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FACT SHEET 1998: 'Quick-N-Big®' Crabgrass and 'Red River' Crabgrass and Annual Winter Crop Doublecropping

'Quick-N-Big®'(QNB) and 'Red River' Crabgrass (RR) are selections of particularly productive crabgrass. Refer to other Fact Sheets from Elstel Farm and Seeds for more information on these varieties. The purpose of this information is to briefly discuss crabgrass and annual winter crop doublecropping. The winter crop can be wheat, cereal rye, oats, barley, triticale, annual ryegrass, annual bromegrass, and annual cool season legumes , etc.. All of these are just for examples and there can be many more.

The following are six major reasons to use QNB and RR crabgrass in forage production schemes:

- They are among the **highest quality and palatablity** of the summer grasses, both for grazing and for hay.
- They are very easy to manipulate in **planned volunteer crabgrass and winter annual grass doublecrop syndromes.** Thus, they mimic perennials.
- They are an excellent component in many warm season forage mixtures.
- They are excellent soil conservation grasses , having good aerial and soil cover , and root mass.
- They can be a moderate quality, easy to grow turf grass.
- They are excellent grasses for use in animal waste (manure/effluent) disposal systems.

All of the above being true within the acceptable growing regions and with adequate cultural practices.

It is the intent of this fact sheet to particularly summarize the management of QNB and RR crabgrass and Winter Annual Grass (Winter pasture or winter crop) Doublecropping (WPDC). The doublecrop approach more completely utilizes the resources of solar energy, moisture, soil fertility, labor, time, and space.

Variations in QNB and RR Crabgrass and Winter Pasture Double-Crop: Without a doubt, a common use of these crabgrass forages is in a WPDC syndrome. But, there are many other uses, too**. Research shows that a doublecrop of crabgrass and rye yields about 60% more than either crop as a single crop**. There are many variations of this approach. The QNB and RR crabgrass are most often used for grazing, but they also make excellent quality hay, chopped forage , and silage. The cool season annual grass component is most often grazed or, in the case of grain crops, taken for grain. But, it too, can be used for chopped forage, silage , and hay or straw feeds. The crabgrass and WPDC can provide three basic seasons of green feed: Fall-Winter phase, Spring phase and Summer phase. Both components can be further integrated by adding legumes such as annual lespedeza or southern cowpea for summer and hairy vetch, red clover, crimson clover, etc. for winter. The legume list is much more involved. The grazier has much flexibility to pick and choose the combination that best fill the niches of need in their own climate and forage flow.

The Adaptation Region of QNB and RR crabgrass extends from N. E. Colorado and into Nebraska , then east and south to the coasts. A form of QNB and RR crabgrass WPDC fits in that entire region on proper soil types and with proper management input. It is possible the northern adaptation areas may extend farther north. For example we have

feedback of QNB doing well in South Dakota. However, the major use area is Kansas and states south and east to the coasts. Crabgrass and WPDC can be used in the more arid west under irrigation. In the Southern Plains and throughout the S. E. US, the crabgrass and WPDC may be very fully employed yearlong. In the northern areas, fall phase winter pasture may be avoided due to lower fall production and soft soils in winter which cause severe trampling damage to the winter crop, but spring grazing or other small grains forage use and crabgrass forage use can usually proceed as usual.

Stockpiled crabgrass can also be carried through fall and into winter use. The syndrome fits best on sandy, loam, silt loam soils and least on silt, clay and clay loam soils.

Cultural Management involves tillage, no tillage or a combination of tillage and no-tillage, planting or volunteer management, soil fertilization, etc. Outlined below are a few of the more common approaches to management of the crabgrass WPDC production.

We are assuming here that volunteer crabgrass is already in place and that **rotational grazing** of all forage is the usual.

Where small grains (wheat, cereal rye, etc.) are used, the usual practice is to minimum till or conventional till for small grains planting, plant by drilling (or broadcasting), fertilize preplant or immediately postplant for fall and fertilize in late winter for spring phase. If QNB or RR crabgrass are not emerged at the end of small grains use (usual for cereal rye pasture) proper minimal spring tillage is an easy option and **it will increase crabgrass production over no spring season tillage**. The crabgrass is either fertilized preemergence or after proper initial growth is achieved. This basic approach is usual for the S. Plains, the mid-west and the S. E. US. There are many variations. **Tillage for volunteer QNB and RRCG should be shallow but thorough on the surface whether done in the fall or in the spring.**

Seed set for volunteer must be managed for during the grazing or mechanical harvests.

Where annual ryegrass, winter legumes, or late utilization of small grains is the case; the usual practice is very similar to above with two major exceptions. One is that annual ryegrass is sometimes managed for volunteer, too. This alters the tillage and fall planting techniques. **The other is that the lateness of use of these crops in the spring conflicts with spring minimum tillage for volunteer crabgrass production**. Crabgrass is up by the end of winter forage use in this case**. If no-tillage is the choice in spring, then fall tillage is more important and should be done if that is an option.** Some ryegrass producers in the more humid S. E. US are aware of the positive tillage response for crabgrass and they will do a minimum tillage at late winter forage end, thus destroying an early crabgrass stand and then manage for a second stand when rain comes.

There is the choice of total no-tillage for winter crops into crabgrass (with or without legumes). Chemicals or intensive grazing of crabgrass may be substituted for tillage. The no-tillage works, but differently. The winter crop produces later and less yield than under tillage but it still produces well. **For crabgrass to produce well, the tillage or renovation for it must be done**. This tillage suppresses plant succession to maintain more pure crabgrass.

Production of stocker cattle beef/acre in the well run crabgrass WPDC is usually 500 to 900 pounds beef/acre in the South Plains and over 1000 and up to 2000 pounds/acre in the S. E. US. These are real producer yields. This range depends on area, soil, **nutrient management**, cattle size, etc.

Fertility Management is very important. On phosphorus deficient soils, banded nitrogen-phosphorus fertilizer with the winter crop seed is **very important for early winter crop production and total production.** All the years' phosphorus and potassium needs can be applied during the winter crop phase. Lime can be applied anytime, but it is best applied before a tillage operation. Nitrogen (N) should be applied at usually recommended rates early in the growing season for each phase, but **NOT** during the 1 leaf to 4 leaf crabgrass seedling stage. To do so **may** thin or kill that seedling stand. Total N for fall phase winter pasture may range 50 to 100 lbs/acre. Total N for spring phase winter pasture can range from 50 to 100 lbs / acre. Total N for the crabgrass phase can range from about 50 to over 150 lbs/acre. The ranges depend on climatic area and production goals**. A "good rule of thumb" is to apply at least 1 pound of actual N per growing day for each phase, and this being for an upper level managed crop**. For the maximum yield, the producer may use up to 2 pounds of actual N per growing day.

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