Drone Technology

Objective: Research and discuss drone applications in agriculture.

The agriculture industry continues to evolve and become more efficient to fulfill food demand for our growing world population. The agriculture sector is a promising sector to meet this growing demand, but is constantly plagued with the following issues: labor availability, extreme weather events, inadequate/inefficient chemical and fertilizer, disease and insect/animal damage.

The use of advanced technologies such as drones offer potential for addressing current problems and gaining more efficiencies. The major applications of drones in agriculture are currently irrigation, crop monitoring, soil and field analysis and bird control.

Items to include (but not limited to) in the study:

1. Background information regarding what is drone technology and its relationship with precision agriculture. In addition, discuss advantages and disadvantages compared to traditional methods, current and potential uses and potential opposition to drones.

2. Its prevalence over the years, present day, and a look into the future at the potential market. Discussion should requirements to own and operate drones, as well as regulations applied to agricultural operations.

3. Discuss how drones could potentially impact agriculture.
    - Current and potential uses. Including: Soil and field analysis, planting, crop spraying, crop monitoring, irrigation, field and animal health assessments.
    - How can drones help and/or hurt farmers and ranchers (large and small producers)?
    - How could drones potentially affect High Plains Farm Credit in the future?