

ORGANIC WORKGROUP 100
KING

Organic Work Group Members (and interested individuals):

Josh and Dana (SO, NRCS)

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Notes from 1st Meeting held April 26, 2011

Organic Initiative Agenda

Introductions

Review of Organic Initiative

Organic Transition CAP

Review of past practices geared towards organic farmers in NC

Ideas for new scenarios

Additional recommendations regarding the Organic Initiative in NC

(Meeting was attended by Josh, Amanda, and Karen)

****Josh's notes from the meeting follow****

*Group discussion at the beginning of the meeting centered around clarifying program eligibility requirements for organic producers, specifically concerning the '2 of the last 5 years' cropping requirement (which I wasn't aware of, but Karen McSwain was), which potentially creates a de-facto 2 year waiting period for organic producer program participation. AGI requirements, and HEL/wetlands compliance was also discussed.

Info received from Greg Walker in response to questions:

Question: Eligibility: *The eligibility requirement that a producer must have grossed over \$1000 in two of the past five years. Does this mean that a new producer, i.e. one year of gross sales over \$1000 would not be eligible until they have a second year of production under their belt?*

No, if the producer cannot show \$1000 or more from last year, then 2 of the last 5 years may help him/her out. Per Program Manual: 515.51(f) (iv)...

"In order to be considered an agricultural producer there must be an annual minimum of \$1,000 of agricultural products being produced, sold, or both from the operation or from the land in which an owner has an interest according to 7 CFR Part 1400. If there were reasons beyond the producer's control (e.g., climatic conditions such as drought) to meet this \$1,000 annual minimum, then documentation must verify that the \$1,000 minimum has been met 2 of the last 5 years."

*Applicability of energy conservation enhancement practices for organic operations was discussed. Suggestions were made to explore adding solar panels, biodiesel conversions, wood burning stoves to potential energy-related EQIP practice scenarios.

Info received from Dana Ashford-Kornburger in response to questions:

Energy for 2012→Energy Audit CAP is already available for EQIP 2011 and will most likely also be available for EQIP 2012. At this time, we are waiting to see what items are recommended in Energy Audits that come out of CAPs before moving forward on the inclusion of Energy Cost-Share Scenarios in EQIP. Some states have moved forward with cost-sharing on various energy reduction and alternative energy scenarios.

*The Organic Transition CAP was discussed by the group. Josh went through the basics of the CAP, and the difference in a conservation plan supporting organic transition (CAP) and an organic system plan. A few issues regarding CAPs was discussed the group, including TSP certification and the role of certifying agents in the process.

*Finally, the group discussed current EQIP 'organic' practice scenarios, and potentially new scenarios to be added to the program in the future.

- Biofumigants were discussed as a need, with NRCS response being that development of the 'green manure' scenario for 2012 under practice 340 could serve this purpose
- Karen McSwain explained the need for a basic 590 Nutrient Management scenario for organics.
- The group discussed the need for 595 IPM practice scenarios needed for resource concerns associated with biological, mechanical, and cultural pest suppression methods typically selected by organic producers
- Water management on organic systems was also discussed as a potential avenue for future cost sharing.

HRW Control Work Group Members (and interested individuals):

Josh, Dana, Ruth, Greg (SO, NRCS)
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Herbicide Resistant Weed Control Agenda

Introductions

Josh provided a review of the current status of HRW in NC, the resource concerns associated with HRWs and the range of alternatives for their control. He discussed prevention and the possibility of even improving soil quality by utilizing increased residue as an alternative.

Review of New Pest Management Standard

IPM (Risk Mitigation) draft NC standard supplement is currently out for review. The focus is on looking at the resource concerns impacted.

IPM HRW CAP

Josh provided information on the CAP and TSP Certification for IPM HRW Control. It was noted that we need to continue trying to recruit TSPs (outreach will continue with CCAs and other crop consultants). If potential TSPs need assistance they should feel free to contact NRCS.

Ideas for new scenarios

Discussion of some of the scenarios available and in the works include heavy residue, cover crop mixes, roller, crop rotation (to introduce additional crops to the rotation; specifically one of the ones of interest is grain sorghum)

Additional recommendations regarding Herbicide Resistant Weeds in NC

Meeting was attended by Josh, Dana, Ruth, Bill Pickens (NC Forest Service), Jay Boyette (NCFB), Chester Lowder (NCFB)

WILDLIFE & FORESTRY
STATE TECHNICAL COMMITTEE WORKGROUP

Thursday, May 12, 2011 – Meeting Summary

Attendees:

| | |
|-------------------------|--|
| Don Riley – NRCS | Kendall Smith – USFWS |
| Robert Horton – NRCS | JohnAnn Shearer – USFWS |
| Greg Walker – NRCS | Mark Fowlkes – NCWRC |
| Bill Powell – NCDFR | Hervey McIver – TNC |
| Dewitt Hardee – NCDA&CS | Seth Ward – Premier Forestry & Env. Consulting |
| Susan Woodall – FSA | Sean Brogan - NCDFR |
| Tim Jones – FSA | Ned Jones – NC Trout Unlimited |
| Natalie Woolard – DSWC | John Kuruc – Triangle Fly Fishers |
| Vernon Cox – NCDA&CS | Scott Pohlman – NCDENR |
| John Isenhour – NCWRC | Mark Jones – NCWRC |

Introduction:

All attendees stated name and agency/group they represented.

Don Riley (NRCS) – brief description of the purpose of the workgroup:

- receive feedback from partners
- address issues raised in larger State Technical Comm. in greater detail
- help define priorities related to Wildlife & Forestry in NC (habitats, practices, programs, etc)
- relay information from NRCS to partners
- develop recommendations specific to Wildlife & Forestry to be presented to NRCS Leadership in NC

Topics Discussed:

1. Conservation Reserve Program (CRP) – Presented by Tim Jones (FSA)

Four handouts provided (attached):

- CRP Sign Up 41 EBI Fact Sheet
- CRP Monthly Contracts Report
- Wildlife HUCs Map
- Water Quality HUCs Map

Sign up 41 data is still forthcoming, but it is estimated that approximately 77% of offers were re-enrollments of existing CRP.

Input for General or Continuous CRP can be made to FSA at any time. Simply contact Tim Jones at the FSA state office. Maintenance and management requirements were provided as specific examples of topics that could be commented on. Recommendations made to FSA are presented to the State Committee for approval.

Sean Brogan recommended that the NC Wildlife Action Plan and the State Resource Assessment be incorporated into guidance whenever appropriate.

Vernon Cox requested re-enrollment statistics over time.

ACTION ITEM: produce data demonstrating percentage of CRP offers that have been re-enrollments for as long of a duration as possible.

John Isenhour asked for a description of the role the County Committee (CoC) plays in setting Soil Rental Rates (SRR). Answer - Local surveys provide data to NASS. This data is utilized to set SRR at a national level. CoC can request a waiver if they perceive a discrepancy.

Robert Horton asked if FSA was realizing issues with getting prescribed burns completed on CRP land. Answer – no.

Bill Powell asked if funding was available to remove loblolly that has established in Longleaf Pine planted under CRP. Answer – Pre-Commercial thinning is available under CRP, but plan will need to be updated.

Sean Brogan recommended that mapping work conducted by NCDNR (and others) be linked to CRP in some way.

John Isenhour – What is the formal channel for requesting updates to CRP?

Answer – Handbook required the development of management criteria. That was completed. These criteria can be reviewed prior to every general sign up. Suggestions and recommendations can be made at any time.

JohnAnn Shearer suggested a meeting take place to discuss individual comments/suggestions.

Since partners were already assembled, the workgroup was asked for recommendations:

- John Isenhour: update CP 36 to require more understory vegetation OR increase understory vegetation as a high ranking component.

JohnAnn Shearer and John Isenhour expressed concern over non-compliance and lack of reaching desired habitat thresholds.

Response – If something is not working, FSA needs to know. If farms you have contact with are not being managed, FSA needs you to inform them of deficiencies. Funding to FSA for quality assurance is limited and NRCS only has responsibility for quality assurance up to the time the practice has been established.

2. Conservation Reserve Enhancement Program (CREP) – Presented by Natalie Woolard (DSWC)

CREP has expanded to cover $\frac{3}{4}$ of the state. Momentum is high with first sign ups in several counties (Carteret, Franklin, Cabarrus, etc). Permanent easement requests are up.

Quality assurance reviews are demonstrating good results with few deficiencies.

Budget is down but current appropriations should carry the program. Continue promoting CREP.

There are currently two vacancies within the Division. Not sure when they will be filled.

Currently updating database to differentiate between species being planted (i.e. – Longleaf Pine). Information can then be better represented through GIS.

3. Prescribed Fire in the Farm Bill – Presented by Don Riley (NRCS)

roduced Greg Walker – gave background on contract management and issues related to prescribed burning. Prescribed burning is generating a significant number of modifications. Longer contracts have diminishing technical assistance funding over time.

RECOMMENDATION: prescribed burning can be planned no more than twice on any given planning unit per contract. This does not prevent clients from applying for the practice again once contract is complete.

This information has been added to the (338) Prescribed Burning Practice Guideline for 2012.

12-Month rule was explained – a practice must be commenced within 12 months of signing the contract.

JohnAnn Shearer stated we need to focus on why burns aren't getting completed.

Discussion:

Dewitt Hardee – move de-obligated funds to other contracts (NHQ does not allow).

John Isenhour – Give DCs more freedom to modify without problems. They have a “no mod is a good mod” mentality.

Sean Brogan – two burn recommendation makes sense. It parallels the Forestry PUV.

Seth Ward – would like to have the private sector more represented and engaged.

ACTION ITEM: *A Statewide List Of Prescribed Burning Contractors will be developed. JohnAnn Shearer agreed to coordinate the effort through the NC Prescribed Fire Council.*

Currently being developed by JohnAnn Shearer (USFWS & NC Prescribed Fire Council Chair).

RECOMMENDATION: Give no significance in ranking to new adopters verses continuing burners. Allow ranking to be based on other environmental benefits.

Will be reflected in 2012 Ranking Criteria (WHIP, WHIP LLPI, EQIP Forestry)

John Isenhour asked if CAP could be utilized to develop burn plans

ANSWER: No CAP is available for Development of Burn Plan. This is set at a national level. However, TSP is still available.

4. Environmental Quality Incentives Program (EQIP) Forestry – Presented by Don Riley and Robert Horton (NRCS)

Background was provided on the EQIP Forestry pool, its history and its current state. Robert Horton stated that this was the time to offer feedback on what has worked, what has not and what is broken.

Sean Brogan stated that the program has improved over the three years it has been available. He stated that he wanted to see multiple years of burning; not just a single year.

DISCUSSION: EQIP requires that a practice be commenced within 12 months of signing the contract. That cannot be altered by the state. This requires that proper planning be completed prior to contract obligation.

John Isenhour stated that each of the three administration areas have its own set of ranking criteria.

DISCUSSION: Great idea and easily implemented. State and National Priority questions will remain the same for all three administrative areas.

ACTION ITEM: *Local Priority questions will be developed for each of the three administrative areas. These questions and their assigned point values will be utilized in the ranking tool for 2012.*

Currently in the development stage. Area 1 has submitted their questions and John Isenhour is heading up discussions for Area 2.

Mark Jones stated that funds should be allocated to areas based on availability of willing participants and land, probability of getting funds obligated, current and historic interest levels. He also recommended that multiple-use management should be emphasized under EQIP Forestry.

5. Wildlife Habitat Incentives Program (WHIP) – Presented by Don Riley and Robert Horton (NRCS)

Background information was provided on WHIP and the Longleaf Pine Initiative (LLPI). WHIP general funds will continue to be obligated through the use of Habitat Priority Area Proposals (HPAP). The process of submitting proposals was described and information on deadlines was requested by the workgroup.

ACTION ITEM: Provide planning/programmatic timeline to workgroup. (ATTACHED)

Sent with summary to Sub-Committee members.

John Isenhour asked if HPAP proposals could be submitted under the LLPI.

Answer: No. LLPI funds will be allocated in a statewide pool. Ranking criteria will emphasize those applications with the highest environmental benefits. Additionally, national guidance has mandated that those applications in a designated priority area will be labeled as high priority applications, those in the historic range, but not in priority areas will be labeled as medium priority and those outside the historic range will be labeled as low priority.

The priority habitats in NC were stated as Longleaf Pine Ecosystems, Shortleaf Pine Ecosystems, Wetlands and Aquatic Habitats and Early Successional Habitat. Further designation between habitat types within each group will be utilized to focus ranking.

6. Open Forum – Presented by Don Riley and Robert Horton (NRCS)

Dewitt Hardee emphasized the importance of getting the information to the landowner/farmer/participants.

Sean Brogan recommended a YouTube clip or Webinar.

Mark Jones emphasized targeted outreach. He recommended utilizing organizations that already exist (i.e. – Tree Farm).

JohnAnn Shearer requested that a Wetlands and WRP Sub-Committee be formed.

John Kuruc requested more information and advice on how to get his organization and membership involved in the process.

John Isenhour requested that deadline for Conservation Plans be released and announced.

RECOMMENDATION: The Wildlife and Forestry Workgroup needs to regularly meet.

ACTION ITEM: After much discussion it was determined that the workgroup should meet no less than each time the full State Technical Committee holds a meeting or twice a year.

Don Riley requested names of individuals or groups that were not present at the workgroup meeting. A list of names and contact information was provided.

ACTION ITEM: Cross reference provided list with complete State Technical Committee list to ensure names are not present. If not, contact those individuals to inform them of the opportunity to participate.

Will complete prior to next called meeting of Wildlife & Forestry Sub-Committee.

List of typical scenarios that are approved for inclusion in the FY'12 program:

- 328 – Conservation Crop Rotation, 3 yr. min. between Herbicide Resistant Weed Susceptible Crop Types
- 328 – Conservation Crop Rotation, Sorghum Substitute for Repeated Crop Varieties (HRW)
- 340 – Cover Crop, Green Manure (Organic)
- 422 – Hedgerow, Stiff Grass to Trap Particulates from Tunnel Fans
- 422 – Hedgerow, Protection from Chemical Drift (Organic)
- 484 – Mulching, Organic Mulching System (Organic)
- 512 – Pasture and Hay Planting, Legume Planting in Pastures
- 130 – Conservation Activity Plan, Drainage Water Management Plan
- 360 – Waste Facility Closure, Swine Lagoon Closure in MLRA 153A or 153B (different cost related to typical hauling distance)
- 710 – Ag. Secondary Containment Facility
- 647 – Early Succession Habitat Mgt., Savannah Understory Establishment
- 395 – Stream Habitat Improvement, In stream Rock Cover Structure
- 655 – Forest Trails and Landings, Protection for Severe Erosion Damage w/ access control
- 472 – Access Control, Livestock scenario and Vehicle scenario
- 533 – Pumping Plant, different payment rate for Livestock Watering Well Pump
- 590 - Nutrient Management, Basic Strategy on Organic Cropland

Proposal for Discussion—NRCS Technical Assistance on Invasive Plants/Potential Biofuel Feedstock Crops

- (1) That for any plant on the NRCS 'Invasive' list, NRCS will not provide technical assistance, unless for control within a Farm Bill Program practice scenario, or specifically approved by the State Conservationist on a case-specific basis
- (2) That for identified 'biofuel feedstock' plants having established agronomic rates through 1217 Interagency Group guidance, technical assistance may be provided for establishment and revision of waste utilization plans using these plants as land application crops, with the exception of *Arundo Donax*.
 - For *Arundo Donax*, technical assistance may ONLY be provided for inclusion as an application crop in a waste management plan, NOT for establishment
 - For certified HYBRID ~~Grass~~ ^{for control} Giant *Miscanthus* varieties (such as Freedom), technical assistance may be provided for both establishment and for inclusion as an application crop in a waste management plan.

Invasive Species List

For use with 2012 EQIP/WHIP Practice Guidelines

**Only plants listed here are eligible for cost share assistance unless approved by state Plant Materials Specialist and ASTC—Technology

WOODY VEGETATION TYPES

autumn-olive *Elaeagnus umbellata*
chinaberry *Melia azedarach*
Chinese privet *Ligustrum sinense*
Chinese wisteria *Wisteria sinensis*
Japanese honeysuckle *Lonicera japonica*
Japanese privet *Ligustrum japonicum*
Japanese wisteria *Wisteria floribunda*
kudzu *Pueraria montana*
mimosa *Albizia julibrissin*
multiflora rose *Rosa multiflora*
princesstree *Paulownia tomentosa*
Russian-olive *Elaeagnus angustifolia*
tree-of-heaven *Ailanthus altissima*

NON-WOODY VEGETATION TYPES

bamboo *Bambusa spp.*
beach vitex *Vitex rotundifolia*
Chinese silvergrass *Miscanthus sinensis*
garlic mustard *Alliaria petiolata*
Japanese knotweed *Polygonum cuspidatum*
Nepalese browntop (Japanese Stiltgrass) *Microstegium vimineum*
oriental bittersweet *Celastrus orbiculatus*

This list will accompany the NC Invasive and Noxious Weeds list located in the PLANTS database.
<http://plants.usda.gov/java/noxious?rptType=State&statefips=37>

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE SPECIFICATION

FENCING

CODE 382

MATERIALS AND CONSTRUCTION SPECIFICATIONS

INTENDED USE OF FENCE

Fences may be designed and installed for permanent or temporary use.

Permanent fence types are designed to be in place for a period of many years with minimal maintenance requirements. Therefore, components are designed for a life span of 15 – 25 years. Permanent fences are used for exterior (boundary) fencing of property and for specific land uses.

Temporary, or moveable fences, are usually single wire and designed to be in place for short periods of time. Temporary fences are best used as subdivision fences for frequent movement or control of animals and where the exact location of the fence may not be the same from time to time. Wire type should be flexible enough to allow frequent movement without undue kinking or breaking, or stress on the operator. Temporary or moveable fences have to control the animals in the same manner as the permanent fence, but there is more risk of animals breaching the fence.

Fence type or style

Barbed wire fences are usually multiple wires used as permanent fences for perimeter or subdivision purposes. They may be used for most type of animals, but are not preferred for horses and small animals.

Woven, Net and Mesh wire fences are used as permanent fences for perimeter and subdivision purposes. The

configuration of the wire spacing and height varies depending on the type of animal being controlled.

High tensile smooth wire fences are usually multiple wires used as permanent fences for perimeter or subdivision purposes. They may be used for all types of animals if properly spaced. Smooth wire may be steel or aluminum and it may be electrified or non electrified.

Electric fences may be permanent or temporary. Electric power is from 110 or 220 electrical current or battery; the battery may be recharged by solar or electrical current. The fences may be of smooth steel, aluminum, or metal woven with polyethylene or polypropylene fiber. Livestock must be trained to respect electric fences.

Board fences are usually wood or some type of composition board used for permanent fence for perimeter or subdivision purposes. Board fence is used primarily where aesthetics or animal safety is of concern. They are most often used for control of horses and for working facilities.

Other fence types include chain link, pipe, vinyl, galvanized panel, and cable fences. They are generally used around corrals and homesteads. They may be used to restrict access to unsafe areas such as lagoons, abandoned mines, and other unsafe or sensitive areas.

Special or non-conventional fencing

Common Sense Fence Systems and Electra-braid are acceptable when installed

Conservation practice standards are reviewed periodically and updated if needed. To obtain the current version of this standard, contact your Natural Resources Conservation Service State Office or visit the electronic Field Office Technical Guide.

NRCS, North Carolina
February 2008

2 PURPOSES, GROUPED TOGETHER

Table 1: Fence Selection Criteria
 Fence design and construction must meet the minimum requirements for controlling specific animal types.

| Animal Type to Control | Fence type | Purpose of Fence | | | Spacing above ground | Line posts & Stay (maximum spacing) | | | |
|------------------------|--|----------------------|---------------------------------|---|---|-------------------------------------|---------------|----------------|--------------|
| | | Perimeter (boundary) | Access lanes & stream crossings | Interior subdivision & stream exclusion | | Minimum Criteria | post w/o stay | post with stay | Stay spacing |
| | | | | | | | Inches | | |
| Cattle | Barbed 3-wire | NO | NO | Meets | 18, 28, 38 | 16.5 | 30 | 10 | |
| Cattle | Barbed 4-wire | Meets | Meets | Exceeds | 16 to 46 evenly spaced | 16.5 | 30 | 10 | |
| Cattle | Barbed 5-wire | Exceeds | Exceeds | Exceeds | 12 to 48 evenly spaced | 16.5 | 30 | 10 | |
| Cattle | Non-Electric 4-wire HT smooth | NO | NO | Meets | 18 to 42 evenly spaced | 30 | 60 | 16 | |
| Cattle | Non-Electric 5-wire HT smooth | NO | Meets | Exceeds | 16 to 48 evenly spaced | 30 | 60 | 16 | |
| Cattle | Non-Electric 6-wire HT smooth | Meets | Exceeds | Exceeds | 12 to 48 evenly spaced | 30 | 80 | 16 | |
| Cattle | Electric 1-wire HT smooth | NO | NO | Meets | 32 | 50 | NA | NA | |
| Cattle | Electric 2-wire HT smooth | NO | Meets | Exceeds | 20, 32 | 60 | 100 | 25 | |
| Cattle | Electric 3-wire HT smooth | NO | Exceeds | Exceeds | 18, 30, 42 | 50 | 100 | 25 | |
| Cattle | Electric 4-wire HT smooth | Meets | Exceeds | Exceeds | 12 to 42 evenly spaced | 50 | 100 | 25 | |
| Cattle | Electric 1-wire Polywire or Polytape | NO | Meets | Meets | 32 | 25 | NA | NA | |
| Cattle | Electric 2-wire Polywire or Polytape | NO | Meets | Meets | 20, 32 | 25 | NA | NA | |
| Cattle | Woven wire with 1 to 2 HT or Barb above | Exceeds | Exceeds | Exceeds | 32" min; HT or Barb at 6" spacing to 48"; HT may be Electrified; Woven wire 3" > ground level | 16.5 | NA | NA | |
| Cattle | HT Woven wire with 1 to 2 HT or Barb above | Exceeds | Exceeds | Exceeds | 32" min; HT or Barb at 6" spacing to 48"; HT may be Electrified; Woven wire 3" > ground level | 25 | NA | NA | |
| Cattle | Wood or Composition boards (6" wide) | Exceeds | Exceeds | Exceeds | bottom of plank at 12, 24, 36, 48 | 8 | NA | NA | |
| Goats & sheep | Barbed 5-wire | NO | NO | NO | 6 to 32 evenly spaced | 16.5 | 30 | 10 | |
| Goats & sheep | Barbed 6-wire | NO | Meets | Meets | 6 to 36 evenly spaced | 16.5 | 30 | 10 | |
| Goats & sheep | Barbed 7-wire | Meets | Exceeds | Exceeds | 6 to 42 evenly spaced | 16.5 | 30 | 10 | |
| Goats & sheep | Non-Electric 5-wire HT smooth | NO | NO | NO | 6 to 32 evenly spaced | 30 | 60 | 15 | |
| Goats & sheep | Non-Electric 6-wire HT smooth | NO | Meets | Meets | 6 to 36 evenly spaced | 30 | 60 | 15 | |
| Goats & sheep | Non-Electric 7-wire HT smooth | Meets | Exceeds | Exceeds | 6 to 42 evenly spaced | 30 | 60 | 15 | |
| Goats & sheep | Electric, 3-wire, HT smooth | NO | NO | Meets | 6, 18, 30 | 50 | 100 | 20 | |
| Goats & sheep | Electric, 4-wire, HT smooth | NO | Meets | Exceeds | 6, 14, 24, 34 | 50 | 100 | 20 | |
| Goats & sheep | Electric, 5-wire, HT smooth | Meets | Exceeds | Exceeds | 6, 12, 18, 28, 38 | 50 | 100 | 20 | |
| Goats & sheep | Woven wire with 1 to 2 HT or Barb above | Exceeds | Exceeds | Exceeds | 32" min; HT or Barb at 6" spacing to 48"; HT may be Electrified; Woven wire 3" > ground level | 16.5 | NA | NA | |
| Goats & sheep | HT Woven wire with 1 to 2 HT or Barb above | Exceeds | Exceeds | Exceeds | 32" min; HT or Barb at 6" spacing to 48"; HT may be Electrified; Woven wire 3" > ground level | 25 | NA | NA | |
| Horses | Electric 2-wire HT smooth | NO | Meets | Meets | 28, 38 | 50 | 100 | 25 | |
| Horses | Electric 3-wire HT smooth | NO | Exceeds | Exceeds | 28, 38, 48 | 50 | 100 | 25 | |
| Horses | Electric 4-wire HT smooth | Meets | Exceeds | Exceeds | 18 to 48 evenly spaced | 50 | 100 | 25 | |
| Horses | Electric 1-wire Polywire or Polytape | NO | Meets | Meets | 34 | 25 | NA | NA | |
| Horses | Electric 2-wire Polywire or Polytape | NO | Meets | Meets | 28, 38 | 25 | NA | NA | |
| Horses | Woven wire w/1-3 wire HT above | Exceeds | Exceeds | Exceeds | 32" + HT Smooth at 6" spacings to 54"; Woven wire 3" > ground level | 16.5 | NA | NA | |
| Horses | Mesh, "No climb" 2"x4" spacing | Exceeds | Exceeds | Exceeds | 48" + HT Smooth at 6" spacings to 54"; Mesh wire 3" > ground level | 16.5 | NA | NA | |
| Horses | Wood or Composition boards (1"x6") | Exceeds | Exceeds | Exceeds | 18, 30, 42 (ht to bottom of boards) | 8 | NA | NA | |
| Hogs | Electric 2-wire HT smooth | NO | NO | Meets | 8, 18 | 20 | 30 | 15 | |
| Hogs | Electric 3-wire HT smooth | Meets | Meets | Exceeds | 8, 16, 24 | 20 | 30 | 15 | |
| Hogs | Woven wire with 1 barb 2" off ground | Exceeds | Exceeds | Exceeds | 32" + Barb at 2" above ground and 2" below the woven wire | 16.5(25) | NA | NA | |
| Hogs | Woven wire 32" w/ 1 HT electric inside | Meets | Meets | Meets | 32" + 1 electric HT 12 inside & 12" off ground | 16.5(25) | NA | NA | |
| Deer | HT Woven wire | Meets | | | to 96" | 25 | NA | NA | |
| Deer | Electric 7-wire HT smooth wire Slanted | Meets | | | see diagram of slant measurements | 30 | 100 | 25 | |
| Deer | Electric 9-wire HT smooth wire | Meets | | | 8, to 72" evenly spaced | 30 | 100 | 25 | |
| Deer | Electric 15-wire HT smooth wire | Meets | | | to 96" evenly spaced | 30 | 100 | 25 | |
| Buffalo | Electric 4-wire HT smooth | NO | NO | Meets | 12 to 42 evenly spaced | 30 | 100 | 25 | |
| Buffalo | Electric 5-wire HT smooth | NO | Meets | Exceeds | 12 to 48 evenly spaced | 30 | 100 | 25 | |
| Buffalo | Electric 6-wire HT smooth | Meets | Exceeds | Exceeds | 12 to 52 evenly spaced | 30 | 100 | 25 | |
| Chickens & Turkey | Mesh, "No climb" 2"x4" spacing | Meets | | Meets | 72" | 16.5 | NA | NA | |
| Emu and Ostrich | Woven wire | Meets | | Meets | 72" | 16.5 | NA | NA | |
| People | Chain Link | | | | 96" with 1 Barb above | 8-10 | NA | NA | |
| People | Electric 6-wire HT smooth | | | | 12 to 60" evenly spaced | 30 | 60 | 15 | |
| People | Woven wire with 1 to 3 HT or Barb above | | | | 32" min; HT or Barb at 6" spacings; HT may be Electrified; woven >3" above soil | 16.5 | NA | NA | |
| People | Wood or Composition boards | | | | 24", 12", 12", 12" to top of fence | 8 | NA | NA | |
| Varmint Control | Mesh, "No climb" 2"x4" spacing | Meets | | | 48"; HT or Barb at 6"; HT may be Electrified; 1 electric HT 8" outside & 8" off ground | 16.5 | NA | NA | |
| Varmint Control | Electric 8-wire HT smooth | Meets | | | 3, 6, 10, 14, 20, 26, 34, 42 | 30 | 100 | 25 | |

2 PURPOSES, GROUPED TOGETHER

| Table 1: Fence Selection Criteria | | | | | | | | |
|--|--|----------------------|---------------------------------|---|---|-------------------------------------|----------------|--------------|
| Fence design and construction must meet the minimum requirements for controlling specific animal types | | | | | | | | |
| Animal Type to Control | Fence type | Purpose of Fence | | | Spacing above ground | Line posts & Stay (maximum spacing) | | |
| | | Perimeter (boundary) | Access lanes & stream crossings | Interior subdivision & stream exclusion | | post w/o stay | post with stay | Stay spacing |
| | | | | | | Minimum Criteria | | |
| Cattle | Barbed 3-wire | NO | NO | Meets | 18, 28, 38 | 16.5 | 30 | 10 |
| Cattle | Barbed 4-wire | Meets | Meets | Exceeds | 16 to 46 evenly spaced | 16.5 | 30 | 10 |
| Cattle | Barbed 5-wire | Exceeds | Exceeds | Exceeds | 12 to 48 evenly spaced | 16.5 | 30 | 10 |
| Cattle | Non-Electric 4-wire HT smooth | NO | NO | Meets | 16 to 42 evenly spaced | 30 | 60 | 15 |
| Cattle | Non-Electric 5-wire HT smooth | NO | Meets | Exceeds | 16 to 48 evenly spaced | 30 | 60 | 15 |
| Cattle | Non-Electric 6-wire HT smooth | Meets | Exceeds | Exceeds | 12 to 48 evenly spaced | 30 | 60 | 15 |
| Cattle | Electric 1-wire HT smooth | NO | NO | Meets | 32 | 50 | NA | NA |
| Cattle | Electric 2-wire HT smooth | NO | Meets | Exceeds | 20, 32 | 50 | 100 | 25 |
| Cattle | Electric 3-wire HT smooth | NO | Exceeds | Exceeds | 18, 30, 42 | 50 | 100 | 25 |
| Cattle | Electric 4-wire HT smooth | Meets | Exceeds | Exceeds | 12 to 42 evenly spaced | 50 | 100 | 25 |
| Cattle | Electric 1-wire Polywire or Polytape | NO | Meets | Meets | 32 | 25 | NA | NA |
| Cattle | Electric 2-wire Polywire or Polytape | NO | Meets | Meets | 20, 32 | 25 | NA | NA |
| Cattle | Woven wire with 1 to 2 HT or Barb above | Exceeds | Exceeds | Exceeds | 32" min; HT or Barb at 6" spacing to 48"; HT may be Electrified; Woven wire 3" > ground level | 16.5 | NA | NA |
| Cattle | HT Woven wire with 1 to 2 HT or Barb above | Exceeds | Exceeds | Exceeds | 32" min; HT or Barb at 6" spacing to 48"; HT may be Electrified; Woven wire 3" > ground level | 25 | NA | NA |
| Cattle | Wood or Composition boards (6" wide) | Exceeds | Exceeds | Exceeds | bottom of plank at 12, 24, 36, 48 | 8 | NA | NA |
| Goats & sheep | Barbed 5-wire | NO | NO | NO | 6 to 32 evenly spaced | 16.5 | 30 | 10 |
| Goats & sheep | Barbed 6-wire | NO | Meets | Meets | 6 to 36 evenly spaced | 16.5 | 30 | 10 |
| Goats & sheep | Barbed 7-wire | Meets | Exceeds | Exceeds | 6 to 42 evenly spaced | 16.5 | 30 | 10 |
| Goats & sheep | Non-Electric 5-wire HT smooth | NO | NO | NO | 6 to 32 evenly spaced | 30 | 60 | 15 |
| Goats & sheep | Non-Electric 6-wire HT smooth | NO | Meets | Meets | 6 to 36 evenly spaced | 30 | 60 | 15 |
| Goats & sheep | Non-Electric 7-wire HT smooth | Meets | Exceeds | Exceeds | 6 to 42 evenly spaced | 30 | 60 | 15 |
| Goats & sheep | Electric, 3-wire, HT smooth | NO | NO | Meets | 8, 18, 30 | 50 | 100 | 20 |
| Goats & sheep | Electric, 4-wire, HT smooth | NO | Meets | Exceeds | 6, 14, 24, 34 | 50 | 100 | 20 |
| Goats & sheep | Electric, 5-wire, HT smooth | Meets | Exceeds | Exceeds | 6, 12, 18, 28, 38 | 50 | 100 | 20 |
| Goats & sheep | Woven wire with 1 to 2 HT or Barb above | Exceeds | Exceeds | Exceeds | 32" min; HT or Barb at 6" spacing to 48"; HT may be Electrified; Woven wire 3" > ground level | 16.5 | NA | NA |
| Goats & sheep | HT Woven wire with 1 to 2 HT or Barb above | Exceeds | Exceeds | Exceeds | 32" min; HT or Barb at 6" spacing to 48"; HT may be Electrified; Woven wire 3" > ground level | 25 | NA | NA |
| Horses | Electric 2-wire HT smooth | NO | Meets | Meets | 28, 38 | 50 | 100 | 25 |
| Horses | Electric 3-wire HT smooth | NO | Exceeds | Exceeds | 28, 38, 48 | 50 | 100 | 25 |
| Horses | Electric 4-wire HT smooth | Meets | Exceeds | Exceeds | 18 to 48 evenly spaced | 50 | 100 | 25 |
| Horses | Electric 1-wire Polywire or Polytape | NO | Meets | Meets | 34 | 25 | NA | NA |
| Horses | Electric 2-wire Polywire or Polytape | NO | Meets | Meets | 28, 38 | 25 | NA | NA |
| Horses | Woven wire w/1-3 wire HT above | Exceeds | Exceeds | Exceeds | 32" + HT Smooth at 6" spacings to 54"; Woven wire 3" > ground level | 16.5 | NA | NA |
| Horses | Mesh, "No climb" 2"x4" spacing | Exceeds | Exceeds | Exceeds | 48" + HT Smooth at 6" spacings to 54"; Mesh wire 3" > ground level | 16.5 | NA | NA |
| Horses | Wood or Composition boards (1"x6") | Exceeds | Exceeds | Exceeds | 18, 30, 42 (ht to bottom of boards) | 8 | NA | NA |
| Hogs | Electric 2-wire HT smooth | NO | NO | Meets | 6, 18 | 20 | 30 | 15 |
| Hogs | Electric 3-wire HT smooth | Meets | Meets | Exceeds | 8, 16, 24 | 20 | 30 | 15 |
| Hogs | Woven wire with 1 barb 2" off ground | Exceeds | Exceeds | Exceeds | 32" + Barb at 2" above ground end 2" below the woven wire | 16.5(25) | NA | NA |
| Hogs | Woven wire 32" w/ 1 HT electric inside | Meets | Meets | Meets | 32" + 1 electric HT 12 inside & 12" off ground | 16.5(25) | NA | NA |
| Deer | HT Woven wire | Meets | | | to 96" | 25 | NA | NA |
| Deer | Electric 7-wire HT smooth wire Slanted | Meets | | | see diagram of slant measurements | 30 | 100 | 25 |
| Deer | Electric 9-wire HT smooth wire | Meets | | | 8, to 72" evenly spaced | 30 | 100 | 25 |
| Deer | Electric 15-wire HT smooth wire | Meets | | | to 96" evenly spaced | 30 | 100 | 25 |
| Buffalo | Electric 4-wire HT smooth | NO | NO | Meets | 12 to 42 evenly spaced | 30 | 100 | 25 |
| Buffalo | Electric 5-wire HT smooth | NO | Meets | Exceeds | 12 to 48 evenly spaced | 30 | 100 | 25 |
| Buffalo | Electric 6-wire HT smooth | Meets | Exceeds | Exceeds | 12 to 52 evenly spaced | 30 | 100 | 25 |
| Chickens & Turkey | Mesh, "No climb" 2"x4" spacing | Meets | | Meets | 72" | 16.5 | NA | NA |
| Emu and Ostrich | Woven wire | Meets | | Meets | 72" | 16.5 | NA | NA |
| People | Chain Link | | | | 96" with 1 Barb above | 8-10 | NA | NA |
| People | Electric 5-wire HT smooth | | | | 12 to 60" evenly spaced | 30 | 60 | 15 |
| People | Woven wire with 1 to 3 HT or Barb above | | | | 32" min; HT or Barb at 6" spacings; HT may be Electrified; woven >3" above soil | 16.5 | NA | NA |
| People | Wood or Composition boards | | | | 24", 12", 12", 12" to top of fence | 8 | NA | NA |
| Varmint Control | Mesh, "No climb" 2"x4" spacing | Meets | | | 48"; HT or Barb at 6"; HT may be Electrified; 1 electric HT 8" outside & 8" off ground | 16.5 | NA | NA |
| Varmint Control | Electric 8-wire HT smooth | Meets | | | 3, 6, 10, 14, 20, 26, 34, 42 | 30 | 100 | 25 |

Fencing Scenarios



1. Scenario Name: 382--Fencing, Non-electric
Cost - \$1.59 LnFt (3-Strand Barbed Wire)

Resource Concerns: Non-Electric fencing will be installed to address either: (1) water quality degradation due to cattle access to hydrologic ally connected water bodies (ie streams) or (2): to improve forage health and plant productivity and vigor through creation of rotational grazing paddocks within a prescribed grazing system

Typical Resource Setting: Pastureland throughout NC that is not managed to exclude cattle from environmentally sensitive areas and/or not managed to fully utilize available forage growth

Typical Size: N/A (varies greatly from site to site) Typical Implementation based on 3-strand barbed wire (minimum meeting NRCS 382 standard for interior pasture subdivision and stream exclusion)

Benchmark Condition: Cattle have nearly uncontrolled access to water bodies for watering purposes; Cattle--in typically overstocked situations--are grazing large pastures that are minimally divided for rotational grazing management and thus do not support long-term forage vigor goals for support of properly sized herd

Result After Implementation: Non-Electric fencing installed improves water quality by preventing deposition of livestock organic waste matter into water bodies; and/or electric fencing has been installed to facilitate the implementation of a prescribed grazing plan and rotational grazing management system. Forage within grazing paddocks is managed to improve timing and management of grazing duration

Associated Practices: 528 Prescribed grazing, 472 Access Control



2. Scenario Name: 382--Fencing, Electric (Subdivision)
Cost - \$1.11 LnFt (One-Strand)

Resource Concerns: Electric fencing will be installed to improve forage health and plant productivity and vigor through creation of rotational grazing paddocks within a prescribed grazing system.

Typical Resource Setting: Pastureland throughout NC that is not managed to fully utilize available forage growth

Typical Size: 4895 Feet; Typical implementation for one-strand high tensile electric wire (minimum meeting NRCS NC 382 standard for interior grazing paddock subdivision).

Benchmark Condition: Cattle--in typically overstocked situations--are grazing large pastures that are minimally divided for rotational grazing management and thus do not support long-term forage vigor goals for support of properly sized herd

Result After Implementation: Electric fencing installed to facilitate paddock grazing and subdivision. Implementation of a prescribed grazing plan and rotational grazing management system. Forage within grazing paddocks is managed to improve timing and management of grazing duration.



3. Scenario Name: 382--Fencing, Electric (Exclusion)
Cost - \$1.43 LnFt (Two-Strand)

Resource Concerns: Electric fencing will be installed to address water quality degradation due to livestock access to hydrologically connected water bodies (ie streams)

Typical Resource Setting: Pastureland throughout NC that is not managed to exclude cattle from environmentally sensitive areas and/or not managed to fully utilize available forage growth

Typical Size: 4895 Feet; Typical implementation for two-strand high tensile electric wire (minimum meeting NRCS NC 382 standard for interior grazing paddock subdivision and stream exclusion of cattle).

Benchmark Condition: Cattle have nearly uncontrolled access to water bodies for watering purposes.

Result After Implementation: Electric fencing installed improves water quality by preventing deposition of cattle organic waste matter into water bodies;

Associated Practices: 472 Access Control