

\$69.87 for HeatSynch. The number of reproductive culls showed an advantage to the synchronization protocols with visual heat detection resulting in a 10.8% cull rate or 37 of the 250 cows not pregnant by 300 days in milk. In contrast, the three synchronization protocols had a similar culling rate of 6.4% or 16 of the 250 original cows failing to conceive by 300 days in milk. The adjusted cost per pregnancy which included cost of extended days in milk and cows removed because of failure to conceive by 300 days was \$298.35 for the visual heat detection program, \$123.46 for HeatSynch, \$115.39 for OvSynch and \$110.49 for each pregnancy obtained using the PreSynch protocol. OvSynch protocol developed in the mid-90's allowed for the first timed artificial insemination (TAI) program that obtain conception rates similar to those of cows artificially inseminated to detected estrus. Modifications of the OvSynch protocol to maximize cows between day 5 and 12 of the estrous cycle (PreSynch) have shown a further enhancement in conception rates to TAI. HeatSynch is a less expensive alternative to PreSynch; however, it requires heat detection and may not work in anovulatory cows. For best results, visual heat detection should be conducted between initial synchronization on first service and resynchronization of cows not detected 18 to 24 days post AI. Pregnancy diagnosis at 33 days allows for accurate determination without a high early post detection embryonic death loss experienced with earlier ultrasonic imaging. All three protocols reduced days open and increased PR with no significant economic advantage of one protocol over the other.

-- Ray L. Nebel
Extension Dairy Scientist,
Reproductive Management
(540) 231-4432 email: rnebel@vt.edu

**** Upcoming Activities****

Hokie Cow Classic Golf Tournament	May 29
<i>VT River Course, Fairlawn</i>	
Dairy Technology and Conservation	June 19
<i>Tour, Montezuma Hall, Dayton</i>	
Dairy Conservation Field Day	July 22
<i>Cedar Springs Farm, Madison Co.</i>	

Charles C. Stallings
Dairy Extension Coordinator
and Extension Dairy Scientist, Nutrition