



Agronomy Notes

Capital Region

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Capital Region Extension Agronomy Team

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Feb 2004

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DEPARTMENT OF AGRICULTURE Office of the Secretary

Declaration of Extraordinary Emergency Because of Bovine Spongiform Encephalopathy

Bovine spongiform encephalopathy (BSE) has been detected in the United States. BSE is a progressive neurological disorder of ruminants that results from infection by an unconventional transmissible agent. It appears that BSE is primarily spread through the use of ruminant feed containing protein and other products from ruminants infected with BSE. The disease was detected in the State of Washington and had not previously been detected in the United States.

The presence of BSE presents a threat to U.S. livestock. It constitutes a significant danger to the national economy and a potential serious burden on interstate and foreign commerce. The Department has reviewed the measures being taken by the State of Washington to quarantine and regulate the herds in question and has consulted with appropriate State Government and Indian tribal officials in the State of Washington. Based on that review and consultation, and the scope of the impact of this event on the national economy, the Department has determined that the State may be unable to adequately take the measures necessary to quarantine and dispose of animals

that may be infected with or exposed to BSE. Therefore, the Department has determined that an extraordinary emergency exists because of BSE in the State of Washington.

This declaration of extraordinary emergency authorizes the Secretary to (1) hold, seize, treat, apply other remedial actions to, destroy (including preventative slaughter), or otherwise dispose of, any animal, article, facility, or means of conveyance if the Secretary determines the action is necessary to prevent the dissemination of BSE and (2) prohibit or restrict the movement or use within the State of Washington, or any portion of the State of Washington, of any animal or article, means of conveyance, or facility if the Secretary determines that the prohibition or restriction is necessary to prevent the dissemination of BSE. The appropriate State Government and Indian tribal officials in Washington have been informed of these facts.

EFFECTIVE DATE: This declaration of extraordinary emergency shall become effective January 6, 2004.

Ann M. Veneman,
Secretary of Agriculture

Finalizing Your 2004 Crop Insurance Decisions

Your 2004 crop insurance decisions for most spring crops must be **finalized by March 15th**. So, let's take a moment to reflect on recent experiences and to highlight some 2004 changes.

In 2002, PA producers were paid about \$64 million, primarily for drought losses. The 2003 figures are still very preliminary but some are expecting that about \$25 million will be paid to producers primarily for excess moisture losses. This could bring the total 1999-2003 loss payments to almost \$120 million. In 2003, the USDA also further helped PA producers' to better afford the purchase of additional protection with a one-time additional premium discount of about \$6 million. This was in addition to the basic premium subsidies and the Commonwealth of Pennsylvania producer crop insurance grant.

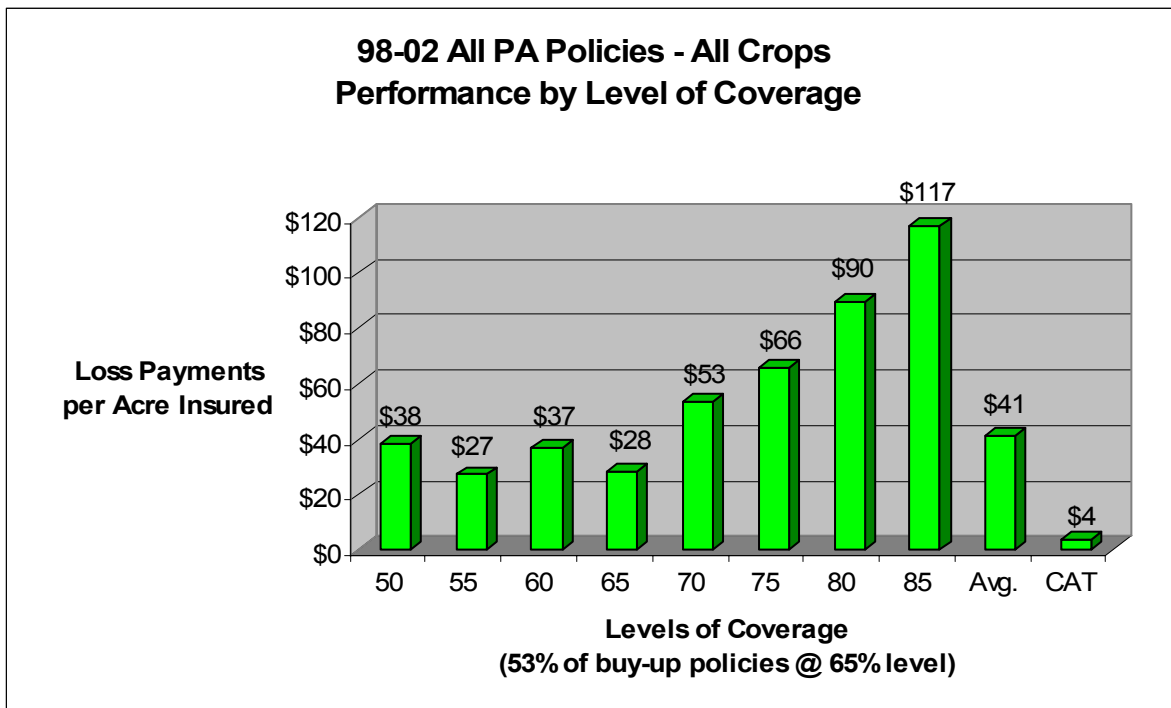
Penciling-out the best choice for 2004

For 2004, the same wide choices of coverages remain. The basic USDA premium subsidies remain, that range from about 38% to 67% of the gross premium, depending which level of coverage you choose. The Commonwealth of Pennsylvania is also providing a total of \$2 million for crop insurance grants which are estimated to pay producer policy fees and reduce the producers' net premium by approximately 7%. It's important to note that the final percentage will be adjusted to stay within available funds. However, the overall cost of most insurance coverage options will increase compared to 2003.

be balanced between the amount of protection and the associated premium cost. The chart below provides some simple mathematical performance comparisons (which reflects estimates of the results of totaling the loss payments by each level of coverage and dividing each by the total acres insured for the period 1998-2002). **It's recommended that you discuss coverage choices and get quotes from your insurance agent so that you are best prepared to make an informed choice, well before the 3/15/04 deadline.**

**Gene Gantz, RMA/USDA
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What protection choice is best for 2004 must be based on the individual needs of each producer. These needs must



Winter Injury to Alfalfa

As this article is being prepared, 1-9-04, Pennsylvania is experiencing some of the coldest temperatures in quite some time. Farmers at the Keystone Farm Show asked me what effect this cold snap will have on alfalfa winter survivability.

Experience has shown that the alfalfa plant can survive low temperatures. Some early dormant, very winter-hardy types can withstand -5° F. Most commonly grown types in the Northeast United States will experience some winter injury at temperatures below 5° F to 15° F. Unfortunately for farmers, county agents and crop advisors, the thermometer alone is not the complete answer to the question of survivability.

One important factor for surviving cold temperatures is how the alfalfa crown is "conditioned" prior to the cold snap. As the plant is exposed to colder temperatures and shorter days, certain physiological conditions change in the plant to provide protection. First, cell membranes become more pliable to resist bursting. Sugars then

accumulate in the cell fluid to lower cell freezing temperatures.

Cell water levels are reduced. Cell water is actually "pulled" outside the cell and freezes between cells. This protects the cell membrane but as more freezing takes place more water is removed from the cell causing dehydration. This leaves little water in the cell to freeze but can cause losses due to dehydration. This works until 5° F to 15° F. Below these temperatures remaining water freezes and forms ice crystals that puncture cell walls. When thawing temperatures reappear, "leaky" cells will die.

What helps condition the alfalfa crown is a slow transition from mild temperatures to cold temperatures. Unfortunately that was not the case this January. Recall the unusual warm temperatures right before New Years?? Such a drastic fluctuation was not helpful.

What about snow insulation? Snow cover would have been beneficial. Snow is an excellent insulator. What the

snow does is reduce the fluctuations in temperature extremes. Unfortunately, there is no snow cover at this time.

Another survival factor is the condition of the soil and it's affect on plant roots. The US Weather Service has recorded one of the greatest yearly moisture levels in 2003. Rarely, throughout the year, did our surface soils dry out and below the plow layer I doubt they ever did. This fall was noted for the continuing wet soil conditions. Harvest of many acres of soybeans and corn had to be delayed until the ground froze.

Wet soils will increase the risk of phytophthora root rot on deep rooted alfalfa plants. This disease can significantly injure the small more fibrous roots that branch off the larger tap root. In addition to water and nutrient uptake, these roots have a significant role in anchoring the plant to the soil.

Wet soil conditions, fluctuating temperatures, no snow and poor secondary roots sets the stage for significant winter injury from heaving. How much??? I doubt anyone can predict too accurately.

What to look for in March?? Slow green up, uneven (one sided) development of buds on plant crowns, varying heights of shoots from the same crown and unhealthy colored (anything other than white) plant roots are common signs of winter injury.

What to do?? At this time, nothing, but watch for future articles after we know what weather lies ahead.

**Paul H. Craig, CCA
Forages, Dauphin County**

2003 Field Tests of Bt Rootworm Corn

Bt YieldGuardRootworm is the trade name for seed corn that has resistance to corn rootworm injury. According to tests conducted by Monsanto during the development of this product, hybrids with this built in resistance gave a twelve bushel per acre gain compared to using a row insecticide for control and eighteen bushels per acre gain over using no control. Our objective was to see how it performed in our area. In the past growing season, we worked on a test, in cooperation with Monsanto, that compared a corn hybrid with



this trait to the same hybrid without the trait but with a treatment with a row insecticide (Force™). This test was done in seven locations in Pennsylvania. Four of the seven tests were in Lancaster and York counties. This article pertains to these test fields.

The test hybrid was Asgrow RX 708. All plots were planted and harvested with the cooperating farmers'

equipment. Thus, each treatment was comprised of four or six rows of corn the length of the field. All three treatments were replicated five or six times at each farm. The planting date for these fields ranged from between May 2 and May 30. All of the fields used were in at least the second year of corn. In July, a number of corn plants were dug up and the roots were evaluated for insect feeding injury. At that time, there were significant differences between the amounts of root damage in most fields. In the table that follows, 0=no damage, 3=severe damage

Table 1. Root injury ratings

	Bt	Force	Check
Wakefield	.025	.382	.9
York	.012	.056	.172
Quarryville	.085	.193	.656
Landisville	.305	.202	2.39

The field that was planted the latest had the most damage even though one of the other fields had corn grown in it for many more years.

The yields were measured at harvest time. In our results, there was only one field out of the four where there was a significant yield difference between the treatments as shown in the table below.

Yield (bu/ac) at each test location

	Bt	Force	Check
Wakefield	192	194	185
York	131	131	129
Quarryville	156	158	152
Landisville	80	56	43

We believe that the yields were close at the first three locations because ample rainfall allowed the corn to recover from the root damage that occurred. The low yields at Landisville are probably because the corn was much younger as a result of the later planting date and was more susceptible to the insect feeding. Further, the field was planted, as many were this spring, in conditions that were wetter than desired. Seed furrow wall compaction was observed and this restricted root growth as well. One other trend we saw in the results was that there were differences in the variability of yields within a given treatment. The Bt was the most consistent, followed by the Force and most variable in the check. We did not see differences in grain moisture between the treatments.

Remember that this is only one year of testing and that rainfall amounts and the development of the insect was delayed later than average. This does give some idea about how much potential there is for this type of insect resistance to protect yield under higher insect pressure and/or adverse soil conditions.

**John Rowehl, CCA
Grain Crops-Cumberland Co.**

EQIP – Environmental Quality Incentives Program 2004 - Voluntary Conservation Program for Farmers

EQIP offers financial and technical help to assist eligible participants install and/or implement conservation structural and management practices on eligible agricultural land. Persons engaged in livestock or agricultural production on eligible land may qualify for 75% to 90% cost share for practices.

EQIP offers contract terms of approximately 18 months to 10 years in length. Cost share is offered for practice installation costs. Incentive payments, for up to 3 consecutive years, are offered for changes in the management of resources. Practices include, but are not limited to grassed waterways, diversions, riparian buffers, tree and shrub plantings, contour buffer strips, terraces, barnyard improvements, and pastures management systems.

A current conservation plan is needed in order to apply for the program. The program is competitive and all proposals are ranked and funded one time per year. Contact your local NRCS office to schedule an

appointment to update or write a conservation plan. More information and applications for the program are available on line at www.nrcs.usda.gov/programs.

Sincerely,



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