

Livestock Update

Beef - Horse - Poultry - Sheep - Swine

November 2015

This LIVESTOCK UPDATE contains timely subject matter on beef cattle, horses, poultry, sheep, swine, and related junior work. Use this material as you see fit for local newspapers, radio programs, newsletters, and for the formulation of recommendations.

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Scott P. Greiner, Extension Project Leader
Department of Animal & Poultry Sciences

Dates to Remember

BEEF

OCTOBER

30TH - Hokie Harvest Sale. Virginia Tech Animal Judging Pavilion Blacksburg, VA.

Contact: Dr. Dan Eversole, phone: (540) 231-4738 or email: deversol@vt.edu

DECEMBER

12 - Virginia BCIA Culpeper Senior Bulls Sale. Culpeper Agricultural Enterprises located on Route 29 just south of Culpeper, VA.

Contact: For video clips as well as catalogs and detailed information on the bulls visit the website www.bcia.apsc.vt.edu, or phone Virginia BCIA at 540-231-9159 or Glenmary Farm at 540-672-7396.

HORSE

SHEEP

NOVEMBER

6 -7 Sheep Management Basics Workshop. Virginia Tech Copenhaver Sheep Center Blacksburg, VA

Contact: Dr. Scott P. Greiner, phone: (540) 231-9159 or email: sgreiner@vt.edu

DECEMBER

5 - 2015 Virginia Sheep Producers' Association Fall Bred Ewe & Doe Sale. Rockingham County Fairgrounds in Harrisonburg, VA.

Contact: Information on the 2016 test and sale may be attained from Scott Greiner, Extension Sheep Specialist, Virginia Tech, phone 540-231-9159, email sgreiner@vt.edu, or visit the VT Sheep Extension website <http://www.apsc.vt.edu/extension/sheep/index.html>

November Herd Management Advisor

Scott P. Greiner & Mark A. McCann
Extension Beef Specialists, Virginia Tech

Moisture in our region through early fall has been ahead of normal resulting in improved fall pasture growth and quality. With some additional management and effort this extra pasture growth can be translated into extra grazing days and reduced hay feeding. Research and Extension demonstrations have consistently shown that strip/ limit grazing of this accumulated fall growth is a far more efficient means of utilization as compared to continuous grazing. Producers who have utilized strip grazing do not have to be convinced to implement it again, as they have witnessed the efficiency of utilization along with positive changes in cattle behavior. In fact, many add more frequent moves of temporary fencing to improve harvest efficiency in succeeding years. Be aware that fall calving cows have higher nutritional requirements, and thus are better candidates for stockpiled fescue grazing, compared to spring calving cows which are in mid-gestation. If you worry that you are pushing the cows too hard to cleanup stockpiled forage, put out a bale of average to below quality hay in the grazed area. If cows consume the hay too quickly, then move the fence and provide access to more forage on more frequent basis. One last item to recall about limit grazing tall fescue is that once it is consumed, the pasture area is prepared for frost seeding of clover.

Spring Calving Herds (January-March)

General

- Implement marketing plan for calf crop, synchronize post-weaning grazing and feeding program as well as vaccination program with marketing plan. Calculate break-evens on various winter and spring marketing options and consider risk management strategies.
- Schedule and conduct pregnancy diagnosis with veterinarian. Plan a marketing strategy for open cows which takes advantage of seasonality in cull cow price.
- Finalize winter feed and forage supplies and options. Conduct forage tests to determine nutritional content of hays.

Nutrition and Forages

- Body Condition Score cows at weaning and separate thin cows
- Use palatable feeds and high quality hay to background calves.
- Continue stockpiling tall fescue and begin strip grazing accumulated growth if needed.
- Continue to manage first-calf heifers separately; give them the best forage. Thin mature cows could be added to this group.
- Continue to feed high Se trace mineral salt. A forage analysis can reveal what other minerals should be supplemented.
- As warm season grasses go dormant, manage grazing to utilize dormant residue before too much weathering occurs.
- Begin to shop and compare winter supplement options.

Herd Health

- In consultation with your veterinarian, finalize vaccination and preconditioning protocol for calf crop.

Reproduction

- Conduct pregnancy check of cow herd with veterinarian.
- Cull open, old and thin cows and cows with problem udders, eyes and soundness issues.

Genetics

- Collect weaning weights on calf crop at appropriate time (AHIR age range 120-280 days), along with cow weights, hip heights and body condition scores (cow mature size data taken within 45 days of calf weaning measure).
- Identify replacement heifers using objective measures including genetic background, dam performance, individual performance, along with phenotype. Keep only heifers born in defined calving season.

Fall Calving Herds (September-November)

General

- Calving season is winding down for most. Continue to observe cows frequently. Address calving difficulties early.
- Tag, tattoo, record birth weight, calving ease score, teat/udder score and mothering ability of dam. Keep accurate records at birth.
- Monitor young calves for scours. Prevent scours by keeping calving area clean and well drained. Moving 2-3 day old pairs out of calving area to separate pasture (reduce commingling of newborn calves with older calves) help reduce exposure to scours.
- Finalize winter feed and forage supplies and options. Conduct forage tests to determine nutritional content of hays.
- Finalize plans and schedule for breeding season.

Nutrition and Forages

- Evaluate growth of yearling heifers with goal of reaching 60-65% of mature weight by breeding. Depending on forage quality, supplementation maybe needed to meet weight gain target.
- Offer high magnesium mineral. Generally, fall calving cows are not as predisposed to grass tetany.
- Reserve high quality hay and stockpiled pasture areas for cows post-calving. Use strip grazing as a tool to increase the efficiency of utilization of cool season pastures by cows post-calving.
- If available, utilize crop aftermath.
- Use grazing management to utilize the residue of dormant warm season pastures.

Herd Health

- Ensure colostrum intake first few hours of life in newborn calves. Supplement if necessary. Newborn calves need 10% of body weight in colostrum first 24 hours of life.
- Provide selenium and vitamin A & D injections to newborn calves
- Castrate commercial calves at birth
- Monitor calves closely for scours and pneumonia, have treatment supplies on hand.
- Finalize and conduct pre-breeding vaccination schedule for cow herd and yearling heifers. Plan early to allow 30-day vaccination window prior to breeding season.

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Reproduction

- Reproductive tract score and measure pelvic area on yearling replacement heifers.
- Finalize plans and protocols for breeding season. Establish calendar to map timing of synchronization program to be used during breeding season. Confirm schedule with AI technician, have supplies and semen are on hand..
- Breed heifers 2-4 weeks ahead of mature cows to allow longer post-partum interval prior to second breeding season

- Conduct breeding soundness exams on herd sires, including annual vaccinations. Do so prior to fall/early winter bull sales to allow time to secure replacements as necessary.
- Breed heifers 2-4 weeks ahead of mature cows to allow longer post-partum interval prior to second breeding season.
- Manage newly acquired herd sires properly to prepare them for the breeding season. Yearling bulls often lose 100+ pounds during their first breeding season. Adjust them to the feed and environment of their new home, and commingle bulls of same age/weight for a period of time prior to turnout. Ample exercise, in combination with a proper nutritional program, is essential to make them physically fit for the breeding season

Genetics

- Collect yearling performance data (weight, height, scrotal, ultrasound) in seedstock herds.
- Make plans for spring bull-buying season. Evaluate potential sources for bull purchase. Using herd genetic goals, establish benchmarks and selection criteria for bulls to be purchased. Secure new natural service sires in ample time to acclimate to your management and environment prior to breeding season.

21st HOKIE HARVEST SALE

Sharing the Harvest

Friday Evening, **OCTOBER 30, 2015**

ANIMAL JUDGING PAVILION • VIRGINIA TECH

SALE TIME 6:30 PM • BLACKSBURG, VIRGINIA



12- Service Age Bulls • Angus • Simmental • Hereford
Performance • Ultrasound • BSE



Lot 12



Lot 13



Lot 16



Lot 23



11 - Purebred Females • Angus • Simmental
Spring Pair Splits • Fall Pairs



Lot 1



Lot 2



Lot 4



Lot 10



7 - Spring Calving Commercial Bred Heifers • 13 - Spring Calving Young Commercial Cows

SALE BOOK ON THE WEB AT www.brubakersales.com
BID ONLINE AT www.cowbuyer.com

Dr. Dan Eversole
540/231-4738
deversol@vt.edu

Chad Joines
540/557-7263
cjoines@vt.edu

For catalog requests, contact:
Brittany Heath
bheath12@vt.edu

BRUBAKER Ken Brubaker
Sales & Marketing LLC 540/908-5799
ken@brubakersales.com

2015 VIRGINIA TECH SHEEP MANAGEMENT BASICS WORKSHOP

Virginia Tech Copenhaver Sheep Center
Blacksburg, VA

Friday, November 6 and Saturday, November 7
(10 AM Friday through 3 PM Saturday)

This workshop is designed for individuals with a limited amount of experience in the care and management of sheep. Special emphasis will be placed on the management practices required during and around the time of lambing. Participants will get hands-on experience with a group of ewes that will be lambing during the two-day workshop.

Topics areas to be covered include:

*Facilities and Handling, Newborn Lamb Management, Flock Health, Nutrition & Feeding Management
Reproductive Management, Basic Record Keeping & Selection*

This workshop is limited to a maximum of 25 participants. The cost is \$40 per person. The first 25 preregistrants will be enrolled. First-time participants will be given preference. To preregister for the workshop, utilize the form below. Detailed information will follow receipt of registration (including lodging block details).

This workshop is sponsored by:



Virginia Cooperative Extension
Virginia Tech • Virginia State University



*Virginia Cooperative Extension programs and employment are open to all, regardless of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, genetic information, marital, family, or veteran status, or any other basis protected by law.
An equal opportunity/affirmative action employer.*

Extension is a joint program of Virginia Tech, Virginia State University, the U.S. Department of Agriculture, and state and local governments.

If you are a person with a disability and desire any assistive devices, services or other accommodations to participate in this activity, please contact Scott Greiner at 540-231-9159/800-828-1120 during business hours of 8 a.m. and 5 p.m. to discuss accommodations 5 days prior to the event.

Cut Along Dotted Line and Return by October 10, 2015 (enrollment limited)

Make check payable to Virginia Sheep Producers Association

**Mail form to Dr. Scott Greiner, Department of Animal & Poultry Sciences, Virginia Tech,
366 Litton Reaves Hall, Blacksburg, VA 24061**

phone 540-231-9159, fax 540-231-3010, email sgreiner@vt.edu

Name(s) _____

Address _____

City _____ State _____ Zip _____

Phone _____ Email _____

Virginia Tech Sheep Management Basics Workshop, November 6-7, 2015

Annual Virginia Fall Bred Ewe Sale to be Held December 5

The 2015 Virginia Sheep Producer's Association Fall Bred Ewe & Doe Sale will be held Saturday, December 5 at 1:00 PM at the Rockingham County Fairgrounds in Harrisonburg. Yearling ewes and does, ewe lambs and doe kids, along with mature ewes and does will be sold. All yearling and mature ewes and does will be sold as guaranteed pregnant. Breeds offered will include Suffolk, Hampshire, Dorset, and crossbreds (including whether dams). All does will be registered meat goats or meat goat crossbreds. For a sale catalog or more information visit the VSPA website <http://www.vasheepproducers.com/> .

2015 Virginia Performance Tested Ram Lamb & Replacement Ewe Lamb Sale Results

The 40th Annual Virginia Performance Tested Ram Lamb Sale was held at the Virginia Sheep Evaluation Station at the Virginia Tech Shenandoah Valley AREC near Steeles Tavern on Saturday, August 29. A total of 49 rams sold for an average price of \$483. Top-selling ram was a winter Suffolk consigned by High Road Sheep of Covington, VA which sold for \$1500. Replacement ewe lambs were sold immediately following the rams. A total of 45 ewe lambs sold for an average price of \$323. Ashley's Club Lambs of Lyndhurst, VA consigned the top-selling ewe lamb which brought \$700. Detailed sale results were as follows:

Breed Group	No.	Avg.
Winter Suffolk	16	\$461
Fall Suffolk	3	\$583
Fall Dorsets	12	\$477
Winter Dorsets	6	\$458
Winter Hampshire	2	\$450
Fall Katahdin		
Winter Katahdins	4	\$619
Fall White Dorper	1	\$625
Winter White Dorper		
Winter NC Cheviot	1	\$425
Winter Crossbred	4	\$413
Total Rams	49	\$483
Commercial Ewe Lambs	45	\$323

The Virginia Ram Lamb Performance Test and Replacement Ewe Lamb Sale is sponsored by the Virginia Sheep Producer's Association.

Information on the 2016 test and sale may be attained from Scott Greiner, Extension Sheep Specialist, Virginia Tech, phone 540-231-9159, email sgreiner@vt.edu, or visit the VT Sheep Extension website <http://www.apsc.vt.edu/extension/sheep/index.html>

2015 CULPEPER SENIOR BULL SALE

Scott P. Greiner
Extension Animal Scientist, Beef
Virginia Tech

The 58th annual sale of the Virginia BCIA Culpeper Senior bulls will feature approximately 60 fall-born yearling bulls on Saturday, December 12, 2015 at 12:00 noon at the Culpeper Agricultural Enterprises located on Route 29 just south of Culpeper, Virginia. These 60 fall-born bulls represent the top end of the Angus, Simmental, SimmAngus, Gelbvieh, and Gelbvieh Balancer bulls currently being developed.

The majority of the bulls selling are sired by trait-leading, highly proven AI bulls of each breed. All bulls selling meet minimum genetic requirements (EPDs) to sire calves for the VQA Purple Tag Feeder Calf Program. Bulls have been screened for reproductive and structural soundness, and sell with the BCIA enhanced guarantee for soundness and fertility. Complete performance information will be available on all bulls, including growth, maternal, and carcass EPDs, detailed test performance information, and ultrasound data. Many of the bulls will sell with genomically-enhanced EPDs, and all SimmAngus bulls will be genotyped for homozygous black status.

Again this year, we will feature video clips of each of the bulls available for sale. These video clips provide buyers a good opportunity to preview the bulls prior to sale day, and can be found on the BCIA website www.bcia.apsc.vt.edu. The sale will be available via the internet allowing producers to view and purchase bulls over the internet with live streaming video in conjunction with the sale.

For video clips as well as catalogs and detailed information on the bulls visit the website www.bcia.apsc.vt.edu, or phone Virginia BCIA at 540-231-9159 or Glenmary Farm at 540-672-7396.

Use of Antibiotics on Pig Farms to Change

Mark J. Estienne, Ph.D.

Professor and Swine Research Physiologist

Virginia Tech- Tidewater Agricultural Research and Extension Center, Suffolk

Introduction

Antimicrobial drugs are substances that work against microbes such as bacteria, viruses, fungi, and parasites. *Antibiotics* are effective against bacteria. All antibiotics are antimicrobials, but not all antimicrobials are antibiotics. When a specific antibiotic is employed, not all targeted bacteria are susceptible to it and die. The bacteria that can resist the antibiotic survive and reproduce, thus creating a population of microbes with *antibiotic resistance*. Thus, the antibiotic is no longer effective against those bacteria.

Antibiotic resistance is an emerging health issue. Some resistant bacteria cause severe illness in humans that requires a long recovery period and high medical expenses. According to the Centers for Disease Control and Prevention [1], more than 2 million people in the U.S. become infected with bacteria that are resistant to antibiotics resulting in at least 23,000 deaths annually.

In modern pork production systems, antibiotics added to the feed or through water delivery systems have been commonly used on farms for: 1) treatment of illness, 2) control or prevention of disease, and/or 3) improvement of growth performance (for example, rate of gain or the efficiency of converting feed to muscle). It has been suggested that increasing antibiotic resistance in humans is partially due to antibiotic use in food-animals such as pigs, although documented statistical evidence in support of this concept is lacking [2]. Nevertheless, new policies implemented by the U.S. Food and Drug Administration (**FDA**) and governing the Veterinary Feed Directive (**VFD**) will change on-farm use of antibiotics. **These changes are designed to enhance veterinary oversight of antibiotics used in livestock that are also medically important in treating human illness.** The objective of this paper is to briefly describe the new VFD regulations and changes that will affect pig farmers.

What is the Veterinary Feed Directive?

A VFD is a written statement from a licensed veterinarian that authorizes the owner or caretaker of pigs to purchase and use feed containing a VFD drug to treat their animals **in accordance with the FDA-approved directions for use**. For other forms of drugs, such as injectable antibiotics, a veterinarian has the authority to direct a farmer to use the substance in *extra-label* fashion. For example, the *labeled* dosage for Procaine Penicillin G is 3,000 International Units (**IU**) per pound of body weight injected intramuscularly in swine. Procaine Penicillin G can be purchased at farm supply stores without a veterinary prescription but it must be used by the farmer according to the label. A veterinarian, however, may direct the farmer to use the antibiotic in extra-label fashion by increasing the dosage or route of administration (for example, 4,000 IU per pound of body weight injected subcutaneously). **In contrast, extra-label use of feed medications is illegal, even by a veterinarian.**

What changes have been made in the Veterinary Feed Directive?

As mentioned previously, changes to the VFD are designed to enhance veterinary oversight of antibiotics used in livestock that are also medically important in treating human illness. Examples of such antibiotics include Neomycin and Chlortetracycline (for a complete list see [3]). For the pig farmer these antibiotics will still be allowed for treating a specific animal health condition, but only if the farmer obtains a VFD from a licensed veterinarian. Table 1 contains feed-grade antibiotics that currently have a VFD label and as of October 1, 2015 are subject to the new regulations.

Table 1. Swine feed-grade antibiotics with a Veterinary Feed Directive (VFD) label as of October 1, 2015.

Antibiotic	Tradename	Company	Indication	Inclusion rate, g/ton	Withdrawal period, days
Avilamycin	Kavault	Elanco Animal Health	Diarrhea in the presence of pathogenic <i>E. Coli</i> in weaned pigs	73	0
Florfenicol	NuFlor	Merck Animal Health	Respiratory disease associated with <i>A. pleuropneumoniae</i> , <i>P. multocida</i> , <i>S. suis</i> , and <i>B. bronchiseptica</i>	182	13
Tilmicosin	Pulmotil	Elanco Animal Health	Respiratory disease associated with <i>A. pleuropneumoniae</i> , and <i>P. multocida</i> ,	181-363	7

By December of 2016, all medically important antimicrobials [3] (a total of 283 products) will be added to the VFD list. No products on the expanded VFD list will be available for over-the-counter purchase at farm supply stores and other locations. Producers will need a VFD to gain access to essentially all feed-based antibiotics and a prescription will be required for products applied through water. Also, all companies (a total of 26) that market drugs on the VFD list to the pork industry will remove production claims on drug labels. **This means that VFD drugs may be used only to treat, control, or prevent specific diseases and not for enhancement of growth performance.** There are, however, six products that will not be affected by the FDA's new policy and will remain available for treating or controlling animal health conditions and/or growth promotion (Table 2). Although, these products do not require a VFD and can be purchased over-the-counter, all are classified by the FDA as Type A medicated feed articles. Moreover, Carbadox and Tiamulin are further classified as *Category II* and any feed manufacturer that uses a Category II, Type A medicated feed article must be registered with the FDA and hold an approved medicated feed mill license. Bacitracin methylene disalicylate (**BMD**), Bacitracin zinc, Bambermycin and Narasin are *Category I*, Type A medicated feed articles and may be manufactured in mills not holding a FDA license.

Table 2. Antibiotics that will remain available for enhancing swine growth performance after December, 2016.

Antibiotic	Tradename	Company	Indication	Inclusion rate, g/ton	Withdrawal period, days
Bacitracin methylene disalicylate (BMD)	BMD 50	Zoetis, Inc.	Increased rate of weight gain and improved feed conversion efficiency at lower doses; Control of dysentery in grow-finish hogs and clostridial enteritis in suckling pigs at high dose	10-30; 250	0
Bacitracin	Albac®	Zoetis, Inc.	Increased rate of	10-50	0

zinc			weight gain and improved feed conversion efficiency		
Tiamulin	Denagard®	Novartis Animal Health	Control of dysentery and ileitis at low dose; Treatment of dysentery at high dose	35-200	2 (low dose) 7 (high dose)
Carbadox	Mecadox	Phibro Animal Health	Control of swine dysentery at higher dose; Increased rate of weight gain and improved feed conversion efficiency at lower doses	10-25; 50	42
Bambermycin	Flavomycin®	Merck Animal Health	Effective against gram-positive pathogenic bacteria; Increased rate of weight gain and improved feed conversion efficiency	1-2	0
Narasin ¹	Skycis	Elanco Animal Health	Increased rate of weight gain and improved feed conversion efficiency in grow-finish hogs	13.6-27.2	0

¹Type of antibiotic called an ionophore

Farmers obtaining a VFD should be aware that copies of the VFD must be retained for 2 years. Additionally, the FDA may inspect the records upon demand. Therefore excellent record keeping will be essential.

The Veterinary-Client-Patient Relationship (VCPR) is critical

One consequence of the FDA's changes to the VFD policies is that many pig farmers will have to increase their interaction with veterinarians. A VFD may only be issued in the context of a valid VCPR. Minimum standards for a VCPR are: 1) The veterinarian has assumed responsibility for making medical judgements regarding the health of the pigs and the need for medical treatment, 2) the client (the owner of the animals or caretaker) has agreed to follow the instructions of the veterinarian, 3) the veterinarian has sufficient knowledge of the pigs by virtue of animal examination and timely visits to the premises where the animals are kept, and 4) the veterinarian is available to provide any necessary follow-up evaluation or care.

Many states have legal definitions of what constitutes a valid VCPR. What is considered a legitimate VCPR in Virginia is as follows:

Virginia Code § 54.1-3303. Prescriptions to be issued and drugs to be dispensed for medical or therapeutic purposes only.

*A. A prescription for a controlled substance may be issued only by a practitioner of medicine, osteopathy, podiatry, dentistry or **veterinary medicine** who is authorized to*

prescribe controlled substances, or by a licensed nurse practitioner pursuant to § 54.1-2957.01, a licensed physician assistant pursuant to § 54.1-2952.1, or a TPA-certified optometrist pursuant to Article 5 (§ 54.1-3222 et seq.) of Chapter 32. The prescription shall be issued for a medicinal or therapeutic purpose and may be issued only to persons or animals with whom the practitioner has a bona fide practitioner-patient relationship.

For purposes of this section, a bona fide practitioner-patient-pharmacist relationship is one in which a practitioner prescribes, and a pharmacist dispenses, controlled substances in good faith to his patient for a medicinal or therapeutic purpose within the course of his professional practice. In addition, a bona fide practitioner-patient relationship means that the practitioner shall (i) ensure that a medical or drug history is obtained; (ii) provide information to the patient about the benefits and risks of the drug being prescribed; (iii) perform or have performed an appropriate examination of the patient, either physically or by the use of instrumentation and diagnostic equipment through which images and medical records may be transmitted electronically; except for medical emergencies, the examination of the patient shall have been performed by the practitioner himself, within the group in which he practices, or by a consulting practitioner prior to issuing a prescription; and (iv) initiate additional interventions and follow-up care, if necessary, especially if a prescribed drug may have serious side effects.

Actions that may reduce or eliminate the need for antibiotics on pig farms

The judicious use of antibiotics will continue to be an important tool for ensuring pig health and animal well-being. However, farmers should develop strategies and management changes that boost herd health and minimize the need for antibiotics on the farm. This may include but not be limited to: 1) improved biosecurity to prevent diseases from entering the farm, 2) appropriate vaccinations to prevent diseases, 3) use of feed additives that may be effective alternatives to antibiotics such as probiotics, active proteins, zinc, and copper (more research is needed in this area), and 4) improved environment in facilities in which pigs are kept, including better management of temperature, ventilation, stocking densities, etc. If they have not already done so, producers should complete the National Pork Board's Pork Quality Assurance-Plus (**PQA-Plus**) training and certification program.

For more information on the new FDA policies on the VFD and the PQA-Plus program visit the National Pork Board's website at: <http://www.pork.org/>.

References

1. Centers for Disease Control and Prevention. Available at: <http://www.cdc.gov/drugresistance/> (accessed October 15, 2015).
2. American Society of Animal Science- Official Statement from the Board of Directors. 2013.

Antibiotics still work for us! Counter point to Consumers Reports Statement on Antibiotics in Food Animals. Available at: <http://takingstock.asas.org/?p=10195> (accessed October 16, 2015).
3. FDA-Center for Veterinary Medicine. 2003. Evaluating the safety of antimicrobial new animal drugs with regard to their microbiological effects on bacteria of human health concern. Guidance for Industry #152. Available at:
<http://www.fda.gov/downloads/AnimalVeterinary/GuidanceComplianceEnforcement/GuidanceforIndustry/UCM052519.pdf> (accessed October 15, 2015)