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dba "Elstel Farm & Seeds" "The Crabgrass Seed Folks"

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Fact Sheet 2011: 'Quick-N-Big®' Crabgrass Management "Pot-Shots".

Introduction: 'Quick-N-Big®' Crabgrass(QNBCG) has been available to producers five years in 2011. The first worldwide known crabgrass variety, 'Red River' Crabgrass (RRCG), has been available to producers 20 years in 2011.

Positive Input From Producers about our crabgrasses is encouraging in our efforts to help forage and livestock producers, and land stewards of the USA. Grazier "A" said, "People don't understand, this Quick-N-Big crabgrass is not ordinary crabgrass". This in a conversation about it's quick seedling and young growth to grazing and it's bigness on his pastures. Cattleman "B" wrote, "I do love this Quick-N-Big Crabgrass." This referencing how well it was doing in his pastures, and he has also had RRCG over 10 years to compare. Grazier "C" said, "Your Crabgrass sure has been good to our cows" Feedback "puts gas in our tank" and shows us producers are doing well with it.

<u>Thinning too Thick Quick-N-Big and Red River Volunteer Crabgrass</u> is sometimes needed. If this is a need in your stands, feel free to phone us to talk about it. Thinning needs to be done on "dog-hair thick" volunteer. Thinning is done on <u>only very young stands</u>.

Speed of Germination and Seedling Growth has always been a major interest with crabgrasses. Years ago, we did a RRCG germinator study of the responses of **"New Crop "** versus **"Aged"** seed. New crop seed germinated <u>7% of it's total capability in **one week**</u>. Two & 3 year old "Aged Seed" germinated <u>58% of it's capability in the same time, or, over 8 times more</u>. Complete germination capable at the time took 1 month, that is, 1 month to get all the germination possible. We recommend using "Aged Seed" when possible.

Recently, Wade Kravanik of the Oklahoma Dept. of Agri. , Seed Laboratory, helped DALRYMPLE FARMS do a germination and early seedling growth germinator study of QNBCG and RRCG seeds to compare these varieties. General field responses had been observed, but laboratory details were desired. Composite samples of each variety of the same age ,2 and 3 year old , aged seed were used. Precise readings were done daily at 1 to 5 days. The test ended at 14 days. It is not realistic to give full details herein , but an abstract follows.

Germination is presented as relative % of total capable germination (germinable seed) at day 14. The 2 grasses had 11 % to 16 % germination at a cool 59°F by day 4 and 5. So. even slight germination is possible at about 60 °F. At a cool 68°F, only QNBCG had some germination at day 3, and % of germinable seed of QNBCG was 91 % to 94 % at day 4 and 5. So, Nearly all seed of QNBCG germinated at about 70°F (or higher temperatures) in less than a week. This was 32% better than RRCG on those cool days. This indicates QNBCG can germinate equal to or much better than RRCG at cool soil conditions. Both grasses germinated well at warmer temperatures of 77°F with 93% to 97% at days 4 and 5. This would be, more or less, the temperatures the seed would face in the

days of warm spring and early summer field plantings. At the "Official Germination Temperatures" of variable 68°F to 95°F, total germinable seed for both grasses was 95% to 99% on days 4 and 5. At temperatures of 77°F to 100°F, the grasses had 23% to 64 % germinable seed on day 1, and total germinable seed was 93% to 99 % by days 4 and 5. RRCG averaged 62% germinable seed the first 3 days at 77°F to 100°F, and QNBCG averaged 71%, or 16% better than RRCG, indicating QNBCG also germinates faster at the warmer temperatures. Cooler & quicker germination is quicker pasture. Seedling growth the first 5 days comes from the seed energy, not the sun. At temperatures of 77°F to 100°F on days 3 to 5, RRCG seedlings averaged 0.6 inches tall. QNBCG averaged 0.8 inches tall, or 33% taller than RRCG. Taller seedlings make quicker pasture.

Controlling Sandbur in some crabgrass fields of the Plains and Southern US is a problem. Sandbur is a low value weedy grass forage with massive amounts of extremely thorny, "unpalatable" seeds. Growing conditions are essentially as for crabgrass. **There is no quick, easy way to control sandbur in crabgrass**. Dalrymple Farms had a field of RRCG on sandy soil in Western Oklahoma get invaded by sandbur seed from roadsides , fence rows , and unatteneed oil field roads and sites in and around the field. Had the problem been seen sooner , we could have sprayed the fence rows , road edges , and field edges, and kept the sandbur at bay a longer time.

In other cases, deep moldboard plowing to bury the sandbur seeds, followed by roller-packing to re-firm the seedbed, followed by a very shallow drilled crabgrass seed planting kept the sandbur at bay for many years. The soil was not tilled after the plowing in order to leave more sandbur seeds buried deep.

In other cases, summer tillage and /or herbicide spraying to control the sandbur for at least 1 to 2 summers is a big help. This technique involves some other main crop on that field, or some form of crop rotation to allow the field to be cleaned of the summer sandbur. All methods are time consuming and may add expense, but other summer and winter forage or crops can be grown on the land in the rotation process.

During 2010, Dalrymple Farms planted the prior mentioned sandbur infested RRCG field to a "Round-up **Ready Corn**" for grazing. This allowed spraving the field for sandbur kill and seed reduction. In summary, the corn was planted in 24 inch rows with a common grass drill with fluted seed feeds after frost in early spring. The drill was calibrated to plant about 2 to 3 corn seeds per foot of row. The field was top-dressed with nitrogen at 75 pounds actual nitrogen immediately after planting. This planting was in the 26 inch precipitation zone. The corn grew to average about 7 feet tall at tasseling stage and initial grazing. Round-Up (glyphosate) herbicide spraying for sandbur control was done two times before the corn was too tall (four to five feet tall or less). Grazing was by strip grazing technique with grazing periods averaging about 3 days. It is best to graze corn in 1 day or less strips, but this was not people friendly or feasible on our farm. Too many jobs at one time. Our 3 day grazing period system worked well for us as there was never a back fence and the steers continued to graze leaves and stems on the whole area already grazed. This worked well. This approach was excellent for controlling sandbur and getting relatively high volume grazing at the same time. The cleaned area then went no-til planted wheat and was later re-planted to the QNBCG or RRCG crabgrass varieties in spring 2011 or later. This technique could be used to control other unwanted summer grasses in a crabgrass field.

<u>Soil Conservation Plantings</u> can be mixtures, and for us those **mixtures include QNBCG or RRCG**. We wrote some about this in Fact Sheet 2010. Dalrymple Farms does these plantings on hilly, sloping, or flatter pasture lands, terraces, pond dikes, waterways, spillways, roadsides, and equipment yards, etc. Costomers have done this on newly clear-cut forest lands, etc.

Dalrymple Farms equipment parking lot and barn area is on wind erodible sandy soil and it was planted to better soil cover in June, 2010. The area was tilled to prepare and smooth the soil, then it was sprigged with Midland Bermudagrass at about 60 bushels per acre, then it was broadcast seeded with 3 to 5 pounds per acre of QNBCG in a complete fertilizer mix. Then the area was firmed with a homemade roller and topdressed with nitrogen. It was then watered with yard water sprinklers.

On the day 2 after watering started, the first QNBCG seedings had emerged. This is among the quickest Dalrymple Farms has seen this "quick" grass start to emerge in fields. The mass emerged over the next week or more. The soil was under erosion control in about 2 to 3 weeks. Bermudagrass emerged over a period of several weeks and spread during summer. The area was mowed 4 times during summer to control the over story and release the bermudagrass better. **Each of 4 mowings could have been a grazing**. By summers end, the QNBCG was still there as a soil cover, and there were bermudagrass colonies about every 2 feet. They spread. It was a success. This note is being added at the end of summer 2012. By the end of summer 2011, or year 2, the bemudagrass in this mixture was 100 % covered and the QNBCG was minimal , but it did it's job of early ground cover. If Dalrymple Farms had wanted the QNBCG and bermudagrass mixture to persisit, the QNBCG would have been managed differently. The lot has remained fully covered throught the forth year. **QNBCG can be an excellent addition to conservation vegetation mixtures.**

This type of mixture has worked for Dalrymple Farms in many applications. These applications range from re-vegetating pond dikes, waterways, pond spillways, and in thickening bermudagrass or Old World Bluestem in thin perennial stands. Thinning may have occurred by drought, or winter damage, or improper grazing. The crabgrass, be it QNBCG or RRCG, thickens the total vegetation population and as the perennials re-grow and thicken, the crabgrass declines----unless we want to treat it in such a way as to keep it in the mixtures.