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Alternative Opportunities for Small Farms: Small Grain Production Review¹

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Small grains fit well in multiple cropping systems and may improve a grower's cash flow since small grains bring in money at a different time of the year than most other agronomic crops. Their use as forage crops and as feed grains have made them particularly attractive to livestock farmers. Wheat is grown almost entirely for grain whereas rye is grown predominantly for forage. Oats are the best dual purpose crop of the small grains and are used for both forage and grain.

The wheat acreage is concentrated in the panhandle area of Florida with nearly 90 percent planted in the counties west of the Suwannee River. The oat and rye acreage is more widespread. Another crop which may have a good potential in Florida as a feed grain is triticale. This is a new crop developed by crossing wheat and rye. Triticale can produce high grain yields and seems to be able to withstand unfavorable environmental conditions better than wheat.

Marketing Situation

Small grains are easily stored if protected from stored grain insects and well established market systems are in place. Wheat can be used as a food crop, as soft red winter wheat for the milling industry, as a feed grain for animal feeding, or as a forage crop also for animals. One of the best ways to market small grains is as feed through animals.

There are markets for the straw of small grains for mulching, bedding for livestock and as a compost used by mushroom farms. Also, the straw is quite valuable as a mulch for no-tilled summer crops. Small grains are also very useful for control of soil erosion caused by wind or water. Small grains can also be used as windbreaks in other crops to protect young plants from damage from blowing sand.

Labor and Capital

The production of small grains is highly mechanized and requires a considerable investment in equipment such as drills and combines. Custom work might be available for planting, fertilizing and harvesting small grains. Small grains are low value per acre crops and most farmers who depend on them grow rather large acreages. These crops are short-season annuals which allows double cropping and farmers can spread their fixed costs and risk over two crops per year. Small grains have lower inputs than many agronomic crops.

Per acre production costs (excluding land) in north Florida are about \$125 for wheat, \$100 for oats and rye and \$110 for triticale. Low prices and yields often result in revenues that have been only slightly higher and frequently lower than costs in the panhandle area of Florida.

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Suitability

These crops give highest yields on fertile well-drained soils and do not yield as well on deep sandy soils that are low in fertility and water holding capacity. Triticale appears to have an advantage over wheat in sandy, acid soils.

All of the small grains have good cold tolerance. For forage, rye is the small grain most widely used for winter grazing. Rye is more cold tolerant than oats and generally produces more forage than either oats or wheat. Hessian fly resistant wheat varieties should be used especially when planted early in the fall for forage.

Irrigation is not used very extensively on small grains because our rainfall pattern during the winter growing season and the present low input nature of small grain production.

Planting Situation

Small grain varieties in Florida have varying dates of maturity, lodging resistance, grain yield, test weight and resistance to various diseases. There are recommended varieties of the small grains (for grain) which have been evaluated over a several year period for various characteristics at Florida Agricultural Experiment Stations.

Recommended varieties of rye, oats and wheat for forage do exist at the present time. Oats may be planted earlier in the fall and grazed earlier than rye. Oats are very palatable but you should choose a variety that is winter hardy and has good resistance to crown rust. Wheat is similar to oats in yield and palatability, but it is important to select a variety with good disease resistance and Hessian fly resistance.

Cultural Program

Small grains are hampered more by diseases and insects in central Florida than in the area where they are traditionally grown because of the higher temperatures. Not all varieties have adequate disease resistance so it would be very important to follow a fungicide disease control program when the small grains are grown for grain. Usually 2 to 3 fungicide sprays applied in the spring are adequate for disease control. The major insect problem is the Hessian Fly which can be controlled by using resistant varieties and various cultural practices.

Normally, phosphorus and potassium fertilizer are applied in amounts indicated by a soil test at planting along with 30 lbs of nitrogen per acre. Then the small grains are top dressed 1-2 times during the growing season with nitrogen at the rate of 60 to 70 lbs. of nitrogen per acre. In sandy soil, it might be necessary to topdress with sulfur and potassium as well. Weeds are not normally a factor if good stands are obtained at planting. Several herbicides are available that will control weeds in small grains. A potential grain producer should determine what and when herbicides have been used on the acreage previously to determine if the same herbicides are compatible with the grain(s) they are growing.