0292 History and development of the Bovine Estrus Synchronization Planner. S. K. Johnson[*1], G. Dahlke[2], and D. R. Strohbehn[2], *[1]Kansas State University, Colby, [2]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. 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). 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: estrus synchronization, decision tools, evaluation

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

0294 Assessing the need, project development and impact of the National Swine Reproduction Troubleshooting and Management Guide.

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An assessment of university Cooperative Extension swine programs in the United States revealed lack of a tool for troubleshooting reproductive problems at the farm level. Moreover, there are an extremely small number of extension specialists academically trained in reproductive physiology of pigs who are able to conduct troubleshooting and ongoing educational programs at the farm level. Thus, pork producers rely on themselves, veterinarians, or other consultants to improve reproductive performance of the breeding herd. A major role of university Cooperative Extension/Outreach is to provide scientific based information to help pork producers and consultants solve swine reproductive problems. The United States Pork Center of Excellence organized a group of nine university Extension swine specialists to develop a National Swine Reproduction Troubleshooting and Management Guide (NSR-TMG) for use by all pork producers and pork industry consultants. The NSR-TMG uses a question and answer format. The NSR-TMG has three main areas: (1) Problems with replacement gilts, (2) Problems with sows, and (3) Problems with semen quality. The replacement gilt segment focuses on problems associated with attainment of puberty and expression of estrus, problems resulting from a gilt pool that is too small, and problems that lead to poor litter size or reduced farrowing rate of gilts. The sow segment focuses on problems associated with reduced longevity due to high culling rate, low farrowing rate, low litter size, prolonged weaning-to-service interval and high pre-weaning mortality of pigs. The semen quality segment focuses on record keeping, semen delivery and storage, semen evaluation, and on-farm semen collection and processing. The program has answers for over 1000 questions. The answers are supported by a list of 648 references. Some references are available by linkage. The NSR-TMG is a web-based application, user-friendly, applicable for use by any size of sow farm, and easily accessed through personal computer, smart phones and tablets. Because the NSR-TMG is web-based, it will be easily updated. The project was partially funded by numerous pork industry partners. There is a yearly license fee to obtain access to the NSR-TMG. University and college instructors have free access to train students. The NSR-TMG is being used to improve reproductive performance of the sow herd by independent pork producers, large corporate swine operations, swine genetic companies, veterinarians, swine nutrition consultants, and university instructors. The actual financial impact of the NSR-TMG is difficult to measure at the farm-level.

Key Words: swine reproduction troubleshooting

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