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## EXTENSION EDUCATION: DECISION SUPPORT TOOLS IN EXTENSION

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### 0292 History and development of the Bovine Estrus Synchronization Planner. S. K. Johnson<sup>\*1</sup>, G. Dahlke<sup>2</sup>, and D. R. Strohbehn<sup>2</sup>, <sup>1</sup>Kansas State University, Colby, <sup>2</sup>Iowa State University, Ames.

The Bovine Estrus Synchronization Planner is an Excel-based tool that aids in the selection and delivery of synchronization protocols. The development was a response to vocal concerns expressed by technicians, veterinarians and producers to Iowa State University extension beef specialists on the difficulty in managing the product delivery and timing elements of estrus synchronization protocols. Errors in protocol follow through were common and the resulting poor conception rates unfairly discredited the technology. As a multi-state extension group (now the Beef Reproduction Task Force) was coming together to deal with similar issues related to clear communication on research-based synchronization protocols, an Iowa State specialist approached the group about working together to update the existing planner with the new task force recommendations. This has been a successful partnership as the group has worked together to improve and update the planner for 10 yr. The original program contained six protocols, but now almost 40 recognized protocols are included. However, the short list of protocols recommended by the task force is highlighted. At one point there was a charge for the software, but over time the group has achieved enough industry sponsorship to provide the program as a free download at [http://www.iowabeefcenter.org/estrus\\_synch.html](http://www.iowabeefcenter.org/estrus_synch.html). Today, the planner has more independent users than any of the other Iowa State University Animal Science software. The most recent development is a shortened version for use on handheld devices ([www.estrussynch.com](http://www.estrussynch.com)). Through the following steps: identification of research proven protocols, designation of most appropriate use of protocols, direction on proper implementation and stressing the importance of timing through the use of a calendar printout, the Estrus Synch software has clarified the necessary details to the end user. An online survey of AI users in 2013 (42 states represented) indicated 36% had downloaded the planner; of which 41% used it frequently, 15% used it 3–5 times, 31% used it less than twice and 13% had not used it. Users strongly agreed or agreed that the planner was easy to use (79%), made scheduling easier (77%), reduced errors (68%), improved communication (71%), helped achieve timely planning and preparation (73%), and directed them to a more appropriate protocol (57%). Suggestions made by users were included in the 2014 version. The Estrus Synchronization Planner has been a useful tool in the proper implementation of synchronization protocols. Efforts to inform potential users of its availability must continue.

**Key Words:** estrous synchronization, decision tools, evaluation

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### 0293 Impact of decision support tools available for dairy farm management. V. Cabrera\*, University of Wisconsin, Madison.

A number of decision support tools are available for dairy farm management and are being used for practical decision-making. The objective of this analysis was to document the level of adoption of decision-support-tools available at the University of Wisconsin-Madison Dairy Management Website (<http://DairyMGT.info>; > 35 tools) including the *Repro Money*, a Wisconsin extension program to improve reproductive performance. Since its inception in 2008, the DairyMGT.info, conceived as a mechanism to deliver science-based, user-friendly, and practical-application decision-support-tools, has accumulated a number of tools in nutrition, heifer rearing, reproduction, production, replacement, financial, and environment. The domain DairyMGT.info was registered with *Google Analytics* in December 2009 (<http://www.google.com/analytics>) to record the number of visitors and pageviews. Later, a system to track tool-specific usage by registering user emails was implemented in March 2011. Data indicate that the DairyMGT.info domain has consistently received > 1000 visits and > 3000 pageviews per month with a total of > 55,500 visits and > 179,000 pageviews in the period December 2009 to January 2014. Around 55% of visitors were from the US and the rest from more than other 150 countries, counting as the most important: Australia, Mexico, Brazil, Canada, Argentina, UK, and Italy. To January 2014, a list of 4500 users were registered with the DairyMGT.info domain and there were > 35,000 tool effective uses (a rate of > 1000 accessions a month or > 30 a day). As the number of visitors, tools usage is consistently increasing. The top 5 most popular tools are: FeedVal 2012-feed price valuation, grouping strategies for feeding lactating dairy cattle, value of sexed semen programs, economic reproductive analysis, and the economic value of dairy cow. A special tool for improving dairy herd reproductive management, *Repro Money* consists on facilitating 4+ farm-team meetings with the goal of diagnosing, prioritizing needs, and taking effective actions to improve reproductive performance. *Repro Money* was launched in late 2010 and since then 45 farmers have enrolled. Data from farms that finished the program by January 2014 ( $n = 30$ ) indicate that reproductive performance (before vs. after) improved significantly at key reproductive indicators such as conception rate (+3%,  $P < 0.01$ ), service rate (+5%,  $P < 0.01$ ), interbreeding interval (–5 d,  $P < 0.01$ ), and overall 21-d pregnancy rate (+3%,  $P < 0.01$ ). This improved reproductive performance was estimated to increase economic gains in an average amount of \$55/cow per yr (range \$0 to \$278) with an estimated overall impact of > \$358,000/yr on 11,340 cows.

**Key Words:** online tools, decision-making, reproductive economic performance