



Successful Seeding on Steep Slopes using PAM-12[®] Plus



This trial was completed to compare PAM-12[®] Plus with straw mulch cover, which is normally used to cover exposed soil sites. Specifications state that exposed soil areas at final grade are to be seeded, fertilized, limed and straw mulched. This trial was completed on two different areas, a tracked fill slope and grooved cut slope, with both areas being relatively uniform. All applications were done with hydro-seeding operations, except blowing straw mulch. Straw mulch/hydro-seeding operations included three separate passes over the same area:



1. Hydro-seeding the seed, fertilizer, and lime
2. Blowing straw mulch onto the areas
3. Hydro-seeding a fiber mulch tack on the straw to keep it from blowing away

PAM-12[®] Plus hydro-seeding required only one pass.

Comparisons for this trial included erosion, rill and gully and vegetation growth, coverage, color and height. Monitoring included: dates of first seedlings emerging, percent cover by vegetation group (annual rye and perennial fescue) using eyeball estimates, height of vegetation group seedlings, and percent weed cover. After approximately six weeks, vegetation growth on the tracked fill slopes was essentially the same for both PAM-12[®] Plus and mulch. Vegetation on the grooved cut slope was more uniform for the mulch than for the PAM-12[®] Plus, but it should be noted that the cuts were smaller on the mulch area.

For the tracked fill slope, there was no evidence of rill or gully erosion on either the straw mulch or the PAM-12[®] Plus areas. Both areas had good vegetation growth, cover, vigor and color. The only differences were that the PAM-12[®] Plus areas had more fescue coverage and less rye/wheat coverage, as well as more weeds.

For the grooved cut slope, there was no evidence of rill or gully erosion on either the straw mulch or the PAM-12[®] Plus areas. However, the PAM-12[®] Plus areas had taller, greener and denser vegetation than the straw mulched area.

Based on this trial, PAM-12[®] *Plus* should be cost effective for these types of applications, particularly because of the fact that it required one pass for application instead of the three required for mulch. This would become even more significant with increasing fuel costs, such as those that occurred in the United States during 2008. Additionally, PAM-12[®] *Plus* may become even more desirable in areas where straw becomes less available or more costly. Therefore, it was recommended that PAM-12[®] *Plus* be approved for use on construction and maintenance projects as a substitute for straw mulch erosion control, either through a hydro-seeding operation or as a PAM-12[®] *Plus* dry granule direct application.

Location:	Staunton, Virginia Two sites – one near Route 693 and one near Route 720
Project Description:	Trial completed to compare PAM-12 [®] <i>Plus</i> with straw mulch cover on tracked fill slope and grooved cut slope, with monitoring completed over a 12 month period.
Site Profile:	Two sites with almost uniform limestone, dominated primarily by Frederick and Christian clay soils
Equipment Utilized:	Hydro-seeder
Products:	PAM-12 [®] <i>Plus</i>
Application Rates:	PAM-12 [®] <i>Plus</i> at 1,000-2,000 pounds/acre Straw mulch mix at 2,000 pounds/acre
Project Results:	In this trial, PAM-12 [®] <i>Plus</i> was effective in controlling erosion and in vegetation establishment under normal weather conditions

