



# New Hampshire Fish and Game Department

5B - 6/3/26

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Stephanie L. Simek, Ph.D.  
Executive Director

May 20, 2026

Her Excellency, Governor Kelly A. Ayotte  
and the Honorable Council  
State House  
Concord, New Hampshire 03301

## REQUESTED ACTION

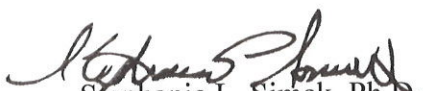
Pursuant to RSA 212:10-b, authorize the New Hampshire Fish and Game Department to enter into an agricultural agreement with Scott Mason and Keith McMann for the management of 111 acres of field land on the Fort Hill Wildlife Management Area (WMA) in Stratford, NH effective upon Governor and Council approval through December 31, 2035. Hunting and fishing will remain permissible uses on the land. No funding is involved.


## EXPLANATION

NHFG owns a 427-acre property in Stratford, NH containing 111 acres of field land. The wildlife management objectives for this property include maintaining certain agricultural crops for migratory waterfowl, white-tailed deer, turkey and other wildlife. To achieve these goals, the Department proposes to continue to allow Scott Mason and Keith McMann to annually plant and harvest hay and grain crops through December 31, 2035. In return, Scott Mason and Keith McMann will leave 13.5 acres of field land fallow and maintained as old-field habitat via periodic brush hogging in late summer. Uncropped buffers along the Connecticut River and wetlands will also be maintained. Finally, Scott Mason will continue to allow NHFG to maintain a public parking area on his land at no cost to the Department.

This agricultural agreement does not impact the allowable public uses of the Fort Hill WMA as regulated by state law and administrative rule FIS900. Allowable public uses include, but are not limited to, hunting, fishing, trapping by permit, wildlife viewing, and hiking. The use of snowmobiles and ATV's requires a permit from the Executive Director.

Respectfully submitted,

  
Stephanie L. Simek, Ph.D.  
Executive Director

  
Kathy Ann LaBonte  
Chief, Business Division

# Fort Hill Wildlife Management Area

## FARM AGREEMENT

This agreement made this 9 day of March, 2026 by and between the State of New Hampshire, Fish and Game Department (hereinafter referred to as the "DEPARTMENT"), acting by and through its Executive Director, 11 Hazen Drive, Concord New Hampshire 03301 and Scott Mason whose address is 806 US Route 3, North Stratford, NH, 03596 and Keith McMann, 457 Phillip Wallace Cove, Parsons, TN, 38363 (hereinafter referred to as the "FARMERS").

**WHEREAS**, the DEPARTMENT is responsible for the conservation of the fish and wildlife resources of the State of New Hampshire; and

**WHEREAS**, the DEPARTMENT owns certain property known as the Fort Hill WMA, in the town of Stratford, more particularly described within the Coos County Registry of Deeds in Book 738 Page 172 (hereinafter referred to as the "Premises"); and

**WHEREAS**, the wildlife management objectives for the Premises include maintaining an agricultural crop (including both hay and grain crops) for white-tailed deer, turkey, waterfowl, and other wildlife; and

**WHEREAS**, Keith McMann has the legal right of first option to enter into an Agricultural Management Agreement with the DEPARTMENT and has opted to have Scott Mason act as his agent to do so (together, the "FARMERS"). The FARMERS have the knowledge, skills, and equipment necessary to effectively harvest and maintain hay and grain crops at the Premises; and

**NOW THEREFORE**, in consideration of the mutual covenants stated herein, the DEPARTMENT and the FARMERS (the "Parties") agree as follows:

1. Grant of Authority to FARMER

The DEPARTMENT hereby grants the FARMERS a revocable license to enter the Premises for the purpose of utilizing approximately 111 acres of field land, as detailed on Figure 1 attached and incorporated herein to this Agreement, for planting and harvesting a grain and hay crop each year from the date of this agreement through December 31, 2035. Table 1 below contains field-specific plans that the FARMERS must follow. Following review and approval by the DEPARTMENT in writing and with any conditions, crop rotations and crop type in each field may fluctuate from Table 1 if requests are reasonable and fit within the management objectives for the Premises.

**Annual Meeting:** FARMERS shall take part in an annual meeting with the DEPARTMENT. The annual meeting shall occur by April 15 of each calendar year.

Table 1. Field Specific Plan for the Fort Hill WMA (See Figure 1 for Map of Fields).

<b>Field 112</b> <i>16.6 acres</i>	<b>Grain Crop:</b> Rotate between corn and clover with small grain cover crop in winter. Leave four rows of standing grain (see section 2j).
<b>Field 113</b> <i>4.1 acres</i>	<b>Grain Crop:</b> Small grain or corn. Farmers may seed to grass in 2027 and 2028 if required by Farmers. Plan to return to a grain crop in 2029. Leave four rows of standing grain (see section 2j).
<b>Field 115</b> <i>16.6 acres</i>	<b>Grain Crop:</b> Small grain or corn. Farmers may seed to grass in 2027 and 2028 if required by Farmers. Plan to return to a grain crop in 2029. Leave four rows of standing grain (see section 2j).
<b>Field 116</b> <i>7.2 acres</i>	<b>Hay Crop:</b> Re-establish a new grass crop in 2026. No timing restrictions.
<b>Field 117</b> <i>21.0 acres</i>	<b>Grain Crop:</b> Rotate between corn and clover with small grain cover crop in winter. Leave four rows of standing grain (see section 2j).
<b>Field 118</b> <i>3.3 acres</i>	<b>Conservation Field:</b> Do not hay; brush hog annually after August 1 <sup>st</sup> as part of compensation.
<b>Field 119</b> <i>12.1 acres</i>	<b>Hay Crop:</b> Re-establish a new grass crop in 2026. No timing restrictions.
<b>Field 120</b> <i>9.4 acres</i>	<b>Conservation Field:</b> Do not hay; brush hog annually after August 1 <sup>st</sup> as part of compensation.
<b>Field 121</b> <i>0.9 acres</i>	<b>Conservation Field:</b> Do not mow. NHFG will manage.
<b>Field 122</b> <i>16.8 acres</i>	<b>Hay Crop:</b> Hay without timing restrictions.
<b>Field 123</b> <i>18.7 acres</i>	<b>Grain Crop:</b> Rotate between corn and clover with small grain cover crop in winter. Leave four rows of standing grain (see section 2j).
<b>Field 124</b> <i>0.7 acres</i>	<b>Conservation Field:</b> Mow annually after August 1.

## 2. General Conditions and WMA Operations

- a. Given that the primary purpose of Wildlife Management Areas is to provide habitat for wildlife, neither the DEPARTMENT nor its partnering agencies will compensate or issue depredation permits to the FARMERS for damage caused by wildlife to crops grown under this agreement.
- b. The FARMERS agree to avoid all mowing, planting, and harvesting within all newly and previously designated buffer zones. Buffers will include 100-foot buffers from all streams and rivers and 50-foot buffers from all wetlands. Buffers will be clearly marked by the DEPARTMENT with wooden grade stakes with ribbon. If a buffer zone impedes upon the FARMERS' ability to travel throughout the Premises or maintain a field described in Table 1, the buffers may be adjusted after coordination and site inspection with DEPARTMENT Staff.
- c. The FARMERS agree to leave Field 121 un-mowed so it may be managed as shrubland by the DEPARTMENT.
- d. The FARMERS agree to maintain Field 118, 120, and 124 as meadow habitat by mowing annually after August 1. It is understood that the southeastern half of Field 120 may not be capable of being mowed and will be managed by the DEPARTMENT.
- e. The FARMERS agree to utilize no till planting methods whenever possible.
- f. Scott Mason agrees to provide the DEPARTMENT with access to and authority to maintain a three (3) vehicle parking area and kiosk on his land easterly of the most northerly railroad crossing access to the WMA as shown in blue in Figure 1. Scott Mason also agrees to allow public vehicular access to the parking area and pedestrian traffic from the parking area to the railroad crossing.
- g. If the parking area described in 2f above does not meet the needs of the DEPARTMENT, the Parties agree to relocate the parking area and kiosk to a mutually agreed upon area.
- h. During the term of this Agreement, the DEPARTMENT agrees to continue to allow Scott Mason the use of its 1.6-acre lot located at the rear of his barns as shown as Field 0 in the map attached as Figure 1.
- i. During the term of this agreement only, the DEPARTMENT agrees not to use its right-of-way across Scott Mason's pastures as shown on Figure 1.
- j. The FARMERS agree to leave four rows of grain crops un-harvested for the use of migrating waterfowl, turkeys, and other wildlife in each of the fields planted for grain. The rows must be fully matured stalks with viable ears or other grain crop and should be left standing. The location of the grain to be left standing in each field will be determined by the DEPARTMENT at the annual spring meeting.

## 3. Special Conditions

- a. The FARMERS agree to adhere to the Integrated Pest Management (IPM) policy outlined in Appendix A.
- b. The FARMERS agree to fill out and submit an "Annual Report Form for New Hampshire Fish and Game Agricultural Lease" each year at the end of the farming season.

- c. There shall be no dumping or burial of any materials or use of any material on the land, which is prohibited by state, or federal laws, which is ecologically hazardous, or which is in any way detrimental to the surface or groundwater.
- d. The FARMERS may amend field soils with a fertilizer/lime combination, manure, New Hampshire Department of Environmental Services certified ash as allowed under New Hampshire Administrative Rule Env-Sw 1700, or other suitable substitute per the recommendations of the University of New Hampshire Cooperative Extension and with approval by the DEPARTMENT.
- e. The use of bio-solids or similar materials is specifically prohibited.
- f. There shall be no pasturing of livestock on the property.
- g. There shall be no stockpiling of manure, compost, wood ash, or other similar material outside of areas mutually agreed upon by the FARMERS and the DEPARTMENT. The material that is stockpiled and areas for stockpiling shall be approved by the DEPARTMENT at the annual spring meeting. Stockpiling shall follow all applicable best management practices (BMPs) described in the United States Department of Agriculture's Natural Resource and Conservation Service's (NRCS) Conservation Practice Standard on short term storage of animal waste and by-waste products (Appendix B). BMPs that must be followed are listed under the section titled *Criteria Applicable to Temporary Field Stockpile Areas* on the previously named NRCS Conservation Practice Standard handout and included as Appendix B in this agreement.
- h. The FARMERS shall regularly check areas prone to soil erosion within the designated areas or access to these areas. If soil erosion is occurring, the FARMERS shall immediately notify the DEPARTMENT. If erosion mitigation measures need to be taken, such actions may be implemented by the FARMERS, at the cost of the FARMERS, after consultation and approval by the DEPARTMENT.
- i. The FARMERS may prune or cut trees encroaching into farmed fields with the written approval of the DEPARTMENT.
- j. The FARMERS shall comply with all applicable State and local laws, zoning ordinances, rules and regulations in connection with the exercise of any of the terms under this agreement.

#### 4. Period of Use and Termination

This agreement shall become effective upon the date of execution by the Parties and shall terminate on December 31, 2035, unless terminated sooner as provided herein. This Agreement may be renewed or extended with the mutual written consent of both Parties and on any new terms and conditions agreed upon. The DEPARTMENT may terminate this Agreement at any time with 90 days' notice to the FARMERS.

#### 5. Taxes

The FARMERS shall pay all properly assessed real or personal property taxes on the Premises subject to this agreement no later than the due date assessed by the town. Failure of the FARMERS to pay the duly assessed personal or property taxes shall be good cause to terminate this agreement.

6. Public Use

The lands under agreement shall remain open to use by the public at all times and shall remain free from dangerous conditions or obstructions created by the FARMERS' activities under this agreement. The FARMERS shall not prohibit or regulate recreational activities including hiking, hunting, trapping and fishing. No signs or gates shall be erected without the express written permission of the DEPARTMENT.

7. Liability and Safety

- a. The FARMERS shall indemnify the DEPARTMENT and hold the DEPARTMENT harmless from and against any and all injuries to persons (including the FARMERS or his or her employees, agents or representatives), damage to property or expense of every kind and nature (including, without limitation, court costs, expenses and reasonable attorney's fees) arising in any manner, caused by, resulting from, incident to, connected with or growing out of the rights granted hereunder, unless caused solely by the negligent acts or omissions of the DEPARTMENT, or its employees, agents, licensees or delegees.
- b. The FARMERS shall obtain and maintain in effect during the term of this agreement comprehensive or commercial general liability insurance with minimum policy limits of \$500,000 and shall annually provide the DEPARTMENT a certificate that demonstrates that such insurance is in effect and which names the DEPARTMENT as an additional insured and/or certificate holder.
- c. The DEPARTMENT shall not be liable or responsible in any way for any fire damage caused as a result of activities by the FARMERS hereby permitted.
- d. The DEPARTMENT will not be responsible for destruction of agricultural crops, equipment, or machinery resulting from any cause.
- e. Nothing herein shall be deemed to constitute a waiver of the State's sovereign immunity, which immunity is hereby reserved to the State.

8. Inspection of Premises

The FARMERS agrees that the DEPARTMENT or its duly authorized agent, at any time, may examine and inspect any and all portions of the Premises included in this agreement.

10. Compliance by Farmer with the Laws and Regulations: Equal Employment Opportunity

In connection with the performance of any activities authorized by this agreement, the FARMERS shall comply with all statutes, laws, regulations and orders of federal, state, county or municipal authorities which impose obligations upon the FARMERS, including, but not limited to, civil rights, and equal opportunity laws. In addition, the FARMERS shall comply with all applicable copyright laws.

During the term of this Agreement, the FARMERS shall not discriminate against employees or applicants for employment because of race, color, religion, creed, age, sex, handicap or national origin and will take affirmative action to prevent such discrimination.

If this agreement is funded in any part by monies of the United States, the FARMERS shall comply with all the provisions of Executive Order No. 11246 ("Equal Employment Opportunity"), as supplemented by the regulations of the United States Department of Labor (41 C.F.R. Part 60), and with any rules, regulations and guidelines as the State of New Hampshire or the United States issue to implement these regulations. The FARMERS further agree to permit the State or United States, access to any of the FARMERS' books, records and accounts for the purpose of ascertaining compliance with all rules, regulations and orders, and the covenants and conditions of this Agreement.

#### 11. Personnel.

The performance of services shall be carried out by the FARMERS or FARMERS' employees. The FARMERS shall provide, at their own expense, all personnel necessary to perform the activities authorized by this agreement. The FARMERS warrant that all personnel engaged in such activities shall be qualified to perform the activities, and shall be properly licensed and otherwise authorized to do so under all applicable laws. The DEPARTMENT acknowledges that the FARMERS wish to have members of the CJEJ Farm assist with the farming and maintenance of the fields covered under this agreement. The DEPARTMENT requires that the FARMERS disclose annually which fields will be farmed and/or maintained by members of the CJEJ farm each year.

To the extent the FARMERS are subject to the requirements of N.H. RSA chapter 281-A ("*Workers' Compensation*"), FARMERS shall maintain and require any subcontractor or assignee to secure and maintain payment of Workers' Compensation in connection with activities which the FARMERS proposes to undertake pursuant to this Agreement. The DEPARTMENT shall not be responsible for payment of any Workers' Compensation premiums or for any other claim or benefit for FARMERS, or any subcontractor or employee of FARMERS, which might arise under applicable State of New Hampshire Workers' Compensation laws in connection with the performance of this Agreement. FARMERS shall provide DEPARTMENT with a certificate documenting coverage for any application of Workers' Compensation coverage.

The FARMERS shall not hire, and shall permit no subcontractor or other person, firm or corporation with whom it is engaged in a combined effort to perform the activities authorized by this agreement, to hire any person who has a contractual relationship with the State, or who is a State officer or employee, elected or appointed.

#### 12. Farmers' Relations with the State

In the performance of this agreement each of the undersigned FARMERS, including all FARMERS' employees, subcontractors, and agents, are in all respects independent contractors, and are neither agents nor employees of the State. Neither the FARMERS nor FARMERS' officers, employees, agents or members shall have the authority to bind the State or receive any benefits, worker's compensation or other emoluments provided by the State to its employees.

#### 13. Assignment, Delegation and Subcontracts

The FARMERS shall not assign, or otherwise transfer any interest in this Agreement without the prior written consent of the DEPARTMENT. None of the services shall be delegated or subcontracted by the FARMERS without prior written consent of the DEPARTMENT.

14. Waiver of Breach

No failure by the State to enforce any provisions hereof shall be deemed a waiver of its rights with regard to that event, or any subsequent event.

15. Notice

Any notice by a party hereto to the other party shall be deemed to have been duly delivered or given at the time of mailing by certified mail, postage prepaid, in a United States Post Office addressed to the addresses included herein.

16. Amendment

This Agreement may be amended, waived or discharged only by an instrument in writing signed by the Parties hereto.

17. Construction of Agreement and Choice of Law and Forum

This Agreement shall be governed, interpreted, and construed in accordance with the laws of the State of New Hampshire, and is binding upon and inures to the benefit of the parties and their respective successors and assigns. In event of any dispute concerning the interpretation of this Agreement, the DEPARTMENT'S decision shall be final. The wording used in this Agreement is the wording chosen by the Parties to express their mutual intent, and no rule of construction shall be applied against or in favor of any party. Any actions arising out of this Agreement must be brought and maintained in the Merrimack County Superior Court of New Hampshire which shall have exclusive jurisdiction thereof.

18. Third Parties

The Parties hereto do not intend to benefit any third parties and this Agreement shall not be construed to confer any such benefit.

19. Entire Agreement

This Agreement, which may be executed in a number of counterparts, each of which shall be deemed an original, constitutes the entire Agreement and understanding between the Parties, and supersedes all prior agreements and understandings relating hereto.

IN WITNESS WHEREOF, the Parties hereto have hereunto caused their names to be set and their seals to be affixed as of the day and year first above written.

(Executed in duplicate)

The State of New Hampshire, acting through its Fish and Game Department on this day 6th of May, 2026.

[Signature]  
Stephanie L. Simek, Ph.D. Executive Director

STATE OF NEW HAMPSHIRE  
COUNTY OF Merrimack

Personally appeared before me on this 6th day of May, 2026 Stephanie L. Simek, who acknowledges herself to be the Executive Director for the New Hampshire Fish and Game Department, and as such is duly authorized to execute the foregoing instrument for the purposes therein contained, by signing her name on behalf of the State of New Hampshire.

[Signature]  
Notary Public/Justice of the Peace [seal]  
My Commission Expires: 10/29/30



Keith McMann  
Keith McMann

Tennessee  
STATE OF ~~NEW HAMPSHIRE~~  
COUNTY OF Decatur

I, hereby certify that Keith McMann personally appeared before me on this 27 day of March, 2026 and acknowledged the foregoing Agricultural Agreement.

Brock T Mirkle

Notary Public/Justice of the Peace [seal]  
My Commission Expires: Feb 03, 2030



Scott Mason  
Scott Mason

STATE OF NEW HAMPSHIRE  
COUNTY OF Cös

I, hereby certify that Scott Mason personally appeared before me on this 9 day of MARCH, 2026 and acknowledged the foregoing Agricultural Agreement.

Angella M. Richard

Notary Public/Justice of the Peace [seal]  
My Commission Expires: 9/21/2027

ANGELLA M. RICHARD - Notary Public  
State of New Hampshire  
My Commission Expires September 21, 2027



Figure 1. Map of the fields to be farmed under this agreement at the Fort Hill WMA, Stratford, NH. All 100-foot and 50-foot riparian buffers have been incorporated into this map.

**APPENDIX A. INTEGRATED PEST MANAGEMENT POLICY  
FOR WILDLIFE MANAGEMENT AREAS**

The FARMER will adhere to the following Integrated Pest Management (IPM) strategy:

1. FARMERS must utilize insecticide-untreated seed for all crops unless the FARMER has produced documentation of potential pest infestations warranting the use of insecticide-treated seed AND the DEPARTMENT has pre-approved the use of insecticide-treated seed. Seeds treated with pesticides expressly prohibited in #2 will not be approved.
  - i. IF insecticide-treated seed is approved for use by the DEPARTMENT, The FARMERS agree to adhere to the following:
    1. The FARMERS will follow best management practices for treated seed according to the *The Guide to Seed Treatment Stewardship*, as produced by the American Seed Trade Association and CropLife America. This guide can be found online at <http://seed-treatment-guide.com/>.
    2. The FARMERS agree to adhere to water resource setbacks as described in the New Hampshire Department of Agriculture Pesticide Control rules chapters Pes 502.04(a), Pes 502.05, Pes 1001.01(a) and Pes 1001.01(b) when planting treated seed.
2. The insecticides imidacloprid, thiamethoxam, clothianidin, and fipronil and the herbicide atrazine are expressly prohibited in all forms for all agricultural uses on DEPARTMENT lands.
3. Other pesticide applications may be employed by the FARMERS as needed, and without prior approval of the DEPARTMENT, based on the following:
  - i. The FARMERS have monitored, scouted, and assessed pest infestations without the use of pesticides.
  - ii. The FARMERS can produce documentation to the DEPARTMENT demonstrating pest infestations had reached action thresholds, warranting pesticide applications as outlined below.
  - iii. All pesticide applications must comply with all applicable state and federal laws.
  - iv. All pesticide applications must adhere to the lowest effective treatment rate.
  - v. The FARMERS and the DEPARTMENT agree to consult with the University of New Hampshire Cooperative Extension for alternative and IPM strategies for controlling pests.
4. The FARMERS agree to plant a ground cover crop of buckwheat, radishes, ground clover, small grains, or summer annual grasses if, for any reason, a grain crop is not planted in any given year, if the crop fails, or to improve soil health.
5. The FARMERS may amend field soils with fertilizer, lime, manure, DES-certified ash, or other improvements per recommendations based on soil testing.
6. The FARMERS agree to submit a written annual report as documentation of crops planted, pest scouting, pesticide use, and other agricultural practices employed. The report must provide methods and materials, results, actions, and any consultations/recommendations provided by others.
7. The DEPARTMENT encourages crop rotation to improve soil health and reduce pests.

**Actionable thresholds for control of pests on NH Fish and Game owned farm fields.**

Excerpted from the IPM Field Corn Pocket Guide for the NE Region as provided by  
UNH Cooperative Extension.

- New York State Integrated Pest Management Program. 1999. IPM field corn pocket guide: Northeast region. Auburn, NY: IPM.

Pest	Action Threshold	Management Alternatives	Comments and Sampling Strategies
<b>Japanese Beetle</b>	Apply treatment if 50% of plants have silks that are still green and are clipped to less than 0.5 inches while pollination is still in progress. See information on Corn Rootworm current season sampling in this chart.		Control is generally not needed or economically practical in field corn, so <b>routine sampling is not recommended</b> . Note presence and activity of adult beetles during time of corn rootworm sampling at silk stage. Examine 20 plants in each of five locations in the field, determine stage of pollination, number of beetles per plant and percentage of plants with silks clipped to less than 0.5 inches or less.
<b>Maize Billbug</b>	Difficult to assess and treat. Plants with foliar damage usually recover. Consider treatment only when many plants are being killed or severely damaged.		Note signs of damage during early season stand evaluations. Sample 20 consecutive plants in 5 areas of the field. Record number of damaged plants, noting if billbugs are present. Billbug damage can often be found in areas associated with yellow nutsedge. See also Cutworm.
<b>Sap Beetle</b>			<b>No need to sample.</b>
<b>Seed Corn Maggot</b>	No rescue treatment is available. Severe infestations may require replanting affected areas. A preventative seed treatment is generally recommended.		Note skips in row or unhealthy seedlings during early season stand evaluations. Dig up skips in rows or examine seeds for presence of maggots. Check 5 areas of the field. See also seedling diseases, whit grubs, and wireworms.
<b>Slugs</b>	<b>PA/NJ and states south</b> —populations of five or more slugs around each corn seedling at spike to 3-leaf stage may require treatment, especially if injury is already heavy, plant growth is slow, and cool wet conditions continue. If weather turns hot and dry, 10 or more slugs per plant may be tolerated especially if seedlings reach the 3-leaf stage.	Certain cultural practices can reduce slug populations. These include reducing the use of manure, shifting to conventional tillage practices for at least one season, using minimum tillage to reduce the amount of surface trash, applying liquid nitrogen when slugs are present. Chemical controls may be available in some states. Contact your local Cooperative Extension office for further information.	Monitor for slugs while conducting early season stand evaluations. Examine 20 consecutive plants in each of 5 locations in the field. Corn can generally recover from slug injury as long as seedling growing point is not damaged.
<b>Stalk Borer</b>	Rescue treatments are difficult; you must detect larvae early, while they are moving or feeding on leaves.	Improved control of grasses, ragweed, dock and other large-stemmed weeds where this insect overwinters in the egg stage.	"If you see it, sample it." Larvae move from grasses to corn. Inspect field borders or weedy fields for damaged plants and migrating larvae. See also hopvine borer and potato stem borer.
<b>White Grubs</b>	There may be a potential pest problem if you find two or more grubs per cubic foot of soil prior to planting time.		High-risk fields (long-term pasture fields returning to corn) may have high grub populations. Look for signs of grubs during tillage. In a growing corn crop, if you not missing, wilted, or stunted seedlings, check for larvae in the soil around damaged plants.

Pest	Action Threshold	Management Alternatives	Comments and Sampling Strategies
<b>Wireworms</b>	Average of one or more wireworms per bait station.	Three-way seed treatment containing wireworm control material provides some protection against low- to moderate wireworm levels, especially in first-year corn after sod. If losses are severe, affected parts of the field and replanting with treated seed may be the only option. No rescue treatment is available.	Two or three weeks before planting, set up five bait stations in different parts of the field. Bait stations with a 50:50 mix of untreated corn and wheat seed buried six inches deep. Cover the trap with black plastic to heat the soil and enhance seed germination. (This sampling technique is not effective with early corn plantings, since the soils are usually too cold for wireworm activity.) During the growing season, if you notice missing, wilted, or stunted seedlings, check for larvae in the soil around damaged plants.
<b>Fall Armyworm</b>	Treatment may be necessary if 75% or more of plants show damage and 3 or more larvae per plant are found. Tall corn will seldom need to be treated unless the leaves above the ear are also damaged.		Examine 20 consecutive plants in each of 5 locations in the field. Record the average size of larvae.
<b>True Armyworm</b>	Average larval length is ½ to ¾". Armyworms longer than 1 ¼" usually have completed their feeding. <b>PA/NJ and states south</b> —treat if 35% or more of the plants are infested with larvae less than 1" long and more than 50% defoliation is observed on damaged plants. <b>NY and states north</b> —treat only if most plants show damage, there are 3 or more larvae per plant, and larvae are less than 1 inch long.	Only the infested portion of the field and a 20- to 40-ft border around it need to be treated. Since larvae are active at night, apply treatments late in the day.	Examine 20 consecutive plants in each of 5 locations in the field. Record the average size of larvae. Armyworms longer than 1 ¼" usually have completed their feeding.
<b>Black Cutworm</b>	<b>PA/NJ and states south</b> —apply rescue treatment before the 3-5 leaf stage if 10% or more of the young plants show fresh leaf feeding and cutworms are present. At the 305 leaf stage, treat if 5% of the plants are cut and there are four or more cutworms per 100 plants. <b>NY and states north</b> —treat if 5% or more plants have been cut and larvae are still small (1/2 inch or less)	Treat only the infested area and 20-40 ft surrounding border. Larvae longer than 3/4 to 1" are difficult to control with insecticides. Portions of field may have to be disked and replanted if damage is no longer controllable.	Examine 20 consecutive plants in each of 5 locations in the field. Record the average size of the larvae.
<b>Corn Earworm</b>	Control is generally not needed or economically practical in field corn, so routine sampling is not recommended.		
<b>Corn Flea Beetle</b>	Control is generally not needed or economically practical in field corn, so routine sampling is not recommended.		
<b>Corn Leaf Aphid</b>	<b>NY and states north</b> —control is generally not needed or economically practical in field corn, so routine sampling is not recommended. <b>PA/NJ and states south</b> —treat only when 25% of the plants are heavily infested and natural enemy activity is low. To be most effective, treat before 50% of the tassels emerge.		Although corn leaf aphid populations are often observed, economically damaging populations are not common. <b>NY and states east and north</b> —routine sampling is not recommended.

Pest	Action Threshold	Management Alternatives	Comments and Sampling Strategies
<b>Corn Rootworm</b>	<p>For pollination interference in the current season, the action threshold occurs when silk is clipped to &lt;0.5 in. in most plants, beetles of either species are present, and pollination has not yet occurred. Action thresholds for the next season for CRW vary by state. For further information contact your local Cooperative Extension office.</p> <p><b>DE/MD</b>—For 1-3 year corn fields, an action threshold is reached when there are 0.25 CRW/plant or 10 CRW adults per yellow panel trap per week. In continuous fields of 4 or more years corn, a soil insecticide is recommended if visual counts exceed 2.0 CRW beetles/plant, or 35 CRW adults per yellow panel trap/week.</p> <p><b>In PA</b>—Threshold for WCR is 1.0 per plant in 1<sup>st</sup> year corn, 1.5 per plant in second year or greater corn. Threshold for NCR is 2.0 beetles per plant in 1<sup>st</sup> year corn, 3.0 per plant in second year or greater corn.</p> <p><b>In NY</b>—Action threshold is average of 1.0 WCR or 2.0 NCR beetles per plant. To determine risk of CRW induced root injury next season, use the sequential sampling table included in the Corn Rootworm description in this guide.</p>	<p>For adult (silk clipping) damage, apply an insecticide labelled for this pest. For larval (root feeding) damage, rotate to another crop in the subsequent spring, or apply a labelled soil insecticide at planting.</p>	<p>Make weekly visual counts of beetles during time of silking and pollination. Count number of beetles on 10 plants in each of at least five locations throughout the field.</p> <p>Crop rotation is the best management tool for corn rootworm. For fields that will be replanted to corn the following season, monitoring for corn rootworm beetles will help to identify the relative risk of potential CRW damage the following year.</p> <p>A sequential sampling method is available for use in NY and PA to reduce sampling time.</p> <p>In DE and MD, a second method using Olsen 4 x 6 inch yellow sticky panel traps is also recommended as a monitoring alternative. Deploy traps at a density of 1 every 5 acres. Place traps in the ear zone with a wooden dowel and secure with a clothespin. <b>CRW action thresholds for fields to be replanted to corn the following year vary by state. For further information, contact your local Cooperative Extension office.</b></p>
<b>European Corn Borer</b>	<p>If 75% of plants are damaged, consider harvesting early as silage. Many corn hybrids tolerate moderate levels of leaf and stalk injury without economic yield loss. Contact your local Cooperative Extension office for further information.</p>	<p>If ECB losses are annually significant, consider fall plowing or mowing of stalks to reduce corn borer overwintering survival, selecting corn hybrids with good standability, or using hybrids that express the <i>Bacillus thuringiensis</i> (Bt) endotoxin.</p>	<p>Insecticide control of ECB is rarely practical in the Northeast, so routine sampling is not recommended. Note percentage of damaged plants during corn rootworm sampling at silking stage, especially those with stalks tunneled by ECB larvae.</p>
<b>Grasshopper</b>	<p>If field has an otherwise acceptable crop (not overrun by weeds), and 8 or more adults or 15 or more nymphs (immatures) per square yard are found in the field borders, spot treatment may be necessary.</p>		<p>Often associated with poor grass/weed control. Scout field borders and damaged crops, and estimate level of damage and grasshoppers per square yard.</p>
<b>Hopvine Borer/Potato Stem Borer</b>	<p>No rescue treatment is available. Severe infestations may require replanting affected areas.</p>		<p>Monitor edges of field, especially those with grassy borders. Quack grass and foxtail species are the main egg-laying sites, but barnyard grass, large crabgrass and fall panicum are also potential sites. <b>Insecticide control is generally impractical.</b> These insects overwinter in the egg stage. Destroying host weeds will reduce risk of this pest the following season.</p>

**APPENDIX B. UNITED STATES DEPARTMENT OF AGRICULTURE'S NATURAL RESOURCE AND CONSERVATION SERVICE'S (NRCS) CONSERVATION PRACTICE STANDARD ON THE SHORT-TERM STORAGE OF ANIMAL WASTE AND BY-WASTE PRODUCTS.**

**Criteria Applicable To Temporary Field Stockpile Areas**

Locate the storage pad on a site-specific basis to minimize seepage and meet conditions and functional requirements.

Provide positive drainage away from the field stockpile area in all directions. Protect water bodies such as ponds, streams, and springs from runoff.

Maintain at least 30 feet of vegetative buffer on the downslope side of the stockpile storage area for filtering solids in the runoff. A manure stockpile may be placed in a fallow field when appropriately sited.

Provide adequate germination of newly established buffers prior to stockpile formation. Install a sediment barrier (synthetic silt fence or hay bales) around the pile if vegetation is not well established.

Maintain the stockpile so that no dust and debris transport to waters or drainageways occurs.

Seed all disturbed areas beyond the edges of the stored manure to an approved vegetative cover.

Locate stockpile—

- Above the 100-year floodplain elevation unless site restrictions require location within the floodplain. Protect the facility from inundation or damage from a 100-year flood event when in the floodplain.
- As far away as practical and at least 100 feet from neighboring residences or public roads or areas.
- At least 150 feet from wells, springs, streams, and ponds, or 300 feet from wells, springs, streams, and ponds when water resource is located down gradient from the stockpile area.
- At least 100 feet from all drainageways.
- Where the seasonal high water table will be no closer than 2 feet below the bottom of the stored manure, unless a geosynthetic liner is used.
- Where there is no groundwater spring, seep, or subsurface drainage tile lines that could be contaminated by the stored waste.
- On soils with a maximum saturated hydraulic conductivity class (kSAT) of moderately high (~ 2 in/hr) or on a soil pad, geomembrane lined pad, or similar lining method, and the stockpile is covered.
- Where there will be positive drainage from the stack in all directions and clean water runoff is excluded from the stockpile storage area.
- Where access is not limited by poor weather conditions such as excessive ice, snow, or muddy ground.

