** Cotton-based.

**Pharmaceuticals:** Many agricultural connections called by-products and co-products: cattle gelatin used as a coating for vitamin capsules; cattle fat and fatty-acids used in various medicines; soybean oil used in many creams and lotions; pituitary glands from cattle used in the treatment of arthritis and allergies; lactose from milk used as part of agent for tablets; soybean lecithin (an emulsifier, a soybean oil derivative ... helps break up fats and hold them in suspension) is used in pharmaceuticals.

**Pine Tar:** From the yellow pine tree (Georgia).

**Popcorn:** Grown by farmers with butter from dairy cows.

**Pretzels:** Wheat flour and vegetable oil.

**Printing:** Newspapers, tickets, programs, schedules: All paper-based (aspen and pulp from MN forests) and printed using soy ink from soybeans.

**Resin Bag:** Pine resin from yellow pine; removed, dried and powdered for use.

**Soap, Deodorant, Shaving Cream, Cosmetics (Eye Black):** Fats (in soaps), protein meal and stearic acid (helps retain moisture) from cattle; corn starch base and soybean lecithin (wetting agent) in cosmetics; lanolin from sheep in beauty soaps.

**Soda Pop:** Your favorite is sweetened with corn syrup.

**Sunflower Seeds:** Grown by farmers in the Midwest states.

**Tape/Bandages:** Corn dextrin and cattle gelatins are used as adhesives and binding agents.

**Turf Grass:** Many baseball fields are covered with natural turf grass, which is usually a mixture of perennial rye grass, Kentucky blue grass, fescue and other grasses (from sod farming - horticulture). Ag fertilizers used to maintain quality grass.



Minnesota Agriculture  
in the Classroom  
[www.mda.state.mn.us/maitc](http://www.mda.state.mn.us/maitc)