

# Forage, Turf and Legume Seed Production in the U.S.A.

## Overview

The U.S.A. is the undisputed world leader in the production of various crops. Wheat dominates the mid-west landscape in Kansas and Oklahoma, Corn dominates in Iowa and Illinois, while the US soybean belt encompasses Iowa to Indiana. And most of the world recognizes Oregon as the world's most dominant forage seed-growing region in the world. But American grass seed production is not confined to Oregon, other states contribute to the huge annual production of turf, grass and legume seed that the U.S. produces annually.

In 2002, 10,822 American farmers harvested over 1.4 million acres of grass seed. Most of the U.S. acres are located in Oregon (545,000 acres – 38% of total U.S. acres), with Missouri the only other state to lay claim to over 100,000 acres (355,000). However, with good growing conditions and regions favorable to growing grass and legume seed, production is very good in other states. 5 other states show over 40,000 acres, Idaho, Washington, California, Kansas and then Minnesota.



U.S. forage seed production is primarily grown in 7 States: Oregon, Missouri, Idaho, Washington, California, Kansas and Minnesota

## Turf Grass Seed Production

Almost all U.S. production of the lucrative turf grass market occurs in Oregon. Perennial ryegrass, annual ryegrass, tall fescue turf varieties and fine fescues occupy close to 470,000 acres, producing over 716 million lbs of seed!

The U.S. census does not break **fescue** out between tall fescue and other species (fine leaved species). Missouri has 320,000 acres of tall fescue production, (primarily the variety K-31), but production only averages 2-300 lbs/acres. Although tall fescue acres are 50% fewer in Oregon, production is over 220 million lbs annually (> 1000 lbs/ac avg.). Oregon continues to overproduce tall fescue. Total fescue production was 241 million lbs in 2002, compared to 139 million in 1997, 97 million in 1992 and 68 million in 1987. Missouri's 2002 production was at 65 million lbs, on par with previous census years (1997 = 62 mil, 1992 = 29 mil, 1987 = 66 mil). Oregon Agriculture Information Network (OAIN) figures for 2002 show tall fescue acres/production at 163,000 acres and 253 mil lbs, while chewings, red and hard fescue numbers totaled 20,000 acres, with 17.7 million lbs of production, making total OAIN numbers at 183,000 acres, 271 mil lbs production. (2002 US census data shows all fescue 188,000 acres total, 241 million lbs production). U.S. fescue seed production is dominated by these 2 states (Oregon = 75% of production, Missouri = 20%).

Despite fire bans in Washington State and Oregon, U.S. production of **Kentucky bluegrass** continues to hold. Idaho, through expansion in the region bordering Washington State, has seen its bluegrass acres increase by 20,000 from 1997 to 2002 (Idaho acres in 2002 @ 57,000). Idaho has moved past Washington as the state with the most acres (57,000 vs. 48,000) but Washington still leads in overall production (irrigation). With Idaho now in the

picture, bluegrass seed production totaled over 75 million lbs. in 2002, up from the 59 million lbs recorded in 1997. Washington State acres remain in the 48,000 acre range.

With over 280,000 acres producing a 450 million lb. crop, perennial and annual **ryegrass** dominate the Oregon forage seed landscape. Acres are typically split 60-40 between annual and perennial ryegrass respectively. Yields average over 1600 lbs/ac. No other state has over 4000 acres of ryegrass production. Although the 2002 census shows ryegrass production in Oregon of 456 million lbs, yearly estimated Oregon data (2002) shows annual ryegrass seed production at 225 mil, perennial at 211 mil (total = 436 million lbs).



**Bentgrass** seed production remains exclusive to Oregon (2 growers in Washington State), with acres less than 10,000. Bentgrass seed production is primarily used for golf course greens.

Warm season grass production (bahiagrass seed/bermudagrass) is limited to the U.S.'s southern states. Florida has close to 20,000 acres of **bahiagrass** production (1.3 million lbs. produced), which is used in both the turf and pasture sectors. **Bermudagrass** is grown extensively in California (34,000 acres, US total area @ 42,000 acres). Arizona is the only other state with significant acres (4,500). Total U.S. production is over 16.7 million lbs. Seed is used extensively in the lawn/turf industry and is exported worldwide (2 million lbs annually).

### **Forage Grass Seed Production**

Forage grass seed production in the U.S. is concentrated on growing smooth brome grass and timothy seed. Of the 15,000 acres dedicated to **bromegrass** seed production, 77% of this land can be found in Kansas. (12,000 acres). Total U.S. production fluctuates annually, (probably due to price.....take seed or bale hay). 2002 saw 15,000 acres of bromegrass grown. 1997 acres were at 6,000, 1992 at 9,000 acres, while 1987 saw 30,000 acres. A 4.7 million lb crop came off in 2002, up substantially from 1997 (1.6 million lbs). Northwestern states (Washington, Idaho and Oregon), round out the main bromegrass production regions. Oregon's acres are starting to move up, from basically none in 1997, 1992 and 1987, to 500 acres in 2002, producing over 500,000 lbs.

**Timothy** seed production is concentrated to the north, with Minnesota the main producing state (63% of U.S. acres and production). 2002 production saw 4.3 million lbs of timothy seed harvested, up from 1997 (2.2 mil) but down from the huge crop in 1987 (11 million lbs) Timothy seed production has increased in Idaho (close to 1 million lbs in 2002), while the eastern states, New York and Pennsylvania, continue to produce seed, primarily for their dairy

pasture mixtures. Idaho remains the 2nd largest growing state, as it has been for the 3 previous censuses.

In 2002, **wheatgrass** production once again concentrated in the western states, Montana, Idaho, and some in Utah. Washington State contributed over 4000 acres. Close to 3.2 million lbs of wheatgrass seed (various species) was harvested in 2002, more than the 2.6 and 2 million reported in the 1997' and 1992 census but well below 1987's reported production of over 10 million lbs.



**Western Wheatgrass**

**Orchardgrass** production continues to be concentrated in Oregon. With average yields close to 900 lbs/ac, a 15 million lb crop is taken off in that state annually. Production can be found in some eastern states, but Oregon grows over 96% of the Orchard grass in the U.S.

### **Legume Seed Production**

At one time, the U.S. annually grew close 80-90 million lbs of **alfalfa** seed, but this has decreased in recent years. U.S. acres have fallen from 163,000 (1997) to 102,000 (2002), down 38%. In 1987, the U.S. reported 348,000 acres of alfalfa seed production! 2002 saw California continue to lead the U.S. in both acres and production, but well off previous years. 2002 saw total U.S. alfalfa seed production levels at 58 million lbs (1997 production of 83.5 million lbs), concentrated in California, Idaho and Washington. (27,000, 17,000, and 14,000 acres respectively). 70% of the U.S. crop was grown in these 3 states. Nevada, with figures unreleased, continues to grow close to 5 million lbs. California and Idaho acres are down from 1997, with California down 19,000 acres and Idaho down 16,000 from the 1997 census. Californian production continues to focus on non-dormant varieties. Much of this decrease in alfalfa seed production has been taken over by growers in Manitoba and Saskatchewan, where acres have increased significantly since 2000.

For the first time since the 1987 U.S. agriculture census, **red clover** seed production fell below 10 million lbs. Growers are declining, as is acreage (2002 = 43,600 acres, 1997 = 49,500, 1992 = 48,800, 1987 = 115,000). Although Missouri leads in acres dedicated to red clover seed production (14,500 acres producing 1.4 million lbs of seed), Oregon, with it's irrigation and superb growing conditions, grows much more seed on less acres (4.5 million lbs, 8,500 acres). Seed production can still be found in most states, with larger acres found in Kansas, Ohio, New York, Idaho, and Washington. Idaho, which produced over 1million lbs in the 1997 census (1.4 million lbs.) saw production drop to just over 540,000 lbs. With more direct seeding, less red clover is now being used as plow down in the U.S. winter wheat crop.

Oregon continues to be the primary state growing **crimson clover**, with 1.7 million lbs of production in 2002. However, production has fallen 1 million lbs/year since 1999 (5.7 million lb crop). **Lespedeza**, a perennial legume, continues to be grown in abundance for seed in Missouri and Kansas, with close to 5 million lbs produced in 2002. (1997 and 1992 U.S.

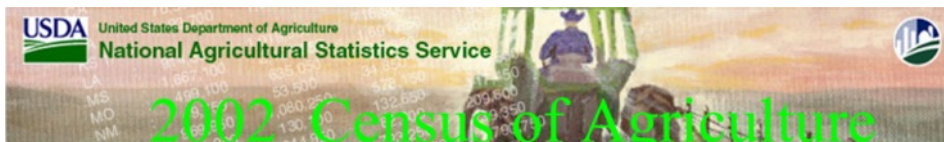
production @ 2.5 million lbs.) **Vetch** seed production has really fallen off in recent years. Only 600,000 lbs were produced in 2002, compared to 1.3 million lbs in 1997, 5.8 million lbs. in 1992 and 4 million lbs in 1987. Oregon and Minnesota remain the main growing areas.



Crimson Clover - Oregon

### Summary

The **U.S. Census of Agriculture** is compiled every 5 years, with the 2002 grass seed results released in the summer of 2004. Data obtained is from that year only. Use discretion when interpreting. In regards to total U.S. forage seed production; the following quick summary can be extrapolated from the data:



### Total US grass and legume Seed Acres:

- Oregon remains the state with the largest acreage used for grass seed production (545,000 acres), followed by Missouri (355,000 acres). However, 320,000 of Missouri's acres (90%) are used for growing fescue (tall....K31).
- only 6 states have more than 50,000 acres growing grass seed. After Oregon and Missouri, there's Idaho, Washington, California, and Kansas.
- 2002 saw 1.4 million acres of land used for forage/grass seed production (1997 = 1.3 million, 1992 = 1.0 million, 1987 = 1.7 million)
- only one farmer grew grass seed in Massachusetts, Vermont, and Louisiana (Alaska had 8 growers in 02!)

U.S. Forage Seed Data 2002 Grass Forage & Legume Seed			1997 Data		1992 Data		1987 Data	
State	# Farms	Acres	# Farms	Acres	# Farms	Acres	# Farms	Acres
Oregon	1413	545,519	1596	546,542	1476	432,378	1606	402,154
Missouri	4096	355,850	4409	318,638	2887	187,044	5410	325,003
Idaho	442	94,130	622	87,519	739	77,598	980	99,067
Washington	388	81,548	419	76,139	396	63,570	550	80,728
California	269	67,838	246	73,302	271	69,712	280	91,145
Kansas	640	54,589	392	23,007	303	D	1,188	58,460
Minnesota	213	41,844	215	D	371	34,019	909	72,637
Montana	155	22,086	184	24,610	143	18,101	591	90,238
Florida	169	20,131	165	D	213	D	202	31,668
Oklahoma	201	15,189	185	17,842	151	D	296	23,039

D: not enough sufficient data to report

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