Crops for Emergency Plantings

By W. O. Scott

Circular 726
W HEN FLOOD, INSECTS, WINTERKILLING, or other hazards destroy your crops, you suffer a direct loss in the cost of seed, seedbed preparation, and cultivation. Of greater importance, however, is the loss of potential feed, pasture, or cash grain.

Fortunately there are some substitute crops that you can use for emergency plantings. Although ordinarily they will not produce so large a crop nor one of such high quality as the original planting, they will provide an acceptable yield and quality of grain or feed on short notice or in a relatively short growing season.

For success with emergency plantings you need to follow the same cultural practices that are essential in any crop production program—seedbed preparation, weed control, etc. You will also need favorable growing weather, especially if the planting is made late in the season. With good management and good weather you can, by following the suggestions given here, produce a feed or grain crop after losing your normal crop.

Cash Grain or Feed Grain

Corn, soybeans, small grain. Unless the loss of the original corn or soybean crop occurs too late in the season for earlier varieties to mature, the best emergency plan is to replant with earlier-maturing varieties of corn or soybeans. The earlier varieties will not yield so much as the medium- to full-season varieties planted at the normal time, but the returns will usually be greater than can be obtained from any other substitute crop now adapted to Illinois.

The success of late plantings depends on the weather, but early-maturing corn hybrids will usually make satisfactory returns when planted as late as June 15 in northern and central Illinois and as late as July 1 in southern Illinois. Plant early-maturing soybean varieties as late as July 1 in the northern half of the state and up to July 10 in the southern half.

If winterkilling has seriously depleted your stand of winter wheat, replant the field to another crop, such as corn or soybeans. If you prefer small grains, you will find spring oats successful in the
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northern two-thirds of the state and spring barley in the extreme northern part.

If winterkilling has only moderately decreased the stand, apply nitrogen in the early spring to improve yields. In fields where the stand is thin, weeds will usually become a problem. Applications of 2,4-D, after the wheat has finished stooling and before it is in the boot stage, can be used to control many of the broad-leaved weeds. To avoid injuring the wheat, do not use more than ¼ pound acid of the ester or ½ pound of the amine types of 2,4-D an acre. 2,4-D should not be used when legumes have been seeded in the wheat because they are susceptible to 2,4-D damage.

Sorghums. Other substitute crops you can use for cash or feed grain are grain and forage sorghums. Colby, Early Hegari, Norghum, Reliance, and Improved Coes are early grain varieties of the combine type, maturing in 75 to 90 days. Ellis, Leoti Red, Early Sumac, Norkan, and Rox are early-maturing forage varieties, requiring 100 to 110 days. The forage sorghums have sweet stalks. They are normally used for silage or cut and shocked for winter feed. However, you can also drill them solid at the rate of 30 to 50 pounds of seed an acre and cut them for hay.

The normal planting rate in rows is 3 to 5 pounds for grain sorghums and 5 to 8 pounds for the forage types. Treat seed of all varieties with a fungicide, such as Ceresan M or Panogen before planting. Under Illinois conditions most varieties are susceptible to various leaf diseases and to chinch bug injury. Fields of sorghum should be protected from migrations of chinch bugs from small grain fields.

Buckwheat, another emergency crop, can be planted as late as July 10 to 15 in northern Illinois and July 15 to 25 in southern Illinois. It is primarily adapted to a cool moist climate. High temperatures and dry weather at blooming time, especially when both days and nights are hot, cause blasted blooms that will produce no grain.

Buckwheat is very sensitive to cold and will be completely killed when the temperature drops to freezing or below. Even with these disadvantages, however, it does have a place as an emergency grain or cash crop in Illinois. If climatic conditions are favorable, it will produce a better crop than any other grain on infertile, poorly tilled lands. But, like other crops, it responds to good treatment.

For buckwheat prepare the seedbed about the same as for corn. Plant with a drill at the rate of 3 to 5 pecks an acre and from 1 to
2 inches deep. Buckwheat begins blooming five to six weeks after planting, and the first grains begin to ripen about three or four weeks after flowering starts. Ripening continues until frost. The crop ordinarily matures 10 to 12 weeks after planting.

**Permanent Pastures**

Loss of new seedings or even old stands of legumes and grasses intended for pasture is more or less common in some sections of Illinois. Established stands may be lost because of ice, winterkilling, or insect infestations. New seedings are most commonly lost because of adverse moisture conditions following seeding.

Where there has been only moderate loss in established pastures, it may be best to leave the pasture and attempt to thicken the thin stand with a grass. Timothy is most often used for this purpose, but you can use ryegrass or tall fescue. Adding Korean lespedeza to one of these three grasses might be beneficial. Seed 4 to 8 pounds an acre of grass, early in the season. If lespedeza is used, seed 10 to 15 pounds an acre. At the same time a light seeding of oats can be drilled in to furnish some high-quality early pasture.

When a new spring seeding is lost because of adverse weather conditions, it is usually best to plow the field as soon as the nurse crop is harvested and replant the grass in August or early September. Alfalfa or birdsfoot trefoil used as part of the mixture can also be seeded in the late summer, preferably in early August. Other legumes such as Ladino or alsike can be seeded the following spring.

**Spring Pasture**

The following suggestions are made for emergency spring pasture:

**Apply 40 to 60 pounds of nitrogen to existing grass pastures.** A top-dressing of nitrogen in the winter or in the early growing season as the grass begins to green up will usually increase production of the pasture in the spring. However, adding nitrogen will not necessarily improve yield during the summer. Other arrangements for summer pasture should be made. Another application of nitrogen in late August or early September will normally increase yield during the fall pasturing season.

**Use existing fields of winter grain,** such as winter wheat, barley, or oats, for pasture. Spring pasturing these crops will probably decrease grain yields, but the benefits derived from the pasture may more than make up for the loss in yield of grain. A top-dressing of
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20 to 40 pounds of nitrogen on these fields will usually increase forage production.

**Plant spring oats early.** Throughout the state, spring oats planted early will make excellent spring pasture. Normally spring oats can be pastured 4 to 6 weeks after planting and if planted alone will furnish pasture for 4 to 6 weeks. Drill the seed at 2 bushels an acre.

For early pasture, plant early. When the soil is too wet to prepare a proper seedbed, *mud in the oats* rather than wait for more favorable soil conditions. Use 30 to 50 pounds of nitrogen an acre at planting time for best forage production.

In northern Illinois other spring grains, such as barley, wheat, and rye, may be used for emergency pastures. Spring oats, however, are better for this purpose.

Adding 1½ bushels an acre of Canada peas to spring oats in the northern one-fourth of the state will improve both the quality and the yield of pasture. However, remember that this mixture will not be ready to graze as soon as oats sown alone.

Adding 3 pounds of rape an acre to spring oats will lengthen the pasture period. Rape should not be used for dairy cattle, but it is excellent for swine and satisfactory for beef and other types of livestock. If a good stand of rape is obtained, the pasture season can be extended beyond 4 or 6 weeks which is considered normal for oats.

**Winter rye** is one of the earliest and highest-producing spring pastures; however, you must decide the previous fall that it will be needed as emergency or supplemental pasture. Rye for both fall and spring pasture may be sown as early as the middle of August. For spring pasture only, plant at about the normal wheat-planting date. Because rye is quite winter-hardy, in some instances it may be planted quite late for spring pasture.

**Other fall-seeded grains**, such as winter oats and winter barley in southern Illinois and winter wheat throughout the state, will furnish excellent spring pasture.

### Summer Pasture

Sudan grass is better adapted than any other crop for supplying emergency or supplemental summer pasture in Illinois. One of the best varieties to use in Illinois is sweet Sudan. Sudan will furnish abundant high-quality pasture from 4 to 6 weeks after planting.
until frost in the fall. Plant any time from late corn-planting time until August 1 to 15. For pasture purposes, it is usually drilled solid in a seeder bed similar to that prepared for corn. Plant 20 to 25 pounds of seed an acre. Treat the seed with a fungicide, such as Ceresan or Panogen, before planting. Applying 40 to 60 pounds of nitrogen at planting time will increase forage production on many soils.

Since Sudan is susceptible to chinch bug damage, soybeans which are not injured by this insect, are often planted with Sudan. Seed 15 to 20 pounds of Sudan and 1½ bushels of an adapted soybean variety to an acre.

Sudan is a sorghum and can cause prussic acid poisoning in livestock. However, the danger from poisoning can be largely eliminated by:

1. Buying only certified seed or seed that is known to be pure Sudan.
2. Letting the Sudan reach a height of 18 inches before pasturing.
3. Not pasturing for several days the new growth that appears following a severe drought.

**Late Summer and Fall Pasture**

Spring seedings that will normally provide late summer and early fall pasture include:

**The Haas mixture** — 2 bushels of oats, 2 pounds of alsike, 2 pounds of red clover, 2 pounds of sweet clover, 2 pounds of timothy. Two pounds of rape may be included if the mixture is not to be used for dairy pasture. The oats in this mixture should be pastured off or cut for early hay.

**Sweet clover alone or sweet clover and lespedeza.** Use 10 to 15 pounds of sweet clover alone, or 8 to 10 pounds of sweet clover and 10 to 15 pounds of lespedeza planted in the spring with oats or a fall-sown grain. Plant sweet clover in a sweet soil and protect against the sweet clover weevil by using the proper insecticide wherever that insect is a hazard.

**Alfalfa.** Use 12 to 15 pounds of nonhardy alfalfa. This plant is not damaged by the sweet clover weevil. However, nonhardy alfalfa will normally winterkill in Illinois and should be considered for pasture only the year it is seeded. Lespedeza may be used with the alfalfa.
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Fall Pasture

One of the best fall pastures is an early-sown winter grain, such as winter rye, oats, wheat, and barley.

**Winter rye** is considered to be best adapted for Illinois because it is not damaged by Hessian fly. Consequently it can be seeded early to provide fall pasture. Because it is quite tolerant to cold temperatures, winter rye will provide later fall pasture and earlier spring pasture than the other winter grains.

**Barley.** Where barley can be used in the southern half of the state, it also provides excellent fall pasture. It too can be seeded ahead of the fly-free date. Since it is not so winter-hardy as wheat or rye, it is not so dependable for spring pasture.

**Winter oats** are less winter-hardy than winter barley, but in southern Illinois they will provide good spring and fall pasture if they are not winterkilled. Seed winter oats about September 1 to provide fall and early winter pasture.

**Winter wheat** is normally not recommended for fall pasture because it is susceptible to Hessian fly damage and should not be seeded until after the Hessian-fly-free date. This date is the same as the planting date for best grain production, but it is too late for the wheat to grow enough to be of much value as fall pasture.

**Ryegrass.** Twelve to fifteen pounds of domestic ryegrass planted in the spring with oats will furnish some spring pasture, but very little during the summer. After fall rains start, it will usually provide fair pasture.

**Other fall pasture mixtures** have been discussed in the preceding section, “Late Summer and Fall Pasture.”

Emergency Hays

**Cereal grains.** Early hay can be made from any of the cereal grains, but oats will produce a more palatable and higher-quality hay than the other small grains. Barley is objectionable because of its beards, while wheat and rye, especially rye, are less palatable than oats. Where winter oats are grown, they provide excellent emergency hay. Spring oats planted early can be used for emergency hay throughout the state.

Cut small grains for hay in the early dough stage. Cut and cure like any other crop or cut with a binder and cure in the shock.
Sudan grass to be used for either hay or pasture can follow the small grain as a second planting in the field.

**Soybeans.** If emergency hay is not needed until late summer or fall, drill soybeans solid at 90 to 120 pounds an acre for an abundance of good hay. Good adapted varieties of medium- to full-season maturity are Harosoy or Hawkeye in northern Illinois; Adams or Lincoln in central Illinois; and Clark, Wabash, or Perry in southern Illinois. Soybeans are harvested for hay before the leaves have started to drop and when the beans in the pods are about fully formed.

**Sudan grass** planted as described under “Summer Pasture,” pages 5 to 6, will produce a large amount of a medium-quality hay. Early-planted Sudan may produce two hay crops in one season. Harvest with a binder or cut and cure in cocks.

**Varieties of forage sorghums,** such as the early-maturing varieties mentioned on page 3, will produce large quantities of emergency hay. For this purpose, drill later-maturing varieties, such as Axtell and Atlas, solid at 30 to 50 pounds an acre. Forage sorghums planted in rows also make excellent silage. Regardless of their use, sorghums should be protected from chinch bugs.

**Millet** is another crop that can be used for emergency hay. The millets are not so palatable as the other crops suggested above, but they can be seeded late — up to July 10 or 15 — and harvested within 60 to 70 days after seeding. Plant 20 to 25 pounds an acre and cut for hay in the early seed stage.

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