

Plant Protection News

A Tree World publication

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SPRING / SUMMER

Operational trials control deer damage

In the United States deer browse causes an estimated \$750 million* in damage to forest regeneration programs.

Besides immediate browse damage, residual problems include: growth suppression, future yield reductions, growth deformities, regeneration delays and plant mortality, where plants are repeatedly browsed or pulled out of the ground. This is a cost the forest industry can no longer afford. An effective control program can drastically reduce the economic impact of these browsing animals. But which method or product should you use? There are many suggested options ranging from doing nothing to using several systems simultaneously. But regardless of the system, understanding the particulars of your own situation, e.g. timing of browse, is the key to managing browse damage.

*West Virginia University Cooperative Extension Service, Publication 809, **An Integrated Approach to Deer Damage Control**.
<http://www.wvu.edu/~agexten/willife/intgdrco.PDF>

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The right choice must be made since you can't afford to invest in a treatment program that doesn't produce results.

Plantskydd Animal Repellent, now manufactured in the U.S.A. and distributed by Tree World, has already shown success. Four years ago, silviculturists at the Chippewa National Forest contacted Tree World for solutions to their extensive deer browse problems – mostly to white pine. In some parts of the U.S., white pine is effectively an endangered species, with only 5-10% of the original white pine forest remaining. In 1998, 110 lbs. of Plantskydd was ordered as a test sample for controlling browsing.

The trial yielded excellent results. 1999 was a particularly tough winter for tree plantations. There had been little snow, a condition which results in large numbers of deer browsing heavily on young trees. In these conditions forest managers expect 100% of the leaders as well as some laterals will be clipped by the deer. But the foresters had been using Plantskydd, and were pleased to discover a 20 fold reduction in damage from previous years.

The Minnesota Department of Natural Resources has been using Plantskydd in approximately two dozen districts over the last few years and has reported a similar level of success.

Tembec Forest industries have conducted elk field trials with satisfactory results. Based on the results of the testing, Forestry Supervisor Kori Vernier recommended the use of Plantskydd animal repellent to reduce the impact of elk browsing on seedlings. "We have moderate to high snow pack and moisture and still find the efficacy of the repellent is roughly six months."

While the right product is an important beginning, an effective browse control program must incorporate a geographically appropriate treatment schedule. Researchers agree that it is much easier to prevent wildlife from sampling a new territory than it is to persuade them to leave an area they have regularly visited. In other words, once they've found a dining spot they like, animals will tend to keep coming back, determined to re-sample that tasty seedling they discovered earlier.

It costs less to treat at the nursery than it does to treat in the field. Make sure that your nursery knows the seedlings must be left to dry prior to packaging, and to minimize storage time to avoid problems with mould.

By repelling animals before they bite, you'll have set the groundwork for a very effective deer damage control program. The right beginning is half the battle.

Now you need to establish a treatment schedule that's right for the browse patterns in your area. This will ensure that the repellent is strongest when you need it most and avoid costly wastage. Properly conducted field trials can give you the information you need to successfully control browse damage.

This year, order seedlings that have been pre-treated with Plantskydd at the nursery.

Protect your row crop from deer

Fruit trees, soy beans, watermelon, pumpkins, cauliflower, blueberries, strawberries, grapes, vegetables, etc...

We do not recommend spraying fruit or vegetables directly, as taste may be altered. Plantskydd's vegetable oil binder is tenacious in sticking to plant material and will not wash off easily. The product works by emitting an odor animals associate with predators. Most plant damage can be avoided if they are treated during the growth phase until just before flowering. Do not treat blossoms as this may interfere with pollination.

TIMING: Timing is everything. The grower must have an idea when deer browse pressure occurs on the plantation—in some cases this begins to occur right at emergence. At other times, it is much later in the season—closer to harvest. Once established, it is more difficult to alter an animal's eating pattern. The grower should apply Plantskydd BEFORE browse damage begins—not after it has started.

GROWTH PHASE: As it is difficult to predict browse pressure, experiment with dilution rates and with the frequency of application. During the growth phase, growers will experience adequate protection by using anywhere from 2 to 5 times more water than the label suggests, and by spraying more frequently e.g., every 2 to 6 weeks. Check for signs of damage frequently! Browse pressure is highly variable—depending on the species of animal, plant, geography, weather, etc.

On crops such as water melons and pumpkins, a single application using 5x more water (10 gal./2.2lbs dose) and spraying liberally, will significantly reduce browse damage to crops for about one month. Spray until just before flowering.



MATURITY / DORMANCY: Plantskydd can provide protection for up to 3-4 months in summer on mature plants and up to six months on dormant plants over winter when applied at highest concentrations.

FRUIT TREES: Over winter, juvenile trees often receive browse damage. Wear a rubber/latex glove with a cotton glove over it, and dip the gloved hand into a solution of Plantskydd. Grasp the tips of the branches—focus on the terminal leader (top branches).

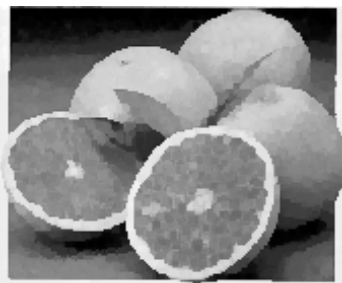
If the problem persists into spring, wait until after leaf-out, then spray mostly the top of the tree using a backpack or atomiser sprayer.

BUCK RUB: Plantskydd is very effective in protecting trees from 'buck rub'—spray the bark of the tree between the 2 and 4 ft. mark until wet. 🌲

For more information, FAQ's, testimonials and references, visit our website: www.plantskydd.com

Protecting fruit trees

Florida Gulf Citrus Suppliers Photo



Specific crops may need special modifications in the application of Plantskydd for maximum benefit. Citrus trees, for example, require a slightly different approach than when applying Plantskydd to conifers. Instead of using 2 gallons of water per 2.2 lbs. of powder, as you would when using Plantskydd for over-winter browse protection, use 10 gallons of water and re-treat after each flush during the growth period.

For over-winter protection, spray late in the fall using less water than during the growth phase. After gaining some experience with Plantskydd, you may notice that the animals reliably enter the site from the same place and put more pressure on the trees located nearby. Revert to a higher concentration of Plantskydd on that border and at least 100 feet into the plantation.

The staff at Treeworld is always available to discuss your particular needs. 🌲

Useful online information

We invite you to send us website addresses that provide valuable plant protection information for our readers. These may be emailed to the editor of Plant Protection News at cat@earthnetcommunications.com

— Put “**Plant Protection News (URL’s)**” in email SUBJECT heading:

Westvaco's Wildlife and Ecosystem Research Forest in West Virginia conducts scientific investigations into the impacts of forest management and harvesting on wildlife and other ecosystem elements.

http://fwie.fw.vt.edu/wwerf/WWERFprojects/projects_active.htm

Holt Research Forest has conducted long-term ecosystem research in a mid-coast Maine oak-pine forest since 1983. Their research section contains a wealth of information and references.

<http://www.umaine.edu/holtforest/Forest%20Stands.htm>

The Missouri Ozark Forest Ecosystem Project or MOFEP, is one of the most comprehensive ecological investigations of forest response ever undertaken in upland oak ecosystems.

<http://mofep.conservation.state.mo.us/>

Minnesota Department of Natural Resources, Fish & Wildlife Today, - Whittails weather winter's worst - An interesting article about an ongoing DNR research project looking into the adaptations of deer to winter led by Glenn Del Giudice.

http://www.dnr.state.mn.us/fish_and_wildlife/publications/fwtoday/fwtospr97/whittail.html

Significant test results from Plantskydd field trials.

www.treeworld.com or www.plantskydd.com

Forest Inventory and Analysis (FIA) research units have participated in establishing a National Data Base Retrieval System (DBRS). This cooperative database is comprised of common forest resource attributes using compatible formats and represented by a standard set of inventory tables.

<http://www.ncrs.fs.fed.us/4801/FIADB/>

University of Missouri - Columbia Integrated Pest Management (IPM) is a strategy that utilizes all appropriate control methods (both chemical and non-chemical) to keep pest populations below economically damaging levels while minimizing detrimental impacts to the environment.

<http://ipm.missouri.edu/>

Plantskydd Products

RETAIL Soluble Powder Concentrate —OMRI Certified

2.2 lbs / 1 kg Box — Treats approximately 400-600 plants/seedlings when **sprayed** with solution (at highest concentration), and approximately 600-800 plants/seedlings when **dipped** in solution.

- Available individually or in case of 10.

BULK Soluble Powder Concentrate —OMRI Certified

22 lbs / 10 kg Case — Treats approximately 4000-6000 plants/seedlings when **sprayed** with solution (at highest concentration), and approximately 6000-8000 when **dipped** in solution.

Premixed Liquid Formulation Spray Bottle

1 quart / 1 litre Bottle — Treats approximately 100 plants 1 foot high.

- Available individually or in case of 10.

Premixed Liquid Formulation Jug

1.3 gal / 5 litres Jug — Treats approximately 400 - 600 plants 1 foot high.

- Available individually or in case of 3.

Conducting a field trial

By repelling animals before they bite, you'll have set the groundwork for a very effective deer damage control program.

Do you know when the most severe browsing damage occurs in your area? Is it early spring? Midsummer or during the depth of winter? You can seriously reduce the damage done by animals to tree plantations and row crops by identifying the local browse patterns.


Treeworld has worked with hundreds of organizations, assisting them to set up field trials and to analyse data, which provides growers with valuable information about when and how to use Plantskydd for maximum benefit. This information also helps us advise other growers on optimal usage and improve our product. We invite you to set up your own field trial and share the results with us.

FIELD TEST PARAMETERS

1. For the purpose of evaluating repellent efficacy, a non-treated control strip consisting of 10-25% of the total number of trees should be provided. Because Plantskydd is an odor-based repellent, controls should be located 300 ft. apart from the treated area where possible.
2. Site conditions and attributes of treated test areas and non-treated control areas should be as similar as possible, and if possible, they should be within the same silviculture stratum. We recommend larger field trials as they provide more accurate data.

TIMING

We recommend treatment in early spring or late fall for maximum browse control efficacy. Trees in the field trial area should be assessed for browse damage in the fourth, fifth and sixth months after application. Tree World staff will be happy to offer any assistance you might require in setting up your field trial. We have pre-formatted *Plantskydd Efficacy Evaluation* forms which we will provide you on request.

—Please contact us for more information: 1-800-252-6051. 

Plantskydd® wholesalers

- ▲ **BEN MEADOWS COMPANY**
Janesville, Wisconsin
Tel: 1-800-241-6401
- ▲ **FORESTRY SUPPLIERS INC**
Jackson, Michigan
Tel: 1-800-752-8460
- ▲ **FLORIDA FERTILIZER COMPANY, INC.**
Wauchula, Florida
Tel: 941-773-4159
- ▲ **TERRA TECH INC**
Eugene, Oregon
Tel: 1-800-321-1037
- ▲ **WILBUR ELLIS**
Portland, Oregon
Tel: 1-800-452-5625
- ▲ **CONSTRUCTION SAFETY PRODUCTS**
Shreveport, Louisiana
Tel: 1-800-592-6940
- ▲ **HERITAGE HILL**
Sparta, North Carolina
Tel: 336-372-2992
- ▲ **ITASCA GEENHOUSE**
Cohasset, Minnesota
1-800-538-8733
- ▲ **UAP CAROLINAS**
Newland, North Carolina
1-800-648-6453
- ▲ **CENTRAL LANDSCAPE SUPPLIES**
St. Cloud, Minnesota
1-800-772-3888



For the **retailer** nearest you visit our website:

www.plantskydd.com or
www.treeworld.com

Dealer inquiries:

Email: info@treeworld.com

Toll free: **1-800-252-6051**

Fax: **604-885-3522**

Monday to Friday

8:00 am - 4:00 pm Pacific time



Plantskydd® soluble powder is listed by the Organic Materials Review Institute (OMRI) for use in production of organic food and fibre.

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