PRESERVING WATER AND WATER QUALITY ASSOCIATED WITH LIVESTOCK AND POULTRY PRODUCTION

Rationale:

Increased climate variability will create challenging environmental conditions for livestock and poultry producers including escalated heat stress, drought, and floods. Livestock are generally resilient to climate variation, but the current rate of climate change will impose overwhelming pressure on livestock systems to adapt to changing environmental conditions. Existing water supplies are becoming more variable due to increased extreme weather events. In addition, increased temperatures cause an increase in water evaporation, increased drought severity in the absence of precipitation, and increased probability for environmental stress in livestock.

Water is an essential nutrient for life, therefore water rights and water usage issues will become more tumultuous as the needs of humans, crops, wildlife, and domesticated livestock and poultry are balanced. Greater knowledge of the demands from each of these sectors will enhance water use planning by creating tools to balance all water needs with that of food production. Since water is essential to maintain and increase food security, efforts to manage dwindling supplies in the face of weather extremes are inherently vital.

During the past 50 years, livestock and poultry production has evolved to fewer and larger production units for several reasons, including the benefits of scale in efficient use of resources. As livestock and poultry production units have increased in size, there have been concerns about their impact on natural resources including water quantity and quality.

- Animal production systems have adopted many technologies designed to protect water use and quality, guided by a complex set of federal and state regulations. A few examples of those technologies include:
    - Containment of process-generated waste water and storm water runoff
    - Rigorous construction standards for manure storage containers made of earth, concrete or other materials
    - Application of manure to cropland at rates corresponding to the uptake of nutrients by the crops
    - Incorporation of manure into soil when applied to cropland
- Application of these technologies requires a high level of expertise and management.
- Animal producers, their families, their employees and their animals have the same needs for high-quality water as other people.
- Recycling of nutrients in animal manure to cropland is the oldest recycling program, and throughout history has contributed to food security.

Regions of the world where water is in short supply tend to also be large agricultural producers (Figure 1). Predictions of an increasing world population require that more food is produced and pressure on agriculture to generate a much larger yield increases significantly.

- The world must double food production in the next 4 decades with little new land available for cultivation, less water available for irrigation, and perhaps limited supplies of fertilizers. Thus we must maximize food production from the earth's limited resources, including water.

Policy Statement:

ASAS supports preservation of water and water quality along with efficient use of resources in livestock and poultry production.

Policy Objectives:

- ASAS supports scientifically based protection of both ground water and surface water.
- ASAS supports policy that acknowledges the value of efficient animal production in promoting food security.
- ASAS supports focus on protection of the environment and on efficient use of resources.
- ASAS encourages funding for research and education to meet objectives that focus on improving nutrient management, water-use efficiency and water quality.

References:

Rekacewicz, P. 2006. Increased global water stress. Maps and Graphics Library, UNEP/GRID Arendal. Available at: http://maps.grida.no/go/graphic/increased-global-water-stress (Accessed 5 July 2015.)

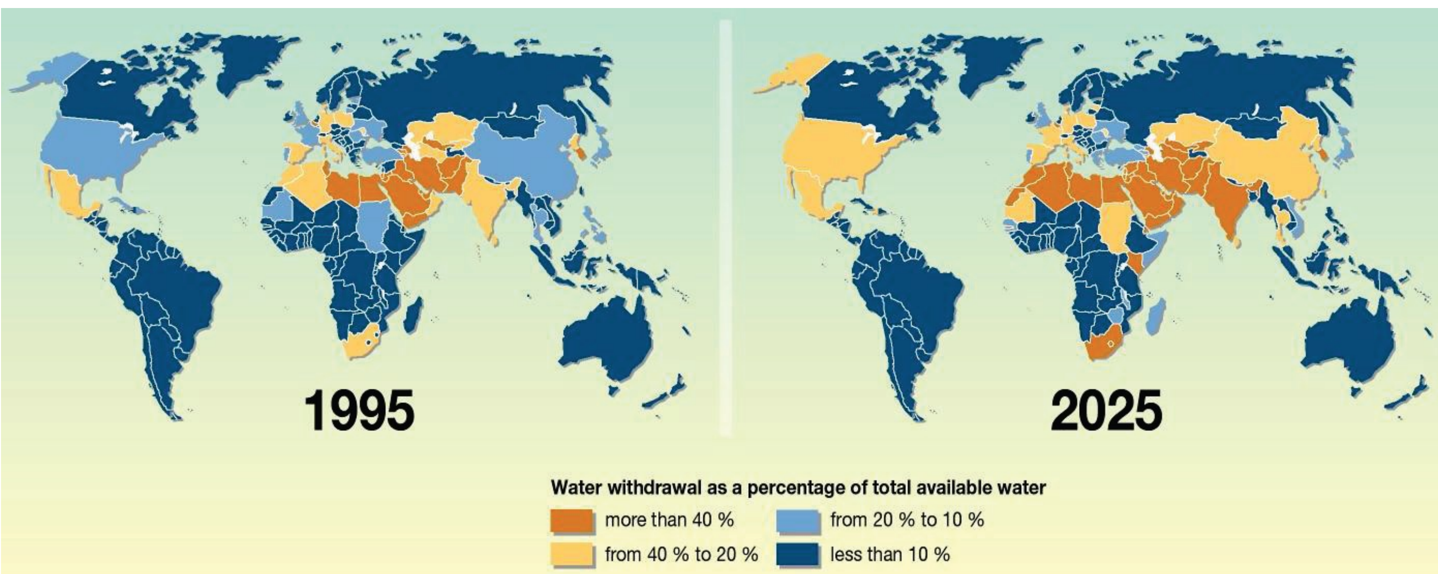

Figure 1: Water withdrawal expressed as a percentage of total water availability. Source: Rekacewicz (2006)

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