

GE eucalyptus field trial sites (Exact locations not revealed):
(from pages 8-16 of the Final Environmental Assessment)

Confined Field Test Locations

The confined field tests are taking place on land controlled by ArborGen or through contracts for field testing. The exact locations are claimed as **Confidential Business Information** (CBI) and have been submitted as part of the APHIS permit application. Under the two permits, there are 28 sites where trees have been planted or will be planted, and on 27 of these sites the trees will be allowed to flower. See below for the States and Counties in which these 28 sites are located. An additional site in South Carolina is a holding area for plants in pots and trees. Trees will be held there for planting and will not be allowed to flower.

All the confined field test sites listed in this permit application are either on privately owned managed plantation forests and agricultural farm lands or experimental research stations managed by academic institutions and industry. The standard agricultural and silvicultural practices for land preparation, planting, irrigation, and harvesting of plants have been routinely used on these sites. Sites that include managed pastures have had intense activity including the use of heavy machinery for general upkeep, irrigation, fertilization, controlled grazing and management of grasses. Standard silvicultural practices will be used at these sites for the duration of the field tests. Surveys conducted by the applicant at each of these locations indicate that there are not any old growth forests or undisturbed natural areas in the immediate surroundings of the test sites. The trees will be planted from 0.5 up to 20 acres, depending on the location. In the case of these tests the planting density will be from 300 - 600 trees per acre². An acre is about the size of a football field.

² Planting density typically refers to the number of trees per acre. Planting densities can vary greatly depending upon the tree species and the environment, but densities of short rotation hardwood trees in the southeastern US are typically in the range of 300–800 trees per acre. Therefore sites ranging from 10 to 20 acres can have from 3000 to 16,000 total trees planted in the ground. Twenty acres, as defined by forest plantation standards in the southeast, is considered a small planting.

Baldwin County Alabama Site:

This location has been an agricultural research station for more than 20 years. The location has been used for managed production of annual agricultural crops and forest trees. Site preparation involved herbicide application, subsoiling, and planting of trees in flat beds. The surrounding areas of the test site consist of field plantings of agricultural crops, experimental forest trees and an abandoned pecan orchard. Approximately 6.2 acres of existing field trials of genetically modified *Eucalyptus* of the same clone (EH1) are being grown under issued permit # 06-325-111r under which these trees are allowed to flower. The oldest of these trees at this site are now entering their fifth growing season.

Up to 8,000 containerized trees, including non-transgenic trees could be transferred to this field test site and planted in field plots of up to 10 acres (at around 300 - 600 trees per acre) over the next three years. An additional field trial of the same clone (EH1) was established at this site on approximately 0.8 acres now covered under permit 08-039-102rm. This trial would be transferred to permit # 08-011-106rm to allow flowering.

Escambia County Alabama Site:

This location had previously been used as an intensely managed pasture for more than 5

years and was planted with grasses suitable for cattle grazing. Site preparation involved herbicide application to remove existing grasses, subsoiling, preparation for possible irrigation, and planting of the test trees in flat beds. The surrounding areas of the test site consist of experimental forest trees; approximately 30 year-old slash pine and a re-forested area with less than 7 year-old mixed stands of pine and hardwood species.

Up to 8,000 containerized trees, including non-transgenic trees could be transferred to this field test site and planted in field plots of up to 10.3 acres over the next three years. The existing field trials of the same clone (EH1) were planted at this site on approximately 0.5 acres that are now covered under Permit #08-039-102rm. These trials would be transferred to permit # 08-011-106rm to allow flowering.

Evans County Georgia Site:

This location has been a commercial nursery for forest seedling production for over 30 years. Site preparation involved herbicide application, subsoiling and planting of trees in flat beds. The areas surrounding the test site consist of nursery beds of forest tree seedlings, experimental forest trees, agricultural crops and mixed stands of hardwood and pine.

Up to 4,000 containerized trees, including non-transgenic trees, could be transferred to this field test site and planted on field plots of up to 5 acres over the next three years. A field trial of the same clone (EH1) was planted on approximately 0.2 acres at this site that is now covered under BRS permit # 08-039-102rm. This trial would be transferred to permit # 08-011-106rm to allow flowering.

Saint Landry's Parrish Louisiana Site:

This location has been an experimental agricultural farm for more than 25 years, used for conducting research experiments with soybean, cotton and wheat. Site preparation involved herbicide application, subsoiling and planting of trees in flat beds. The areas surrounding the test site consist of agricultural fields of rice, sugarcane and millet.

Up to 8,000 containerized trees, including non-transgenic trees could be transferred to this field test site and planted in field plots of up to 11.7 acres over the next three years. Field trials of the same clone (EH1) were planted at this site on approximately 1.9 acres under Permit #08-039-102rm. All tests except 0.2 acres were subsequently terminated. The remaining 0.2 acres would be transferred to permit # 08-011-106rm to allow flowering.

Marshall County Mississippi Site:

This location has been an agricultural research station for more than 50 years, used for conducting research experiments with agricultural crops and grasses. The test site was previously used for experimental planting of grasses. Site preparation involved herbicide application, subsoiling and planting of trees in flat beds. The areas surrounding the test site consist of experimental forest trees, agricultural fields, and less than 5 year-old pine plantations.

A field test of the same clone (EH1) was established at this site on 0.5 acres under permit 08-039-102rm. This test was subsequently terminated. No additional plantings are currently anticipated at this site. Additional tests, if planted at this site, would be allowed to flower under permit # 08-011-106rm.

Pearl River County Mississippi Site:

This location has been used as an agricultural research station for more than 5 years for conducting research experiments with agricultural crops and grasses. The test site was used for experimental planting of grasses. Site preparation involved herbicide application to remove existing grasses, subsoiling, preparation for irrigation installation, and planting of trees in flat beds. The areas surrounding the test site consist of a grape research farm, mixed stands of hardwoods and pine, and a residential area.

Up to 4,000 containerized trees, including non-transgenic trees could be transferred to this field test site and planted in field plots of up to 7 acres over the next three years. The existing field trials of the same clone (EH1) were established at this site on approximately 3.0 acres that are now covered under permit 08-039-102rm. These trials would be transferred to permit # 08-011-106rm to allow flowering.

Bamberg County South Carolina Site:

This location has been a managed forest plantation for more than 14 years. The location has been specifically used for short-rotation planting of hardwoods and softwood trees for forestry research. Standard silvicultural practices for site preparation, irrigation, fertilization, planting and harvesting have been used at this location. Similar practices will be used for the additional field tests to be established at this site. The areas surrounding the test site consist of experimental forest trees, young pine plantations, mixed stands of hardwoods and pine, and agricultural fields. There are experimental test plots of non-transgenic cold-hardy *E. macarthurii*, *E. benthamii*, *E. viminalis*, *E. badjensis*, and *E. dorrigoensis* planted at least 1000 meters from the test plot location.

Up to 4,000 containerized trees, including non-transgenic trees could be transferred to this field test site and planted in field plots of up to 8.3 acres over the next three years. Field trials of the same clone (EH1) were established at this site on 3.5 acres under permit 08-039-102rm. All tests except 0.2 acres were subsequently terminated. The remaining 0.2 acres would be transferred to permit # 08-011-106rm to allow flowering.

Berkeley County South Carolina Site 1:

This is an extension of a greenhouse facility that has been used for acclimatization of transgenic and non-transgenic plants for more than 7 years. The 0.5 acre release site is located adjacent to greenhouse facilities and is surrounded by hardwoods and pine plantations. This site is a secure fenced holding area where trees growing in containers are transferred from the greenhouse to the out-of-doors for acclimatization prior to field planting. Trees will not be allowed to flower at this location.

Berkeley County South Carolina Site 2:

This location has been a managed forest plantation for more than 7 years. The location has been specifically used for short rotation planting of cottonwood and *Eucalyptus* Hybrid (EH1) for forestry research. Site preparation involved herbicide application, subsoiling, drip irrigation installation, and planting of trees in flat beds. The test site is located adjacent to greenhouse facilities and is surrounded by pine plantations.

Field trials of the same clone (EH1) were established at this site on 0.5 acres under permit 08-039-102rm. These tests were subsequently terminated. No additional plantings are currently anticipated at this site. Additional tests, if planted at this site, would be allowed to flower under permit # 08-011-106rm.

Charleston County South Carolina Site:

This location has been a managed forest plantation for more than 10 years. The location has been specifically used for short-term planting of hardwoods and softwood trees for forestry research. Standard silvicultural practices for site preparation, irrigation, fertilization, planting and harvesting were used at this location. Similar practices were used for the additional field tests established at this site. The areas adjacent to the field test site include young mixed stands of hardwoods and pines.

Field trials of the same clone (EH1) were established at this site on 3.1 acres under permit 08-039-102rm. All tests were subsequently terminated. No additional trials are currently planned for this site. Additional tests, if planted at this site, would be allowed to flower under permit # 08-011-106rm.

Marlboro County South Carolina Site:

This location has been a commercial nursery for forest seedling production for over 30 years. Site preparation involved herbicide application, subsoiling and planting of trees in flat beds. The surrounding areas consist of field plantings of agricultural crops, nursery beds of forest tree seedlings and less than 30 year-old mixed hardwood and pine plantations.

A field trial of the same clone (EH1) was established at this site on 0.3 acre under permit 08-039-102rm. This test was subsequently terminated. No additional trials are currently planned for this site. Additional tests, if planted at this site, would be allowed to flower under permit # 08-011-106rm.

Hardin County Texas Site:

This location has been a managed forest plantation for more than 30 years. The location consists of mixed hardwood tree plantations planted using standard silvicultural practices and was harvested by the owner in 2004. The test site is within the larger harvested area and was re-bedded by the owner for planting. Site preparation included herbicide application and subsoiling. The areas surrounding the test site consist of mixed hardwood stands and managed loblolly pine plantations. There are experimental test plots of non-transgenic cold-hardy *Eucalyptus* species, *E. macarthurii*, *E. benthamii*, and *E. viminalis* planted within 100 m of the transgenic test plot location.

Up to 16,000 containerized trees, including non-transgenic trees, could be transferred to this field test site and planted in field test plots of up to 20 acres over three years. A field trial of the same clone (EH1) was established at this site on 19.7 acres under permit 08-039-102rm. This trial would be transferred to permit # 08-011-106rm to allow flowering.

Jasper County Texas Site 1:

This location has been a managed pine plantation for more than 25 years. Previous plantings were cultivated in beds using standard silvicultural practices. The existing pine plantation at this site was harvested by the owner in 2007 and re-bedded for planting. The test site is within the larger harvested and bedded site prepared by the site owner. Further site preparation involved herbicide application, subsoiling and planting of trees in flat beds. The areas surrounding the test site consist of harvest age pine plantations.

Up to 16,000 containerized trees, including non-transgenic trees, could be transferred to this field test site and planted in field test plots of up to 20 acres over three years. A field trial of the same clone (EH1) was planted at this site on approximately 0.7 acres under BRS permit # 08-039-102rm. This trial would be transferred to permit # 08-011-106rm to allow flowering.

Jasper County Texas Site 2:

This location has been in agriculture for more than 30 years. The test site was used for pasture for the past 10 years. Site preparation involved herbicide application to remove existing grasses, subsoiling, preparation for irrigation installation, and flat plantings of trees. The areas surrounding the test site consist of natural stands of mixed pine and hardwoods.

Up to 8,000 containerized trees, including non-transgenic trees, could be transferred to this field test site and planted in field test plots of up to 10 acres over three years. A field trial of the same clone (EH1) was established at this site on 1.0 acre under permit 08-039-102rm. This trial would be transferred to permit # 08-011-106rm to allow flowering.

Jefferson County Texas Site:

This location has been used for managed agricultural production of rice for more than 5 years. Site preparation will involve herbicide application, subsoiling and planting of trees in flat beds. The surrounding areas of the test site consist of rice plantations.

Up to 8,000 containerized trees, including non-transgenic trees, could be transferred to this field test site and planted in field test plots of up to 10 acres over three years

Newton County Texas Site 1:

This location has been a managed loblolly pine plantation for at least 30 years. The previous plantings were cultivated in beds using standard silvicultural practices and the areas have recently been harvested. Site preparation has or will include herbicide application, plowing, and planting of trees in raised or flat beds. The areas surrounding the test sites consist of managed loblolly pine plantations and/or mixed hardwood stands.

Up to 16,000 containerized trees, including non-transgenic trees, could be transferred to this field test site and planted in field test plots of up to 20 acres over three years.

Newton County Texas Site 2:

This location has been a managed loblolly pine plantation for at least 30 years. The previous plantings were cultivated in beds using standard silvicultural practices and the areas have recently been harvested. Site preparation has or will include herbicide application, plowing, and planting of trees in raised or flat beds. The areas surrounding the test sites consist of managed loblolly pine plantations and/or mixed hardwood stands.

Up to 16,000 containerized trees, including non-transgenic trees, could be transferred to this field test site and planted in field test plots of up to 20 acres over three years.

Newton County Texas Site 3:

This location has been a managed loblolly pine plantation for at least 30 years. The previous plantings were cultivated in beds using standard silvicultural practices and the areas have recently been harvested. Site preparation has or will include herbicide application, plowing, and planting of trees in raised or flat beds. The areas surrounding the test sites consist of managed loblolly pine plantations and/or mixed hardwood stands.

Up to 16,000 containerized trees, including non-transgenic trees, could be transferred to this field test site and planted in field test plots of up to 20 acres over three years.

Newton County Texas Site 4:

This location has been a managed loblolly pine plantation for at least 30 years. The previous plantings were cultivated in beds using standard silvicultural practices and the areas have recently been harvested. Site preparation has or will include herbicide application, plowing, and planting of trees in raised or flat beds. The areas surrounding the test sites consist of Page managed loblolly pine plantations and/or mixed hardwood stands.

Up to 16,000 containerized trees, including non-transgenic trees, could be transferred to this field test site and planted in field test plots of up to 20 acres over three years.

Bay County Florida Site:

This location was used as an intensely managed pasture for more than 15 years, and was planted with grasses suitable for cattle grazing. Site preparation involved herbicide application to remove existing grasses, subsoiling, preparation for possible irrigation installation, and planting of trees in flat beds. The areas surrounding the test site consist of experimental forest trees, agricultural crops and less than 25 year-old hardwoods and pine. Up to 4,000 containerized trees, including non-transgenic trees, could be transferred to this site and planted in field test plots of up to 5 acres over the next three years. Field trials of the same clone (EH1) were planted at this site on approximately 1.35 acres of test plots under permit #08-039-102rm. All tests except approximately 0.2 acre were subsequently

terminated. The remaining 0.2 acres would be transferred to permit # 08-014-101rm to allow flowering.

Columbia County Florida Site:

This location has been a managed pine plantation for more than 20 years. Previous plantings were cultivated in beds using standard silvicultural practices. This area of the tract was burned in a fire in May 2007. After the fire, the area was raked and bedded by the site owner in preparation for re-planting. The test site is within the larger harvested and bedded area, which is surrounded by existing pine plantations and additional harvested tracts.

Up to 16,000 containerized trees, including non-transgenic trees, could be transferred to this site and planted in field test plots of up to 20 acres over the next three years.

Gadsden County Florida Site 1:

This location has been used as an agricultural research station for more than 10 years for conducting research experiments on agricultural crops. Standard silvicultural practices were used for site preparation, including herbicide application, plowing and planting of trees in raised or flat beds. The areas surrounding the test site consist of mixed pine-hardwood forests and pine plantations as well as research plantings of agricultural and horticultural crops. There is an experimental plot of non-transgenic *Eucalyptus* species including *E. grandis*, *E. amplifolia*, and *E. camaldulensis* at least 1000 meters away from the transgenic test location.

Up to 8,000 containerized trees, including non-transgenic trees, could be transferred to this site and planted in field test plots of up to 10 acres over the next three years. A field trial of the same clone (EH1) was planted at this site on approximately 0.2 acres under permit # 08-039-102rm. This trial would be transferred to permit # 08-014-101rm to allow flowering.

Gadsden County Florida Site 2:

This location has been an agricultural research station for more than 10 years. The field has been fallow for approximately seven years. Standard silvicultural practices will be used for site preparation, including herbicide application, plowing and planting of trees in raised or flat beds. The areas surrounding the test site consist of mixed pine-hardwood forests and pine plantations, as well as research plantings of agricultural and horticultural crops.

Up to 12,000 containerized trees, including non-transgenic trees, could be transferred to this site and planted in field test plots of up to 15 acres over the next three years.

Glades County Florida Site:

Due to changes in experimental plans this site will not be used for field trials of these trees and was removed from the permit application per the applicant's request.

Highlands County Florida Site:

This location was previously used for managed production of citrus for at least 15 years. The planting area at this location had been used for field trials of transgenic *Eucalyptus* for more than 6 years. Site preparation involved herbicide application, plowing, and planting of trees in flat beds. Areas surrounding the test site consist of less than 5 year-old second-growth pine and hardwood with mixed grasses. Field trials of 1.4 acres of some of EH1 translines are being grown under issued permit # 08-151-101r under which these trees are allowed to flower. These trees are now entering their fifth growing season. An additional 2.3 acres of

tests of different lines with the same EH1 hybrid are being grown under permits 08-039-102rm (2.0 acres) and 09-070-101rm (0.3 acres).

Up to 8,000 containerized trees, including non-transgenic trees, could be transferred to this site and planted in field test plots of up to 10 acres over the next three years.

Marion County Florida Site:

This location has been used as an agricultural research station for more than 5 years for conducting research experiments on agricultural crops. Site preparation involved herbicide application, plowing, and planting of trees in flat beds. Areas surrounding the test site consist of agricultural fields and plantings of horticultural crops. An experimental test of non-transgenic *E. amplifolia* is planted approximately 200 meters from the test plot location. In addition, a field test of 0.3 acres of different lines with the same EH1 hybrid was planted at this site under permit 9-070-101rm.

Up to 8,000 containerized trees, including non-transgenic trees, could be transferred to this site and planted in field test plots of up to 10 acres over the next three years. A field trial of some of the same lines of EH1 clone was established at this site on 0.9 acres under permit 08-039-102rm. This trial would be transferred to permit # 08-014-101rm to allow flowering.

Taylor County Florida Site 1:

This location has been a managed pine plantation for over 20 years. The previous plantings were cultivated in beds using standard silvicultural practices. The existing pine plantations at these sites were harvested by the owner and prepared for re-planting. Additional site preparation involved herbicide application, plowing to remove stumps, and planting of trees in raised beds. Areas surrounding these test sites consist of managed stands of pine plantations.

Up to 16,000 containerized trees, including non-transgenic trees, could be transferred to this site and planted in field test plots of up to 20 acres over the next three years. A field trial of the same clone (EH1) was planted at this site on approximately 4.3 acres under permit # 08-039-102rm. This trial would be transferred to permit # 08-014-101rm to allow flowering.

Taylor County Florida Site 2:

This location has been under managed pine plantations for over 20 years. The previous plantings were cultivated in beds using standard silvicultural practices. The existing pine plantations at these sites were harvested by the owner and prepared for re-planting. Additional site preparation involved herbicide application, plowing to remove stumps, and planting of trees in raised beds. Areas surrounding these test sites consist of managed stands of pine plantations.

Up to 16,000 containerized trees, including non-transgenic trees, could be transferred to this site and planted in field test plots of up to 20 acres over the next three years. A field trial of the same clone (EH1) was planted at this site on approximately 3.7 acres under permit # 08-039-102rm. This trial would be transferred to permit # 08-014-101rm to allow flowering.

Taylor County Florida Site 3:

This location has been under managed pine plantations for over 20 years. The previous plantings were cultivated in beds using standard silvicultural practices. The existing pine plantations at these sites were harvested by the owner and prepared for re-planting.

Additional site preparation involved herbicide application, plowing to remove stumps, and planting of trees in raised beds. Areas surrounding these test sites consist of managed stands of pine plantations.

Up to 16,000 containerized trees, including non-transgenic trees, could be transferred to this site and planted in field test plots of up to 20 acres over the next three years. A field trial of the same clone (EH1) was planted at this site on approximately 1.3 acres under permit # 08-039-102rm. This trial would be transferred to permit # 08-014-101rm to allow flowering.