UNIVERSITY of IDAHO
A College of Agriculture Publication

Idaho Recommends

crop varieties to fit your growing conditions

IDAHO Agricultural Experiment Station

BULLETIN 209
APRIL 1954

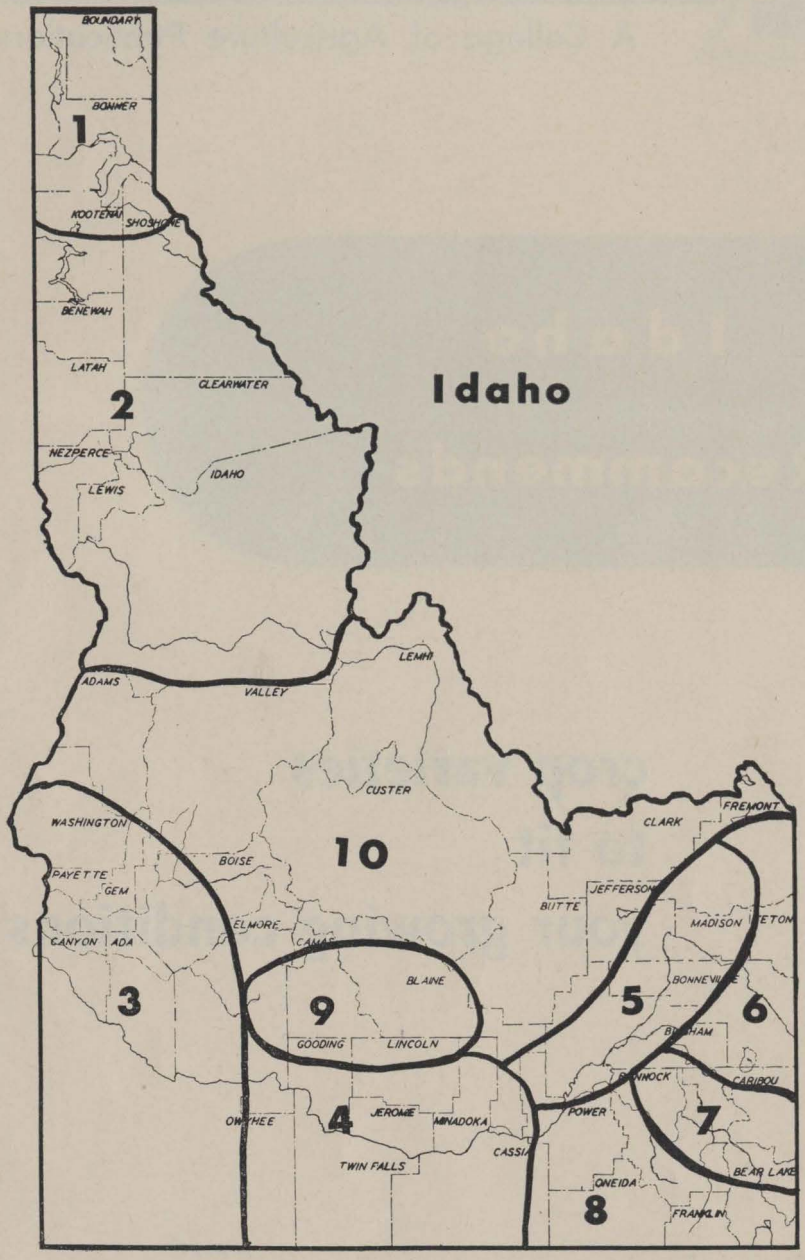

Fig. 1. The 10 major crop producing areas of Idaho.

Crop Varieties to Fit Your Growing Conditions[1]

Widely varying climatic and soil conditions demand different varieties of the important field crops grown in Idaho. The selection of varieties that will fit these special conditions makes for better crop adaptation and provides one of the easiest means of increasing per-acre returns. Since better varieties continue to make their appearance, the list recommended here will have to be revised periodically.

In order to facilitate the discussion of recommended varieties, the agricultural regions of the state are given in ten major areas. It should be recognized that these areas are quite general and that conditions within the designated areas show variations. These areas are shown in Fig. 1.

1. Northern Cutover
2. Palouse and Upper Prairie
3. The Lower Snake River, Irrigated
4. The Central Snake River, Irrigated
5. The Upper Snake River, Irrigated
6. Upper Snake River, Drylands
7. Southeastern Drylands
8. Southcentral Drylands
9. Camas-Blaine Drylands
10. Mountain Valleys

Winter Wheat

Hard Red Winter Wheat

Cache is a white-chaffed, beardless, Turkey-type wheat moderately resistant to common and dwarf smuts. It is acceptable in milling quality. Recommended in Areas 6, 7, 8, and 9.

Turkey refers to a group of white-bearded, winter-hardy wheats susceptible to both common and dwarf smuts. The wheats of this group are excellent in milling quality. The Turkey wheats are not recommended where dwarf smut is prevalent or lodging is a problem.

Wasatch is a white-chaffed, bearded variety highly resistant to common and dwarf smuts. It has a tendency to shatter. In the absence of smut it often yields less than Turkey. The quality is acceptable. Recommended in Areas 6, 7, 8 and 9.

Among varieties not recommended due to either low yield, smut susceptibility, lack of winterhardiness, or poor quality are: Blackhull, Bluejacket, Cheyenne, Comanche, Minter, Pawnee, Tenmarq, and Yogo.

[1] Crop Varieties to Fit Your Growing Conditions is the cooperative effort of agronomists of the University of Idaho College of Agriculture, Experiment Station, and Extension Service.

Soft White Winter Wheat

Brevor is a short, stiff-strawed, beardless variety with a common-type head, resistant to many races of common and dwarf smuts. The quality is fair. Recommended in Areas 1 and 2.

Elmar is a club wheat of medium height with a stiff straw. It is moderately resistant to dwarf and common smuts. The quality is good. Recommended in Areas 1 and 2.

Golden is a beardless, brown-chaffed variety of medium height. It shatters and lodges easily and is susceptible to both common and dwarf smuts. The quality is excellent. Recommended in Areas 1 and 2.

Among varieties not recommended due to either smut susceptibility, inferior quality, or poor straw characteristics are: Elgin, Hymar, Mosida, and Rex.

Spring Wheat

White Spring Wheat

Baart is a bearded, white-chaffed, early-maturing, relatively weak-strawed variety of good quality. Recommended in Areas 6, 7, 8, and 9.

Federation is a beardless, brown-chaffed variety with good straw. Recommended in Areas 2, 3, 4, and 5.

Idaed is an early-maturing, white-chaffed, beardless variety with good quality and straw. Recommended in Areas 1, 2, 3, 5, 6, 7, and 9.

Lemhi is a beardless, white-chaffed variety with medium-stiff straw and excellent quality. Recommended in Areas 3, 4, 5, 6, and 10.

Among varieties not recommended due to either poor yield, weak straw, or inferior quality are: Baart 38, Baart 46, Dicklow, and White Federation 38.

Hard Red Spring Wheat

Henry is a bearded, white-chaffed, stem rust resistant variety. It is especially adapted for spring reseeding of winter-damaged wheat fields. Recommended in Areas 1, 6, 7, 8, and 9.

Komar is a bearded, white-chaffed variety, fairly resistant to stem rust, of good quality. It is used for spring seeding and for the spring reseeding of winter-damaged wheat fields. Recommended in Areas 6, 7, 8, and 9.

Among varieties not recommended due to low yield or poor quality are: Lee, Marquis, Saunders, and Thatcher.

Oats

Cody is a yellow, short-strawed oat resistant to smut and rust. It is adapted to light-textured irrigated soils and dryland areas. Due to heavy foliage and weaker straw, Cody is less desirable than Overland as a companion crop on fertile irrigated soils. Recommended in Areas 3, 4, 5, 6, 7, 8, and 10.

Marida is a white mid-season smut-resistant oat with good straw, suitable for grain or hay production. Recommended for Areas 1, 2, 3, 5, 6, and for hay in Area 10.

Overland is a white, mid-season oat with stiff, short straw, smut and rust resistant, desirable as a companion crop on irrigated soils of high fertility. Recommended in Areas 1, (high fertility bottom lands) 3, 4, 5, and 6.

Among varieties of oats not recommended are Bannock, Clinton, and Swedish Select.

Barley

Spring Barley

Bonneville is a late-maturing white-kerneled, six-rowed, compact, smooth-bearded feed barley with stiff straw. It has heavy foliage and is moderately resistant to loose and covered smuts. It is somewhat difficult to thresh. Recommended in Areas 3 and 4.

Gem is a white-kerneled, early-maturing, semi-smooth bearded feed barley. It has light foliage, is resistant to covered but susceptible to loose smut. This variety is desirable as a companion crop. Recommended in all areas except in Areas 6 and 7.

Hannchen is a medium-maturing, white-kerneled, two-rowed, rough-bearded malting barley with medium-stiff straw but susceptible to smut. Recommended in Areas 1 and 2.

Munsing is a medium-early, bluish - white kerneled, semi-smooth awned, short-strawed, two-rowed feed barley susceptible to smut. This variety is adapted to dry sections in Areas 6 and 8.

Soda Springs Smyrna is a white-kerneled, two-rowed, semi-smooth awned, short, medium-early feed barley, susceptible to smut. Recommended in Areas 6 and 7.

Trebi is a rough-awned, six-rowed, blue-kerneled, weak-strawed, mid-season feed barley. It is resistant to loose smut but susceptible to covered smut. Recommended in Areas 3, 4, and 5.

Velvon 11 is a white-kerneled, six-rowed, smooth-awned feed barley with straw of medium strength. It is moderately resistant to booth loose and covered smuts. Recommended in Areas 3, 4, and 5.

Among varieties not recommended due to disease suscepti-

bility, poor quality, and low yield are: Compana, Glacier, Hanna, Spartan, and Titan.

Winter Barley

Idaho Club is a white-kerneled, distinctly six-rowed, club-headed feed and malting barley. This variety should be seeded during early fall. It may be seeded in early spring for seed increase. Winter barleys are not so winter-hardy as winter wheat. Recommended in Areas 1, 2, and 3. No winter barley varieties are available that are sufficiently winterhardy for other areas of the state.

Rye

Varieties recommended for special purposes such as winter cover or early spring grazing are Rosen, White Soviet, and Balboa.

Corn

The selection of hybrid corn for either grain or silage production should be based on date of maturity. Corn is grown primarily as a silage crop in Areas 4 and 5. It may be grown for grain or silage in Area 3. The limits of maturity for silage purposes are 90 to 105 days in Area 5; 100 to 110 days in Area 4 and 110 to 115 days in Area 3. These maturity dates are based on Idaho's temperature conditions. Add 15 per cent to designated maturity dates established in corn belt areas.

Sorghums

Idaho Club is a forage sorghum, adapted to the warmer sections of Areas 3 and 4.

Beans

Red Mexican UI 3 and 34 are small red beans similar in vine and seed characters, yield, maturity and disease reaction. They are resistant to curly top and common mosaic but susceptible to the variant of common mosaic. The average maturity is 110 to 113 days. Recommended for the bean growing section of Areas 3 and 4.

Great Northern UI 123 and 59 are white beans similar in growth habits, yield, and maturity. They are resistant to the mosaic viruses but susceptible to curly top. They are not recommended in areas where curly top is likely to be severe, such as on farms adjacent to deserts. The average maturity is 103 days. Recommended in Area 4.

Great Northern UI 16 and 31 are white beans similar in growth characters, yield, maturity, and disease reaction. Both are resistant to curly top and the mosaic viruses. The average maturity is 90 days. Recommended in Area 4.

Pinto UI 72, 78 and 111 are similar in growth characters, yield and maturity. They are resistant to curly top and common mosaic but susceptible to the variant of the common mosaic virus. Recommended for the bean growing districts of Areas 3, 4, and 5 and for limited sections in Area 2.

Kidney beans are bush-types which are susceptible to the mosaic and curly-top viruses. The average maturity is 90 days. Recommended for Area 4.

Small Flat White UI 1 has a relatively small vine. It is resistant to common bean mosaic but susceptible to the variant of common mosaic and curly top. Recommended for the bean growing districts of Area 2.

Michelite is a small, white navy-type bean, resistant to mosaic but susceptible to curly top. Recommended in Area 1.

Baby lima beans are grown to a limited extent in Area 3.

Peas

Alaska is a green, smooth-seeded field pea recommended in Areas 1 and 2.

First and Best is a yellow, smooth-seeded field pea recommended in Area 2.

Austrian Winter peas have greenish-brown, mottled seeds. They are grown for green manure and as a seed crop. Recommended for seed production in Area 2.

Grasses

Grasses of Primary Importance — Adequate Moisture Areas

The grass species listed in this group are all long-lived and are well adapted for mixtures with alfalfa or ladino clover for use as either hay or pasture grasses.

Manchar Smooth Brome is a mild, sod-forming grass adapted for hay and pasture mixtures. It is more leafy than commercial smooth brome and has strong seedling vigor. Recommended for all areas of the state.

Intermediate Wheatgrass is a vigorous sod-former and in dryland areas has the advantage of providing green feed in late summer. It is of value in alfalfa-grass mixtures and for pasture. Recommended for all areas of the state.

Alta Fescue is an erect bunch grass adapted to wet and alkaline soils. It is not so palatable as smooth brome or orchard grass but is readily eaten by all kinds of livestock if properly managed. Recommended in Areas 1, 2, and the irrigated areas of the state.

Orchard grass is a bunchgrass having the outstanding characteristic of ability to produce growth during summer heat. Its main use is in pasture mixtures. It matures too early for the production of good quality alfalfa-grass hay. Recommended in Areas 1, 2, and the irrigated areas of the state.

Grasses of Primary Importance — Limited Moisture Area

Crested Wheatgrass is a drought-resistant, long-lived bunch grass used primarily for the reseeding of range land and submarginal crop land. The type commonly known as standard crested wheatgrass is recommended in preference to the Fairway strain. Its principal use is for spring grazing. Recommended for all dryland and range areas.

Siberian Wheatgrass is similar to crested wheatgrass in appearance, growth and adaptation. On poor, sandy, or shallow soils it has shown some advantage over crested wheatgrass. Recommended for all dryland and range areas.

Whitmar Beardless Wheatgrass is a drought resistant bunch grass similar in adaptation to crested wheatgrass but is more difficult to establish. This grass is of value for late spring, summer, and fall grazing. Recommended for all dryland and range areas.

Topar Pubescent Wheatgrass is a long-lived, sod-forming grass similar to intermediate wheatgrass in appearance and growth habit. It is more drought resistant than intermediate wheatgrass but less than crested wheatgrass. It is adapted to low fertility and alkaline soils. Recommended for the high elevation range lands of southern Idaho.

Grasses for Special Purposes

Primar Slender Wheatgrass is a rapidly-developing, short-lived perennial bunch grass. It is limited to fairly moist locations. Its principal use is for pasture, forage, or green manure with short-lived legumes such as the clovers. Recommended in Areas 1 and 2.

Tall Wheatgrass is a coarse, tall, late-maturing bunch grass. Its outstanding characteristic is its ability to grow on alkaline soils especially under irrigated or sub-irrigated conditions. Recommended on the alkaline soils in Areas 3, 4, 5, 7, and 8.

Bromar Mountain Bromegrass is a rapidly-developing short-

lived perennial. Its primary use is in mixtures with sweet clover where the crop is grown for green manure. Recommended in Areas 1 and 2.

Hard Fescue is a low-growing, fine-leaved perennial. It is an excellent root producer and is recommended for growing with alfalfa where the producer does not wish to have a high percentage of grass in the hay. Recommended in all alfalfa producing areas.

Sheep Fescue is quite similar to hard fescue but is more of a bunch grass.

Red Fescue is a definite sod former and finds its main use in lawn seedlings. Recommended for seed production in Areas 2 and 6.

Tualatin Tall Oatgrass is a short-lived, rapidly - developing bunch grass especially adapted to light sandy or gravelly soils for mixtures with alfalfa under situations where the primary grasses are not adapted. Recommended in Areas 1 and light-textured, irrigated soils of Areas 3, 4, 5, and 10.

Reed Canarygrass is a coarse, long-lived, sod-forming grass tolerant to alkaline conditions and especially adapted to areas subject to periods of flooding.

Creeping and Meadow Foxtail are similar in their adaptation and use. They are both long-lived perennials adapted to low, wet areas and to bottom lands subject to overflow.

Alfalfa

Buffalo is not so winterhardy as Ranger but is satisfactory for irrigated lands in the mild climatic areas of the state. Recommended in Areas 3 and 4.

Grimm is a winterhardy, wilt-susceptible, old established variety of variegated alfalfa. This variety may be grown in areas where bacterial wilt does not occur.

Ladak is winterhardy and is outstanding in its ability to produce high yields of forage the first cutting. Recommended for all the one crop, non-irrigated areas of Idaho.

Narragansett is a variegated winterhardy, non wilt-resistant variety grown for seed production for out-of-state use.

Ranger is highly resistant to bacterial wilt and is winterhardy. Recommended for irrigated areas where winter conditions are severe, and where bacterial wilt is present.

Vernal is a variegated winterhardy, bacterial-wilt-resistant variety grown for seed production for out-of-state use.

Non-hardy southern varieties and Argentine alfalfa are not recommended.

Clovers

Kenland Red Clover is the main variety grown for seed. It is also a good variety for hay production. Recommended in Areas 1, 2, 3, 4, and 5.

Pennscott Red Clover is adapted to Idaho for seed production. Recommended in Areas 1, 2, 3, 4, and 5.

White Clover is a long-lived legume used primarily for lawn and pasture purposes. Recommended for seed production in Areas 2, 3, 4, and 5.

Ladino Clover - a high forage yielding giant form of white clover used in pasture mixtures. It is not so winterhardy as white clover. Recommended for seed production in Areas 2, 3, 4, and 5.

Alsike Clover - a short-lived perennial pasture and hay legume with a wider range of adaptation than red clover. It is recommended for high rainfall, and poorly drained irrigated areas.

Strawberry Clover is a long-lived plant resembling white clover. Recommended for areas having both a high water table and alkaline soil conditions.

Birdsfoot Trefoil is a long-lived perennial legume resembling fine stemmed alfalfa. This plant requires a special seed inoculant. It has a wide range of soil and moisture adaptation. It is recommended for pasture on poorly drained soils.

Madrid Sweet Clover is a yellow-blossomed, early, rapid-growing, biennial legume used primarily for soil improvement and pasture. Recommended in all areas of the state except in districts specializing in the seed production of legume crops.

Spanish Sweet Clover is a rank-growing, white-blossomed biennial legume grown primarily for soil improvement purposes. Recommended in all areas of the state.

Hubam Sweet Clover is an annual legume usually established with spring sown cereals for soil improvement. Recommended in Areas 3 and 4.

Importance of Good Seed

Good seeds are not only of a variety adapted to the conditions under which the crop is to be grown but must have in addition (1) strong germination, (2) freedom from seed-borne diseases, (3) as much freedom as possible from foreign materials, (4) freedom from mixtures of other crop seeds, (5) freedom from noxious and other weeds, (6) proper size and development, and (7) uniform good appearance. Producing seed to meet these qualifications de-

mands proper land selection, good cultural practices, disease and weed control, and care in harvesting, cleaning, and storing. Above all, we must begin with high quality, genetically pure seed.

Seed Production is a Specialized Enterprise

Not every crop producer has personal aptitude or equipment to produce high quality seed. Many producers will find it to their advantage to purchase seed from well equipped seed producers rather than to grow their own seeds. This is especially true in the production of small-seeded grass and legume seeds. **The extra expenditure for good seed over the cost of ordinary or poor seed will yield excellent return.**

Fortunately Idaho, like most other states, has an organization whose prime objective is producing good seed. This is the Idaho Crop Improvement Association. The seed growers of the state through a board of six directors conduct the affairs and operations of this organization. Five of the directors are elected by the association membership and represent various geographical areas of the state. The head of the department of agronomy of the University of Idaho serves as the sixth director.

The main purpose of Idaho Crop Improvement Association is providing high quality seed for Idaho farmers through its certification program. The procedures and rules regulating certification of seed crops are developed and applied by the association. Only seed meeting determined requirements enter the market as certified.

Each year the association issues a list of recognized certified seed source varieties. This list is a great help to crop producers in locating good seed sources. Only varieties approved by the varietal and foundation seed committee, made up of representatives of the Agricultural Experiment Station and the Idaho Crop Improvement Association are eligible for certification.

Release of Seed of New Varieties

New varieties are generally developed through breeding activities of agricultural experiment stations and other agencies. If, after proper evaluation, they prove definitely superior to existing varieties, it is to the interest of producers that they be released and made available for general use at the earliest possible date. Initial increase of seed of such new varieties, "foundation seed," is made by the Agricultural Experiment Station. Release of foundation seed for the production of registered and certified seed is made through the Idaho Crop Improvement Association. Such seed is valuable. Produced at public expense, it is necessary to safeguard its identity and to prevent its loss.

Not All New Varieties are Superior

The fact that the seed used by a producer is of a new variety does not necessarily mean that it is the best seed for use in any given area. New varieties are bred for certain growing conditions. A variety developed for another area of the country may be of little value to Idaho areas or any other area where environmental conditions may be quite different from those of the area for which the variety was bred.

The Idaho Agricultural Experiment Station conducts extensive tests of new varieties including varieties developed by other states and plant breeders. Many such introduced varieties are of value under Idaho conditions and have for that reason been added ot the recommended list of adapted varieties. Many others have in the course of the testing program proved themselves inferior to established varieties when grown under Idaho conditions. It is more economical to test these varieties in experimental plots than to try out new varieties on large scale field plantings. Lack of adaptation to environment is reflected in poor yielding ability, prevalance of disease, or development of poor quality. New varieties, like new ideas, are often good; but it is well to test them for their real value before making general use of them.