

RECORD OF PROCEEDINGS

100 LEAVES

MINUTES OF THE BOARD OF DIRECTORS MEETING OF THE PUEBLO CONSERVANCY DISTRICT DECEMBER 26, 1984

The Board of Directors met at 1:00 PM to recess until 4:30 P.M., on the above date, in the office of the District at 111 E. 5th Street:

DIRECTORS PRESENT: P. Kelly, G. Sandstrom and K. Farley
ENGINEER PRESENT : R. Koester
ATTORNEY PRESENT : Ward unable to attend the 4:30 session.
OTHERS PRESENT : F. Weisbrod

The meeting was called to order and the minutes of the November 28, 1984 meeting were approved as prepared.

The Treasurer's Report was approved as prepared and the following vouchers were approved for payment:

17056	U. S. Postmaster	\$ 20.00
17057	Colorado National Bank - Pueblo	10.00
17058	Weicker Moving & Storage, Inc.	10.00
17059	Gus Sandstrom, Jr.	40.00
17060	Patricia Kelly	40.00
17061	Kathleen Farley	40.00
17062	Predovich & Ward	150.00
17063	K L H Engineering Consultants	575.00
17064	Otero Savings & Loan Assoc.	120,000.00

The Board approved the purchase of one \$120,000.00 Certificate of Deposit from Otero Savings & Loan Association per the attached bid sheet and the above voucher #17064.

The Board discussed grant application matters with Fred Weisbrod. Fred will research grant offerings and provide the Board with adviseability of application for various parts of the Santa Fe Project.

The Board discussed the acquisition of the Swink Bridge, and instructed Engineer Koester to get estimates for moving and new foundations as a possible source for the pedestrain bridge at Santa Fe. The board reviewed the presentations prepared by McLaughlin Water Engineers of the steel bridge with wood deck and the all-wood bridge (similar to the pedestrian bridge near Pueblo Blvd.) Both bridges are fairly equivalent in cost, but the Board indicated they favored the steel bridge design on the basis of its long term low maintenance. Should the acquisition of the Swink Bridge not occur, McLaughlin is to be instructed to prepare the design plans for the steel bridge.

The Board reviewed the land survey of the four lots on West 11th Street that Mrs. Hazel Atterbury asked to be offered for sale, and authorized the appraisal of the land be ordered, and provide Attorney Ward with survey and appraisal for his use in setting up the sale by bids of the four lots as surplus.

The Board reviewed the Lawn Seeders, Inc., proposal of December 14, 1984, (copy attached) and determined the project for re-seeding is to be halted for now, and the proposal not ordered.

There being no further business to come before the Board, the meeting adjourned at 5:15 P.M.

The next regular meeting will be on January 28 at 11:00 A.M.

APPROVED:

Patricia Kelly
Kathleen Farley

F. Weisbrod
Secretary

No

27

THE PUEBLO CONSERVANCY DISTRICT

BOARD OF DIRECTORS
P. KELLY
K. FARLEY
G. SANDSTROM

111 EAST FIFTH STREET
544-6823

PUEBLO, COLORADO

MAILING ADDRESS:
P. O. BOX 234
PUEBLO, COLO. 81002

December 26, 1984

FED ID #84-6002506

BID TABULATION: 10:00 AM 12/26/84

PURCHASE DATE: 12/28/84

BIDDER	INTEREST RATE % 364 DAYS (12-27-85)	INTEREST RATE % 182 DAYS (6-28-85)	INTEREST RATE % 91 DAYS (3-29-85)	TYPE	EFFECTIVE ANNUAL YIELD
Colorado National Bank - Pueblo	8.500	8.000	7.650	Simple	\$10,200.
				Simple	\$ 9,600.
				Simple	\$ 9,180.
World Savings	9.050	9.050	9.050	Simple	\$10,860.
				Simple	\$10,860.
				Simple	\$10,860.
United Bank of Pueblo	8.750	8.250	8.000	Simple	\$10,500.
				Simple	\$ 9,900.
				Simple	\$ 9,600.
American Federal Savings	---	---	10.000	Daily	\$12,180.*
Colorado National Bank - Belmont	9.100	8.550	8.200	Simple	\$10,920
				Simple	\$10,260.
				Simple	\$ 9,840.
Otero Savings & Loan Assn.	10.150	9.750	9.300	Simple	\$12,147.*
				Simple	\$11,700.
				Simple	\$11,160

APPARENT BEST BID*

\$120,000. OTERO SAVINGS - 364 Days
or \$120,000. AMERICAN FED. - 91 Days

BOARD OF DIRECTORS
P. KELLY
K. FARLEY
G. SANDSTROM

MAILING ADDRESS:
P. O. BOX 234
PUEBLO, COLO. 81002

Date 12/20/84

CD - First Colorado Bank - \$100,000.
World Savings - \$100,000.

THE PUEBLO CONSERVANCY DISTRICT

BOARD OF DIRECTORS
P. KELLY
K. FARLEY
G. SANDSTROM

111 EAST FIFTH STREET
544-6823
PUEBLO, COLORADO

MAILING ADDRESS:
P. O. BOX 234
PUEBLO, COLO. 81002

DATE December 20, 1984

TOTAL EXPENDED THROUGH CURRENT MONTH \$ 182,353.

Vouchers # 17054 thru # 17063

Amount to be transferred \$ 825.

To checking XX

To savings

Deposits \$ 211,917.26

Tel Transfer Savings Bal. \$ 31,692.

Checking Account Bal. \$ 149.

Total CD's \$ 1,860,000.

Checking acct. Bal	11/20	=	\$ 152.
Tel Tfr. Bal. @	11/20	=	\$ 20,436.
Matured CD's			\$ 200,000.
Otero Savings			\$ 11,917.
Interest earned CD's			\$ 180.
Interest earned Other			\$ 40.
Other earnings Director's Fee			\$
check voided			\$

\$ 232,725.

CD's Purchased World \$ 100,000.

First Colo Bank \$ 100,000.

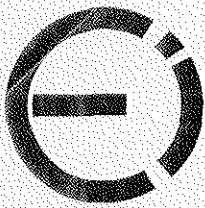
Current Month Expenses \$ 885.

Cash Balance @ 12/20/84 = \$ 31,840.

INTEREST EARNED

TOTAL

January - \$ 00.	August \$ 13,181.	\$191,965.
February - 15,103.	September 5,435.	
March - 39,116.	October 8,592.	
April - 55,717.	November 11,917.	
May - 23,441.	December <u>7,060.</u>	
June - 8,247.		
July - <u>4,156.</u>		



KLH ENGINEERING CONSULTANTS, INC.

ENGINEERING • SURVEYING • LAND PLANNING

Post Office Box 234 • 111 East Fifth Street • Pueblo, Colorado 81002 • (303) 544-6823

DESCRIPTION OF WORK

<u>November 1984</u>	<u>Engineer</u>	<u>Administrative</u>	<u>Clerical</u>
Monitor & Direct Community Services Workers	6.0 hr. Staff		
Review of Maint. on Site	3.0 hr. Staff	2.0 K	
Prepare Bids on CD's		4.0 K	4.0 H
Books, Minutes & Corres.		2.0 K	5.0 H
Work on 1985 Budget		1.0 K	
Agenda, Treas. Report			6.0 H
Director's Meeting & Field Trips	4.0 K	6.0 K	
	13.0 Hrs.	15.0 Hrs.	15.0 Hrs.

Recap on Santa Fe Dam Work completed and billed for:

During December 1983	\$ 1,980.00
During January 1984	2,920.00
During February	1,920.00
During March	1,320.00
During April & May	365.00
During June	110.00
During July, August, September, October and November	0.00

KLH Fees	\$ 8,615.00
McLaughlin Water Engineers	14,260.00
Lincoln DeVore	2,402.00

Total all Fees	\$25,277.00
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Lawn Seeders, Inc.

2202 NORMAN LANE • PHONE (303) 564-5452
PUEBLO, COLORADO 81005

- * CUSTOM HYDRO MULCHED LAWNS
- * EROSION CONTROL
- * LAND RECLAMATION
- * LANDSCAPING
- * LAND LEVELING & PREPARATION

Dec. 14, 1984

Re: Hydroseed Test Areas

Board of Directors
The Pueblo Conservancy District
P.O. Box 234
Pueblo, Co. 81002

To the Board:

I am writing to express my concern regarding the situation of the wildflower seeding experiment. As you know, this project was completed by Lawn Seeders, Inc. on May 29, 1984, as per our verbal agreement. It is my decision to follow through in an attempt to arrive at an equitable solution, if that is the desire of the Board.

In reviewing the problem, I am convinced that the lack of irrigation (referred to in the accompanying catalog and in the seeding recommendations of Mr. Ross Campbell), was the major factor of any failure, however there is a slight potential for spring germination.

All recommendations and standards from all suppliers and producers for materials used were met or exceeded during the application process. All precautions possible were implemented by our company to ensure a successful stand of wildflowers. For your review and insight, I have included the 1985 Applewood Seed Co. catalog. Contained is a summary of planting instructions and specifications, which I have highlighted for your convenience.

Lawn Seeders, Inc.

2202 NORMAN LANE * PHONE (303) 564-5462
PUEBLO, COLORADO 81005

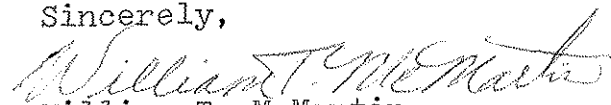
- * CUSTOM HYDRO MULCHED LAWNS
- * EROSION CONTROL
- * LAND RECLAMATION
- * LANDSCAPING
- * LAND LEVELING & PREPARATION

Assuming there is no spring growth in 1985, coupled with Lawn Seeders, Inc. desire for beautification along the River Trail System, I offer the following proposal:

1. Lawn Seeders, Inc. will re-seed the areas involved in the experimental program of 1984 at an actual cost of materials, labor and equipment only.
2. That initial provisions are made for irrigation following the producers recommendations for a proper stand of wildflowers.
3. That irrigation is procured by the Board or Lawn Seeders, Inc.
4. That any future agreements are written and signed by both the Board and Lawn Seeders, Inc.

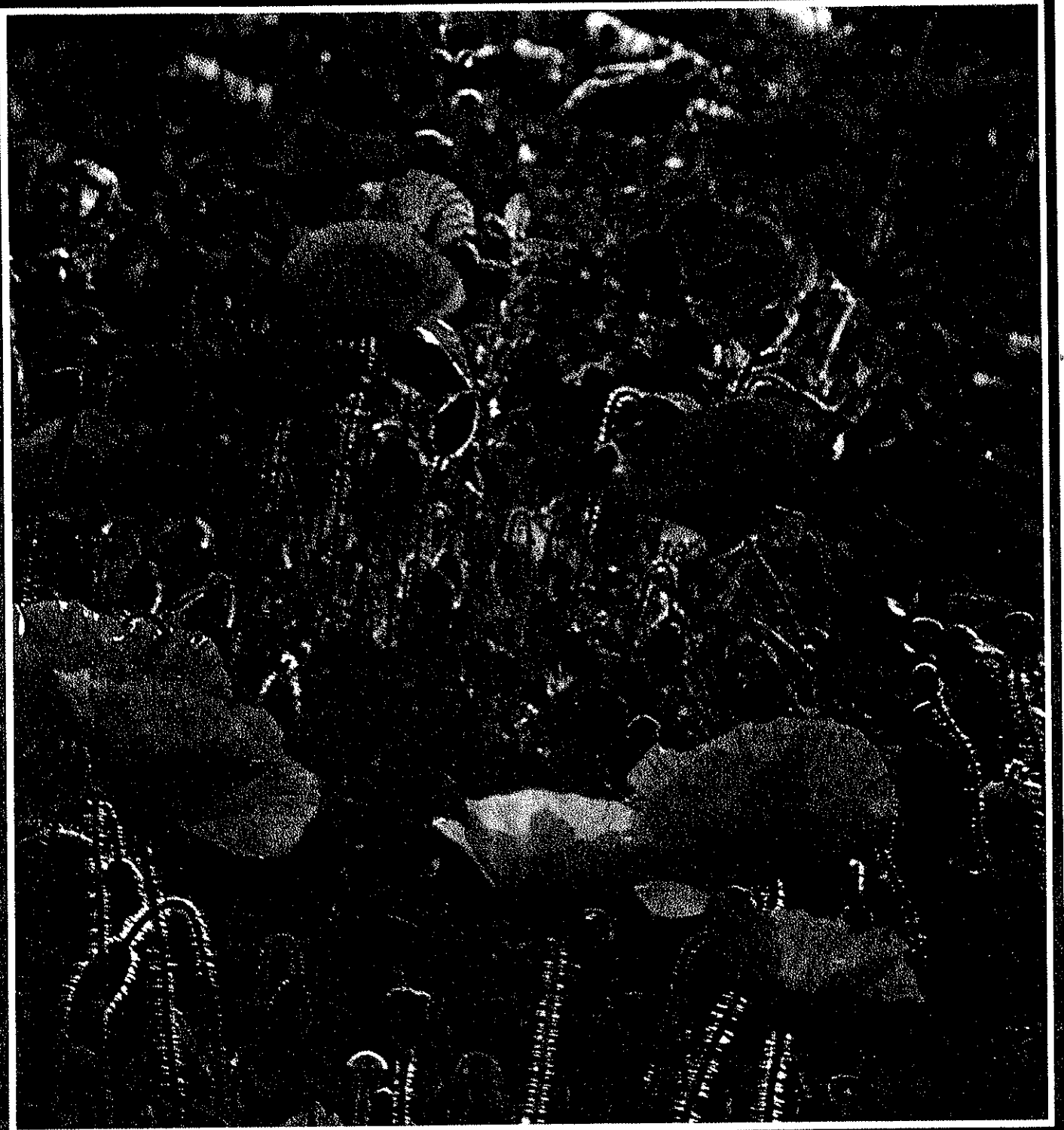
In closing, I hope that this will prove to be a satisfactory arrangement for all concerned, and that the Board recognizes Lawn Seeders, Inc. genuine desire to maintain the best possible working relationship with the Board. The highest level of service, you can be assured, will be rendered by Lawn Seeders, Inc. If there are any questions or other information that I can answer or provide, please do not hesitate to call on me.

Sincerely,


William T. McMartin

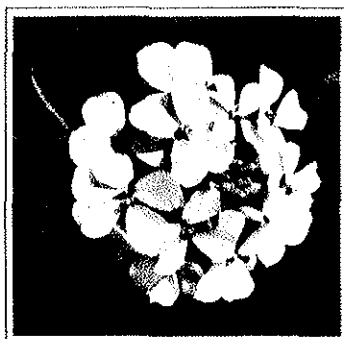
President

WTM/11

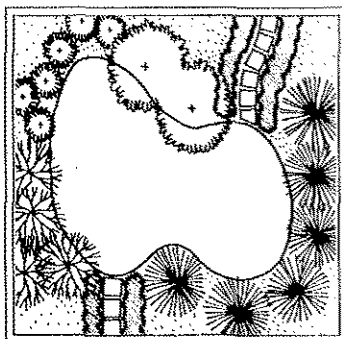


Wildflower Seeds for Landscaping
1985 Catalog

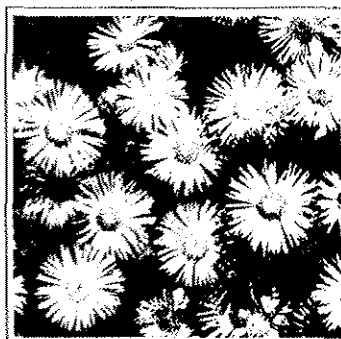
 Applewood Seed Co.



Cheiranthus allonii
Wallflower



Erigeron speciosus
Fleabane Daisy



Aquilegia caerulea
Columbine

Letter from the President

Dear Friends,

This issue of our landscaping catalog begins some new traditions for Applewood. First, we will issue the catalog in the fall of each year so you can use it for planning during the winter and spring. Also, we will publish a midyear newsletter to update you between catalogs.

In these publications, we will report the results of our research and share with you our new ideas and directions. We are continually experimenting with different approaches to soil preparation and seeding, as well as testing new species of wildflowers that we think you may like. In addition, we will report what we have learned from you, our customers, about your experiences growing wildflowers. We are anxious to hear about your projects; your comments will tell us which areas need further work.

New items to note in this catalog are: lower prices of the Shade Mixture, Low-Growing Mixture and Knee-Hi™ Mixture; our new Aggressive Amendment for problem areas; and additions to our offering of individual species. The catalog also includes an expanded discussion of the use of the herbicide, Roundup, for ground preparation and weed control and a summary of critical planting instructions, presented on the following page (these instructions will be supplied with each bulk seed order).

Applewood's new facilities include 1½ acres for in-depth wildflower trials, which enable us to evaluate our mixtures and to modify them based on aggressiveness, range of color, blooming period, long-term performance, plant size and other factors. To validate our own experiences, we are cooperating with botanic gardens, universities and parks to establish test areas throughout the United States and Canada (for example, Pennsylvania State University, Central Park in New York City, Longwood Gardens near Philadelphia, Callaway Gardens in Pine Mountain, Georgia). Please contact us for the trials nearest you. Also, we are working closely with the new National Wildflower Research Center in Austin, Texas, the activities of which will be a real asset to the industry.

Our own trials include experiments with weed control, lower-growing blends and late fall (dormant) seeding. We are continually improving the balance of annuals, biennials and perennials in our mixtures to provide better cover, extended blooming periods and increased species diversity. We are testing jute netting and excelsior mats; both are valuable for establishing wildflowers on steep slopes or areas of heavy runoff. Our moisture tests are providing a more realistic picture of the effects of drought and supplemental irrigation.

We have eliminated particularly aggressive species from our standard mixtures and have formulated an Aggressive Amendment which contains the best of the "tough" species. The Amendment is designed to be used on roadsides and other problem areas in conjunction with the appropriate standard mixture.

Since Applewood was established in 1965, we have learned a lot about wildflowers, and there is much to be learned in the future. We will gladly furnish evaluation sheets with your orders upon request; these will indicate how we analyze our trials. We encourage you to evaluate your own projects and to send a copy for our review; your results will provide valuable information for the assessment of our mixtures.

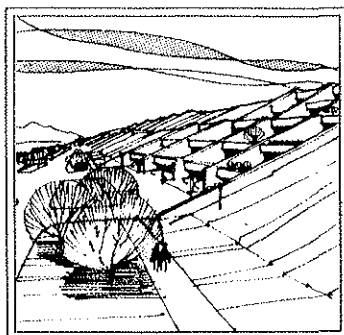
If you have a special problem, please let us know and we'll help all we can. We appreciate your business and want to be of assistance to you. If you visit Denver, please let us know if you would like to see our facilities.

We wish you success in your projects in 1985!

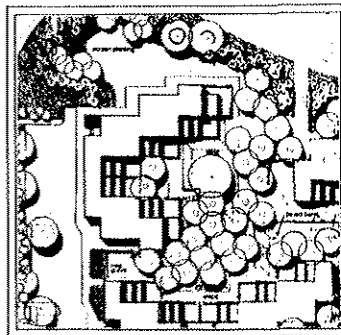
Sincerely yours,

Gene Milstein

Gene P. Milstein
President



Rudbeckia hirta
Black-Eyed Susan



Chrysanthemum leucanthemum
Ox-Eye Daisy

Summary of Planting Instructions

When to Plant

In the spring, plant early when ample rainfall is anticipated. In the fall, plant late so seeds will not germinate until the following spring. Seeds may also be planted in summer if they can be watered regularly for the first 4-6 weeks.

Weed Control

Before planting, remove all weeds and grasses; best results will be ~~DONE~~ obtained by planting on bare ground. A method for treatment of dormant weed and grass seeds is described under this heading, page 5.

Soil Preparation

Rototill or plow the soil to a maximum depth of 3 inches in arid climates or 6-8 inches in moist climates. Where rototilling/plowing is impractical, various scarification methods may be utilized to loosen the soil surface.

Seeding Rate

In areas of one-half acre or less, or where high density is important, plant wildflower seeds at the rate of 4-5 ounces per 1,000 square feet. For larger areas, use the seeding rate indicated for the individual mixture.

WE SEEDED @ 12 lbs./1000 sq. ft.

Planting Depth

If seeds are broadcast, rake in LIGHTLY, covering seeds no more than 2-3 times their thickness (some seeds will show). Or cover with a 1/8-inch layer of peat moss. If seeds are drilled, drill to a maximum of 1/4 inch. If hydroseeding is the method of application, hydro-mulching will provide a top cover.

Moisture

Planted areas MUST be kept consistently moist for 4-6 weeks during the growing season until seedlings are well established. Thereafter, waterings may be gradually reduced. In moist climates, regular rainfall may make supplemental watering unnecessary. In arid climates or during drought conditions, weekly watering will be required to maintain an optimal display.

More Information

Detailed discussions of the subjects summarized here are presented on pages 4 and 5. If you need additional assistance, please contact:

Katheryn Falkenberg,
Botanist

Sandra White,
Botanist

Applewood Seed Co.

5380 Vivian Street
Arvada, CO 80002 USA
303/431-6283
Telex: 289246



Nemophila maculata
Five-Spot

Uses of Wildflowers

The many uses of wildflowers include (1) beautification of urban parks, shopping malls and other public facilities, (2) restoration of rural and mountain residential developments, (3) revegetation of road cuts and mining sites, (4) enhancing the rough and general grounds of golf courses and (5) establishing a substitute for lawns.

Formulation of Mixtures

Applewood wildflower mixtures are formulated on the basis of climatic conditions (rainfall, temperature range, humidity) and elevation. Most species in our mixtures adapt readily to different soil types provided climate and elevation are suitable. All mixtures contain 16 to 25 species, approximately 40% perennials, 20% biennials and 40% annuals. Annuals have been included to establish cover quickly and to give color the first year; most will produce new plants the following year (the biennials will also reseed). Perennial plants live for more than two years and flower from the second year onward. All species require full or partial sun, with the exception of those in the Shade Mixture.

Applewood mixtures are blended to give the widest possible range of colors, heights and periods of bloom. Very few wildflowers bloom continually throughout the season; therefore, we have included spring-, summer- and fall-blooming species in each mixture. Colors include blue, purple, red, white, yellow and many shades thereof. Plant height varies from creeping to 5 feet. See the chart at the end of this catalog for the height, color and blooming period of each species.

In general, our mixtures are formulated to contain approximately equal numbers of seeds of each species. This varies somewhat because of costs, availability and/or climatic conditions. For example, in the Moist Mixture we have given less seed of species that are particularly aggressive. We strive for a balance of the highest quality for each geographic area.

Mixtures may vary occasionally from the indicated listing, based on availability of individual species.

Purity, Germination

Purity of most species is 95-99%. Germination ranges from 55-90%. Minimum standards are shown as PLS (Pure Live Seed), which is obtained by multiplying percent purity X percent germination. Itemized reports are available citing quantity supplied, germination and test dates of each component in our mixtures.

Selecting a Mix

Our Regional Mixtures are designed to fit the broad cross-section of conditions that generally exist within any one geographic region (and within any one project), i.e., variations in soil, slope, drainage, exposure and availability of moisture. For example, we include species for both moist and dry conditions in each mixture, provided that these conditions exist in the particular region. Furthermore, species are included on the basis of their versatility or ability to adapt.

If conditions are relatively consistent or the requirements exacting, one of our Special-Use Mixtures may be appropriate (Dry, Moist, Knee-Hi, Low-Growing or Shade Mixture). For instance, on the rough of a golf course where moisture is controlled, our Moist Mixture may be a better choice than the Regional Mixture indicated for the area.

Likewise, our Low-Growing Mixture (less than 16 inches high) and Knee-Hi Mixture (less than 24 inches high), have been designed to meet the demand from urban and suburban landscape architects and contractors for low-growing blends. These mixtures have a "semi-wild" appearance and can be used along roadsides, in parks, and in commercial and residential developments without looking weedy. Neither mixture will need mowing except once in the late fall, if desired. Both mixtures are very versatile and contain species that will flourish in either dry or moist situations.

In certain cases, a custom blend will be most suitable for your project. Our qualified staff will be glad to assist you in determining your needs.

New Mixture for Difficult Sites

We offer a mixture of highly aggressive wildflowers as an Aggressive Amendment. This Amendment is especially formulated for use with Applewood's standard mixtures on difficult sites, such as roadsides, that receive little or no care. The height of species included ranges from 12 inches to 5 feet.

The Aggressive Amendment is not a balanced mixture, and it should not be used alone. In most cases, recommended planting rates apply, using a 1:1 blend of Amendment and standard mixture. For example, if the planting rate is 6 pounds per acre, use 3 pounds Amendment and 3 pounds standard mixture. Please contact us to discuss appropriate applications of this new Amendment.

Custom Mixtures, Technical Advice

We encourage you to contact us with the specifications of your project; we will be glad to assist you in selecting the mixture best suited to your needs. Our service includes free telephone consultation on planting times, soil preparation and seeding techniques.

For special requirements, we can blend a custom wildflower mixture; the minimum for custom mixtures is 10 pounds. Such mixtures may be based on color, height, climatic conditions, blooming times or other considerations.

If you wish to personally determine or confirm which species of wildflowers are found in your area, we recommend the 11-volume series, *Wildflowers of America*, by H. W. Rickett, published by McGraw-Hill Book Co. and the New York Botanical Garden. These books picture many wildflowers in color and are available in libraries throughout the United States.

Planting Rates

Recommended planting rates are based on a minimum of 50-70 wildflower seeds per square foot (4-7 pounds per acre), which is generally sufficient to establish a good ground cover and to compete with grass and weed seeds which may be in the soil. If you are making up your own mixture, we suggest that you include a minimum of 12 species and think in terms of using equal numbers of seeds of each species (seed count per pound is shown in the chart at the back of the catalog). We can suggest modifications on the basis of cost, seed size, aggressiveness and other factors; for example, most mixtures should contain some annuals to give color the first year.

For areas of one-half acre or less, or where high visibility is important, we recommend 4-5 ounces of wildflower seed per 1,000 square feet, about double the planting rate recommended for large areas.

Use of Grasses

Wildflowers grow best when planted on bare ground where there is no competition for moisture from existing vegetation; most wildflowers are no match for pasture grasses and weeds.

We recommend sowing wildflower seeds either alone or with non-aggressive clump grasses, e.g., Chewings Fescue or Sheep Fescue. These fescues grow quickly and provide soil stabilization. They may be used with any Applewood wildflower mixture in most areas of the United States. However, in the southeastern states of Alabama, Florida, Georgia, Louisiana, Mississippi and South Carolina and in Hawaii, we recommend Tall Fescue; Chewings and Sheep Fescue will not thrive in these climates.

Plant the fescues at a rate of 20-25 pounds per acre or, for small areas, 1/2 pound per 1,000 square feet. Use of fescues does not change the seeding rate for wildflowers. The fescues are listed on p. 13 of this catalog.

Another option is planting "native grasses" (e.g., Big Bluestem, Blue Grama, Buffalo Grass, Indian Ricegrass, Sand Lovegrass, Side-oats Grama). In general, natives are more attractive than fescues; however, most of the available natives grow very slowly and are planted for aesthetic and ecological objectives rather than prompt stabilization of soil. Planting wildflowers with a combination of natives and fescues is often an attractive solution.

The group known as "pasture grasses" will crowd out most wildflowers; grasses in this category include Bluegrass, Brome, Crested Wheatgrass, Annual Rye, Orchard Grass and Timothy, among others. Pasture grasses provide a lush, green ground cover, usually to the exclusion of wildflowers. They are a fine choice for steep slopes and for management of difficult areas.

If, in certain cases, wildflowers are used with pasture grasses, the flowers should be planted in small, high-density patches as accents to the grassed area. Or the wildflowers may be sown with a maximum of 15 pounds per acre of these aggressive grasses.

Soil Preparation

Proper soil preparation is critical for prompt germination of seed and healthy growth of seedlings. Common methods for breaking up soil include plowing, disking, harrowing and, in small areas, using a rototiller. On drastically compacted soil, e.g., mining sites, scarification with a ripper may be necessary. In moist climates, soil is usually tilled to a depth of 6-8 inches. In arid climates, shallow tilling (maximum 3 inches) is preferable; deeper penetration disturbs the upward capillary action of sub-surface moisture, a lifeline for dry-area plants.

Water- and air-holding capacities of soil may be improved by adding peat moss, weed-free straw or other organic material.

Seed Application

Method of application depends on size of area and the terrain. For seeding large areas, i.e., over one acre, specially designed grassland drills have been most effective. Drill to a maximum of 1/4 inch and firm soil with a cultipacker; this maximizes seed/soil contact and ensures good transference of moisture. Hydroseeding/hydromulching (described below) is recommended for steep slopes, rocky terrain and other areas where drilling is impractical. On small areas, broadcast seeds evenly either by hand or by use of a drop or cyclone spreader. Rake in **lightly**, covering seeds to a maximum depth of 2-3 times their thickness.

All seeds, including wildflowers, need ample moisture to germinate and to develop into healthy seedlings. Best results will be obtained by soaking the planted areas thoroughly and maintaining consistent moisture for 4-6 weeks — then gradually reducing waterings. In non-irrigated situations, plant in the spring or before periods of anticipated rainfall.

Use of Mulches

Peat moss or peat-lite planting mixes (Cornell type) make excellent mulches for seeds that are broadcast in small areas. Cover to a maximum depth of 1/2 inch; a thicker covering may hinder penetration. These materials must be soaked thoroughly and kept continually moist as described above.

Straw, free of weed seed, is an excellent mulch for stabilizing soil and speeding plant growth. Straw is usually disked, rolled or crimped into the soil or held down with netting or a chemical tackifier. Fabric or mats made of jute, excelsior, woven paper or plastic fibers are additional options.

Problem Areas

Coarse gravel, lava rock, woodchips or bark work well on steep slopes or on areas where moisture retention is difficult; all materials should be 1-1 1/2 inch in size, minimum. First apply (preferably on tilled soil) a single layer of material, just enough to cover the ground. Then broadcast seeds and soak thoroughly with water. Seeds will germinate in the crevices where they are in contact with moist soil and protected from the elements.

Woodchips or bark are effective in warm climates where growth rate is rapid. However, in cool climates and arid soils, wood products should be avoided unless fertilizer is added to compensate for the nitrogen depletion that occurs as they decompose.

Fertilization

Do not fertilize wildflowers unless the soil is extremely depleted of nutrients. Fertilizers encourage weed growth and lush foliage rather than flowers. **DID NOT FERTILIZE.**

Weed Control

The best initial insurance against weeds is adequate moisture and high germination. Following recommended seeding rates is also essential; these rates were established to help ensure a population of flowers that will compete favorably with weeds and grasses.

Before planting, remove existing weeds by pulling, tilling under, by use of an herbicide such as Roundup or KLEENUP, or by a combination of these methods. If practical, weeds that emerge with wildflower seedlings should be pulled as soon as they are identified.

Following are two methods for preparing the soil where much ground cover is present. Step 1: Rototill or plow soil to uproot vegetation. Where feasible, remove plants by raking. (This technique works well for annuals, but certain perennials, e.g., Bindweed, will not be killed.) Step 2: Irrigate the area to encourage germination of weed seeds near the surface of the soil; most will germinate within two weeks if consistent moisture is available. Do not rototill or plow the soil again because this will bring even



Papaver rhoeas
Corn Poppy

more seeds to the surface. Spray any new growth with Roundup or KLEENUP. Allow the soil to recover for two months before planting wildflowers. From our experience, a two-month recovery period is advisable because use of these herbicides may cause a delay in germination and vigorous growth of seedlings.

Another method is to apply Roundup or KLEENUP as a first step. Remove dead materials by cutting and raking or, in large areas, by cutting and combining. Or the dead vegetation may be rototilled or plowed and disked into the ground. Irrigate the area and proceed as in Step 2. Wildflowers may be planted in late fall, in which case the seeds will remain dormant during the recovery period.

Hydroseeding, Hydromulching

Hydroseeding is the application of a slurry of seed and water to soil. The slurry may also contain wood fiber (hydromulching) and other amendments. The purpose of the fiber mulch is to hold seeds in place, help retain moisture and provide protection from erosion; fibers are usually dyed green as a visual aid in even distribution. In general, hydroseeding/hydromulching is most successful in moist climates or in irrigated areas.

Most authorities agree that germination is better when seed is applied first with 5-10% of the mulching fiber — the balance of the mulch being applied separately as a second step. This approach ensures optimal seed/soil contact; otherwise, many seeds are wasted because they become suspended in the fiber.

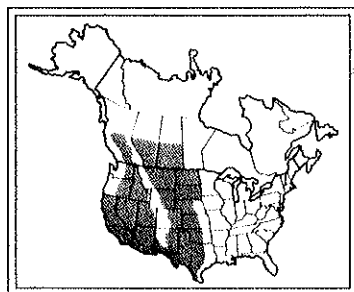
Reports also indicate that seed damage has been excessive with certain practices and machines. For example, centrifugal pumps should not be used to apply seed without fiber — the seed should be either broadcast by hand or applied with the use of a gear pump. Also, seed must not be placed in water until immediately before application.

Numerous reports on hydroseeding and hydromulching in the western United States have been published by the University of California at Davis (notably by Burgess L. Kay, Department of Agronomy).

Mixtures for Special Uses

8043 Dry Mixture

(10-30 inches rainfall/year)

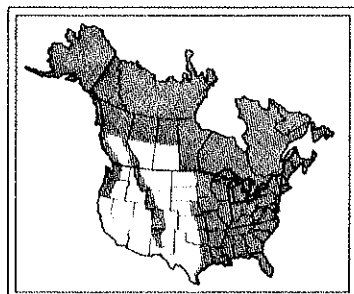


Price		Planting Rate:
Ounce	\$ 5.50	4 lbs./acre
Pound	\$42.00	Seeds/lb.: 706,000
4 pounds	\$30.00/lb.	Seeds/sq. ft.: 64
20 pounds	\$25.00/lb.	Min. PLS: 60

Scientific Name	Common Name	Type*	Color
<i>Achillea millefolium</i>	White Yarrow	P	White
<i>Centaurea cyanus</i>	Cornflower	A	Blue
<i>Chrysanthemum carinatum</i>	Painted Daisy	A	White/Yellow/Red/Purple
<i>Coreopsis tinctoria</i>	Plains Coreopsis	A	Yellow/Maroon
<i>Dianthus barbatus/D. deltoides</i>	Pinks	P	Pink/Red/White
<i>Eschscholzia californica</i>	California Poppy	TP	Yellow/Orange
<i>Gaillardia aristata</i>	Perennial Gaillardia	P	Yellow/Red
<i>Gaillardia pulchella</i>	Annual Gaillardia	A	Yellow/Red
<i>Gypsophila elegans</i>	Baby's Breath	A	White
<i>Linaria maroccana</i>	Spurred Snapdragon	A	Pink/Yellow/Violet
<i>Linum perenne lewisii</i>	Blue Flax	P	Blue
<i>Lobularia maritima</i>	Sweet Alyssum	TP	White
<i>Oenothera missouriensis</i>	Dwarf Evening Primrose	P	Yellow
<i>Papaver rhoeas</i>	Corn Poppy	A	White/Pink/Red
<i>Penstemon strictus</i>	Penstemon	P	Blue
<i>Ratibida columnifera</i>	Prairie Coneflower	B/P	Yellow/Red
<i>Silene armeria</i>	Catchfly	A/B	Pink

8044 Moist Mixture

(Over 30 inches rainfall/year)



Price		Planting Rate:
Ounce	\$ 5.50	6 lbs./acre
Pound	\$42.00	Seeds/lb.: 400,000
4 pounds	\$30.00/lb.	Seeds/sq. ft.: 49
20 pounds	\$25.00/lb.	Min. PLS: 60

Scientific Name	Common Name	Type*	Color
<i>Aquilegia caerulea/A. vulgaris</i>	Columbine	P	Yellow/Red/Violet/Blue
<i>Cheiranthus allionii/C. cheiri</i>	Wallflower	P	Orange/Pink/Red
<i>Chrysanthemum leucanthemum</i>	Ox-Eye Daisy	P	White
<i>Clarkia unguiculata</i>	Clarkia	A	Pink/Lavender
<i>Coreopsis lanceolata</i>	Lance-Leaved Coreopsis	P	Yellow
<i>Delphinium ajacis</i>	Rocket Larkspur	A	White/Pink/Blue/Violet
<i>Echinacea purpurea</i>	Purple Coneflower	P	Purple
<i>Hesperis matronalis</i>	Dame's Rocket	P	Violet
<i>Iberis umbellata</i>	Candytuft	A	White/Pink/Violet
<i>Lavatera trimestris</i>	Tree Mallow	A	White/Pink/Violet
<i>Liatris spicata</i>	Gayfeather	P	Purple
<i>Linum grandiflorum rubrum</i>	Scarlet Flax	A	Scarlet
<i>Myosotis sylvatica</i>	Forget-Me-Not	A	Blue
<i>Nemophila menziesii</i>	Baby Blue-Eyes	A	Blue
<i>Rudbeckia hirta</i>	Black-Eyed Susan	A/B/P	Yellow
<i>Viola cornuta</i>	Johnny Jump-Up	P	Purple/Yellow/Blue

*A: Annual. B: Biennial. P: Perennial. TP: Tender perennial, grown as an annual in cold climates.

8080 Knee-Hi Mixture

(Less than 24 inches high)



Price

Ounce	\$ 5.50
Pound	\$42.00
4 pounds	\$30.00/lb.
20 pounds	\$25.00/lb.

Planting Rate:

6 lbs./acre
Seeds/lb.: 506,000
Seeds/sq. ft.: 70
Min. PLS: 60

Scientific Name	Common Name	Type*	Color
<i>Centaurea cyanus</i> (dwarf)	Dwarf Cornflower	A	Blue
<i>Cheiranthus allionii</i>	Wallflower	B/P	Orange
<i>Coreopsis lanceolata</i>	Lance-Leaved Coreopsis	P	Yellow
<i>Coreopsis tinctoria</i>	Plains Coreopsis	A/B	Yellow/Maroon
<i>Delphinium ajacis</i>	Rocket Larkspur	A	White/Pink/Blue/Violet
<i>Dimorphotheca aurantiaca</i>	African Daisy	A	White/Orange/Salmon
<i>Eschscholzia californica</i>	California Poppy	TP	Yellow/Orange
<i>Gaillardia aristata</i>	Perennial Gaillardia	P	Yellow/Red
<i>Gypsophila elegans</i>	Baby's Breath	A	White
<i>Iberis umbellata</i>	Candytuft	A	White/Pink/Violet
<i>Linum grandiflorum rubrum</i>	Scarlet Flax	A	Scarlet
<i>Linum perenne lewisii</i> (photo)	Blue Flax	P	Blue
<i>Lobularia maritima</i>	Sweet Alyssum	TP	White
<i>Papaver rhoeas</i>	Corn Poppy	A	White/Pink/Red
<i>Ratibida columnifera</i>	Prairie Coneflower	B/P	Yellow/Red
<i>Rudbeckia hirta</i>	Black-Eyed Susan	A/B/P	Yellow
<i>Silene armeria</i>	Catchfly	A/B	Pink

8079 Low-Growing Mixture

(Less than 16 inches high)



Price

Ounce	\$ 5.50
Pound	\$42.00
4 pounds	\$30.00/lb.
20 pounds	\$25.00/lb.

Planting Rate:

4 lbs./acre
Seeds/lb.: 733,000
Seeds/sq. ft.: 67
Min. PLS: 60

Scientific Name	Common Name	Type*	Color
<i>Centaurea cyanus</i> (dwarf)	Dwarf Cornflower	A	Blue
<i>Cheiranthus allionii</i>	Wallflower	B/P	Orange
<i>Coreopsis lanceolata</i> (dwarf)	Dwarf Lance-Leaved Coreopsis	P	Yellow
<i>Coreopsis tinctoria</i> (dwarf)	Dwarf Plains Coreopsis	A	Yellow/Maroon
<i>Dimorphotheca aurantiaca</i> (photo)	African Daisy	A	White/Orange/Salmon
<i>Eschscholzia californica</i>	California Poppy	TP	Yellow/Orange
<i>Gypsophila elegans</i>	Baby's Breath	A	White
<i>Iberis umbellata</i>	Candytuft	A	White/Pink/Violet
<i>Linaria maroccana</i>	Spurred Snapdragon	A	Pink/Yellow/Violet
<i>Lobularia maritima</i>	Sweet Alyssum	TP	White
<i>Myosotis sylvatica</i>	Forget-Me-Not	A	Blue
<i>Oenothera missouriensis</i>	Dwarf Evening Primrose	P	Yellow
<i>Papaver nudicaule</i>	Iceland Poppy	P	White/Yellow/Orange
<i>Phacelia campanularia</i>	California Bluebell	A	Blue
<i>Silene armeria</i> (dwarf)	Dwarf Catchfly	A	Pink
<i>Viola cornuta</i>	Johnny Jump-Up	P	Purple/Yellow/Blue

*A: Annual. B: Biennial. P: Perennial. TP: Tender perennial, grown as an annual in cold climates.

Mixtures for Special Uses, cont'd.

8045 Shade Mixture



Price

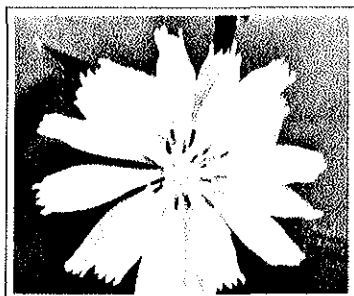
Ounce	\$ 7.50
Pound	\$60.00
4 pounds	\$40.00/lb.
20 pounds	\$35.00/lb.

Planting Rate:

4 lbs./acre
Seeds/lb.: 780,000
Seeds/sq. ft.: 71
Min. PLS: 60

Scientific Name	Common Name	Type*	Color
<i>Aquilegia caerulea/A. vulgaris</i>	Columbine	P	Yellow/Red/Violet/Blue
<i>Chrysanthemum leucanthemum</i>	Ox-Eye Daisy	P	White
<i>Clarkia unguiculata</i>	Clarkia	A	Pink/Lavender
<i>Coreopsis lanceolata</i>	Lance-Leaved Coreopsis	P	Yellow
<i>Delphinium ajacis</i>	Rocket Larkspur	A	White/Pink/Blue/Violet
<i>Dianthus barbatus</i>	Pinks	P	Red
<i>Echinacea purpurea</i>	Purple Coneflower	P	Purple
<i>Gypsophila elegans</i>	Baby's Breath	A	White
<i>Hesperis matronalis</i>	Dame's Rocket	P	Violet
<i>Iberis umbellata</i>	Candytuft	A	White/Pink/Violet
<i>Linaria maroccana</i>	Spurred Snapdragon	A	Pink/Yellow/Violet
<i>Mimulus tigrinus</i>	Monkeyflower	A	Yellow/Red
<i>Myosotis sylvatica</i>	Forget-Me-Not	A/B	Blue
<i>Nemophila menziesii</i>	Baby Blue-Eyes	A	Blue
<i>Papaver rhoeas</i>	Corn Poppy	A	White/Pink/Red
<i>Viola cornuta (photo)</i>	Johnny Jump-Up	P	Purple/Yellow/Blue

8086 Aggressive Amendment



This Amendment is for use only as a supplement to Applewood Regional or Special-Use Mixtures; it is not a balanced mixture if used alone. For details, see p. 4, "New Mixture for Difficult Sites."

Price

Ounce	\$ 5.50
Pound	\$30.00
4 pounds	\$20.00/lb.
20 pounds	\$18.00/lb.

Planting Rate:

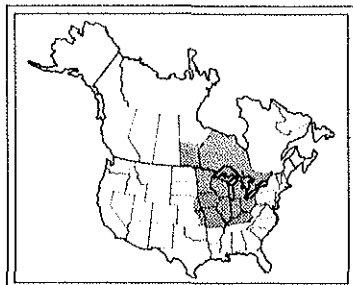
See p. 4
Seeds/lb.: 430,000
Min. PLS: 60

Scientific Name	Common Name	Type*	Color
<i>Achillea millefolium</i>	White Yarrow	P	White
<i>Centaurea cyanus</i>	Cornflower	A	Blue
<i>Cerastium biebersteinii</i>	Snow-in-Summer	P	White
<i>Cheiranthus allionii</i>	Wallflower	B/P	Orange
<i>Cheiranthus cheiri</i>	Wallflower	B/P	Orange/Pink/Red
<i>Cichorium intybus (photo)</i>	Chicory	P	Blue
<i>Cosmos bipinnatus</i>	Cosmos	A	White/Pink/Crimson
<i>Eschscholzia californica</i>	California Poppy	TP	Yellow/Orange
<i>Gypsophila elegans</i>	Annual Baby's Breath	A	White
<i>Gypsophila paniculata</i>	Perennial Baby's Breath	P	White
<i>Helianthus annuus</i>	Sunflower	A	Yellow
<i>Hesperis matronalis</i>	Dame's Rocket	P	Violet
<i>Lathyrus latifolius</i>	Perennial Sweet Pea	P	Rose/Pink
<i>Linum perenne lewisii</i>	Blue Flax	P	Blue
<i>Lotus corniculatus</i>	Bird's-Foot Trefoil	P	Yellow
<i>Oenothera hookeri</i>	Tall Evening Primrose	B/P	Yellow
<i>Rudbeckia hirta</i>	Black-Eyed Susan	A/B/P	Yellow
<i>Sanguisorba minor</i>	Small Burnet	P	Green

*A: Annual. B: Biennial. P: Perennial. TP: Tender perennial, grown as an annual in cold climates.

Regional Wildflower Mixtures

8046 Midwest Mixture

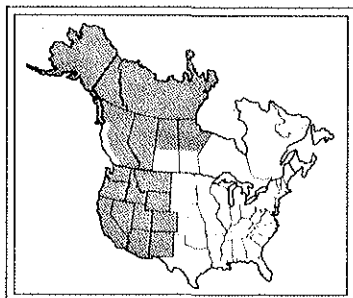


U.S.: Illinois, Indiana, Iowa, eastern Kansas, Kentucky, Michigan, Minnesota, Missouri, eastern Nebraska, Ohio, Wisconsin.
Canada: southern Manitoba, Ontario.

Price		Planting Rate:
Ounce	\$ 6.00	5 lbs./acre
Pound	\$48.00	Seeds/lb.: 642,000
4 pounds	\$33.00/lb.	Seeds/sq. ft.: 72
20 pounds	\$28.00/lb.	Min. PLS: 60

Scientific Name	Common Name	Type*	Color
<i>Achillea filipendulina</i>	Gold Yarrow	P	Gold
<i>Achillea millefolium</i>	White Yarrow	P	White
<i>Centaurea cyanus</i>	Cornflower	A	Blue
<i>Cheiranthus allionii/C. cheiri</i>	Wallflower	B/P	Orange/Pink/Red
<i>Chrysanthemum leucanthemum</i>	Ox-Eye Daisy	P	White
<i>Coreopsis lanceolata</i>	Lance-Leaved Coreopsis	P	Yellow
<i>Delphinium ajacis</i>	Rocket Larkspur	A	White/Pink/Blue/Violet
<i>Dianthus barbatus/D. deltoides</i>	Pinks	P	Pink/Red/White
<i>Dimorphotheca aurantiaca</i>	African Daisy	A	White/Orange/Salmon
<i>Echinacea purpurea</i>	Purple Coneflower	P	Purple
<i>Gaillardia pulchella</i>	Annual Gaillardia	A	Yellow/Red
<i>Gypsophila elegans</i>	Baby's Breath	A	White
<i>Hesperis matronalis</i>	Dame's Rocket	P	Violet
<i>Iberis umbellata</i>	Candytuft	A	White/Pink/Violet
<i>Liatris spicata</i>	Gayfeather	P	Purple
<i>Linaria maroccana</i>	Spurred Snapdragon	A	Pink/Yellow/Violet
<i>Linum grandiflorum rubrum</i>	Scarlet Flax	A	Scarlet
<i>Lupinus perennis</i>	Perennial Lupine	P	Blue
<i>Machaeranthera tanacetifolia</i>	Prairie Aster	B	Violet
<i>Oenothera missouriensis</i>	Dwarf Evening Primrose	P	Yellow
<i>Papaver rhoeas</i>	Corn Poppy	A	White/Pink/Red
<i>Ratibida columnifera</i>	Prairie Coneflower	B/P	Yellow/Red
<i>Rudbeckia hirta</i>	Black-Eyed Susan	A/B/P	Yellow
<i>Silene armeria</i>	Catchfly	A/B	Pink

8047 Mountain Mixture



Above 7,000 ft.: Arizona, southern Alberta, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming.

All elevations: Alaska, northern Alberta, eastern British Columbia, northern Manitoba, N.W. Territories, northern Saskatchewan, Yukon.

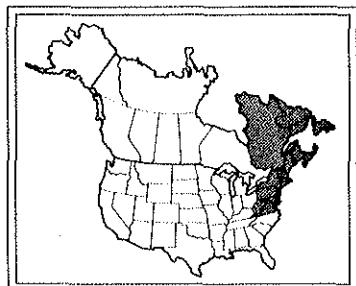
Price		Planting Rate:
Ounce	\$ 6.00	5 lbs./acre
Pound	\$48.00	Seeds/lb.: 528,000
4 pounds	\$33.00/lb.	Seeds/sq. ft.: 60
20 pounds	\$28.00/lb.	Min. PLS: 60

Scientific Name	Common Name	Type*	Color
<i>Achillea filipendulina</i>	Gold Yarrow	P	Gold
<i>Achillea millefolium</i>	White Yarrow	P	White
<i>Aquilegia caerulea</i>	Columbine	P	Yellow/Red/Violet/Blue
<i>Campanula rotundifolia/C. carpatica</i>	Harebell/Bellflower	P	Lavender-Blue
<i>Centaurea cyanus</i>	Cornflower	A	Blue
<i>Cerastium biebersteinii</i>	Snow-in-Summer	P	White
<i>Cheiranthus allionii/C. cheiri</i>	Wallflower	B/P	Orange/Pink/Red
<i>Chrysanthemum leucanthemum</i>	Ox-Eye Daisy	P	White
<i>Delphinium ajacis</i>	Rocket Larkspur	A	White/Pink/Blue/Violet
<i>Dianthus barbatus/D. deltoides</i>	Pinks	P	Pink/Red/White
<i>Eschscholzia californica</i>	California Poppy	TP	Yellow/Orange
<i>Gaillardia aristata</i>	Perennial Gaillardia	P	Yellow/Red
<i>Gypsophila elegans</i>	Baby's Breath	A	White
<i>Hesperis matronalis</i>	Dame's Rocket	P	Violet
<i>Linum perenne lewisii</i>	Blue Flax	P	Blue
<i>Lupinus perennis</i>	Perennial Lupine	P	Blue
<i>Myosotis sylvatica</i>	Forget-Me-Not	A/B	Blue
<i>Oenothera missouriensis</i>	Dwarf Evening Primrose	P	Yellow
<i>Penstemon strictus</i>	Penstemon	P	Blue
<i>Rudbeckia hirta</i>	Black-Eyed Susan	A/B/P	Yellow
<i>Silene armeria</i>	Catchfly	A/B	Pink

*A: Annual. B: Biennial. P: Perennial. TP: Tender perennial, grown as an annual in cold climates.

Regional Wildflower Mixtures, cont'd.

8048 Northeast Mixture



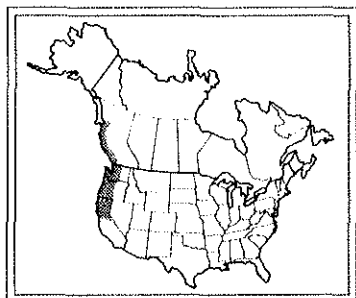
U.S.: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, Washington DC, West Virginia. **Canada:** Maritime Provinces, Newfoundland, Quebec.

Price		Planting Rate:
Ounce	\$ 600	5 lbs./acre
Pound	\$48.00	Seeds/lb.: 585,000
4 pounds	\$33.00/lb.	Seeds/sq. ft.: 66
20 pounds	\$28.00/lb.	Min. PLS: 60

Scientific Name	Common Name	Type*	Color
<i>Achillea filipendulina</i>	Gold Yarrow	P	Gold
<i>Achillea millefolium</i>	White Yarrow	P	White
<i>Aster novae-angliae</i>	New England Aster	P	Violet
<i>Centaurea cyanus</i>	Cornflower	A	Blue
<i>Cheiranthus allionii/C. cheiri</i>	Wallflower	B/P	Orange/Pink/Red
<i>Chrysanthemum leucanthemum</i>	Ox-Eye Daisy	P	White
<i>Coreopsis lanceolata</i>	Lance-Leaved Coreopsis	P	Yellow
<i>Delphinium ajacis</i>	Rocket Larkspur	A	White/Pink/Blue/Violet
<i>Dianthus barbatus/D. deltoides</i>	Pinks	P	Pink/Red/White
<i>Digitalis purpurea</i>	Foxglove	B/P	Purple/Cream
<i>Echinacea purpurea</i>	Purple Coneflower	P	Purple
<i>Gypsophila elegans</i>	Baby's Breath	A	White
<i>Hesperis matronalis</i>	Dame's Rocket	P	Violet
<i>Ipomopsis rubra</i>	Gilia	B	White/Red/Coral
<i>Liatris spicata</i>	Gayfeather	P	Purple
<i>Linaria maroccana</i>	Spurred Snapdragon	A	Pink/Yellow/Violet
<i>Linum grandiflorum rubrum</i>	Scarlet Flax	A	Scarlet
<i>Lupinus perennis</i>	Perennial Lupine	P	Blue
<i>Oenothera missouriensis</i>	Dwarf Evening Primrose	P	Yellow
<i>Papaver rhoeas</i>	Corn Poppy	A	White/Pink/Red
<i>Rudbeckia hirta</i>	Black-Eyed Susan	A/B/P	Yellow
<i>Silene armeria</i>	Catchfly	A/B	Pink

8049 Northwest Mixture

(Below 7,000 ft.)



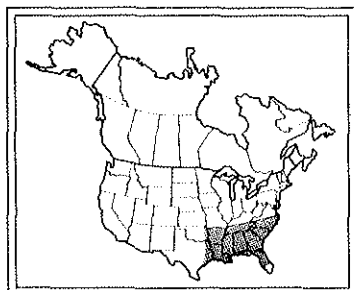
U.S.: northern California, western Oregon, western Washington. **Canada:** coast of British Columbia.

Price		Planting Rate:
Ounce	\$ 600	5 lbs./acre
Pound	\$48.00	Seeds/lb.: 612,000
4 pounds	\$33.00/lb.	Seeds/sq. ft.: 69
20 pounds	\$28.00/lb.	Min. PLS: 60

Scientific Name	Common Name	Type*	Color
<i>Aquilegia caerulea</i>	Columbine	P	Yellow/Red/Violet/Blue
<i>Cheiranthus allionii/C. cheiri</i>	Wallflower	B/P	Orange/Pink/Red
<i>Chrysanthemum leucanthemum</i>	Ox-Eye Daisy	P	White
<i>Clarkia unguiculata</i>	Clarkia	A	Pink/Lavender
<i>Collinsia heterophylla</i>	Chinese Houses	A	White/Violet
<i>Coreopsis lanceolata</i>	Lance-Leaved Coreopsis	P	Yellow
<i>Delphinium ajacis</i>	Rocket Larkspur	A	White/Pink/Blue/Violet
<i>Dianthus barbatus/D. deltoides</i>	Pinks	P	Pink/Red/White
<i>Eschscholzia californica</i>	California Poppy	TP	Yellow/Orange
<i>Gilia tricolor</i>	Bird's Eyes	A	Lavender/White
<i>Hesperis matronalis</i>	Dame's Rocket	P	Violet
<i>Liatris spicata</i>	Gayfeather	P	Purple
<i>Linaria maroccana</i>	Spurred Snapdragon	A	Pink/Yellow/Violet
<i>Linum grandiflorum rubrum</i>	Scarlet Flax	A	Scarlet
<i>Lobularia maritima</i>	Sweet Alyssum	TP	White
<i>Mirabilis jalapa</i>	Four-O'Clock	TP	Red/Pink/Yellow/White
<i>Nemophila maculata</i>	Five-Spot	A	White/Purple
<i>Nemophila menziesii</i>	Baby Blue-Eyes	A	Blue
<i>Papaver rhoeas</i>	Corn Poppy	A	White/Pink/Red
<i>Rudbeckia hirta</i>	Black-Eyed Susan	A/B/P	Yellow
<i>Silene armeria</i>	Catchfly	A/B	Pink

*A: Annual. B: Biennial. P: Perennial. TP: Tender perennial, grown as an annual in cold climates.

8050 Southeast Mixture



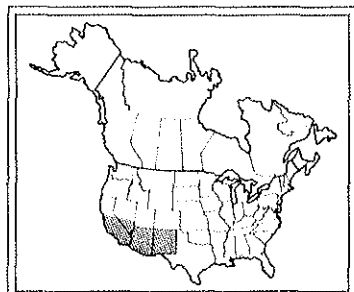
Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, eastern Oklahoma, Tennessee, eastern Texas, South Carolina. (For southern Florida, the Gulf Coast/Caribbean Mixture may be appropriate.)

Price		Planting Rate:
Ounce	\$ 6.00	7 lbs./acre
Pound	\$48.00	Seeds/lb.: 342,000
4 pounds	\$33.00/lb.	Seeds/sq. ft.: 54
20 pounds	\$28.00/lb.	Min. PLS: 60

Scientific Name	Common Name	Type*	Color
<i>Centaurea cyanus</i>	Cornflower	A	Blue
<i>Cheiranthus allionii/C. cheiri</i>	Wallflower	B/P	Orange/Pink/Red
<i>Coreopsis lanceolata</i>	Lance-Leaved Coreopsis	P	Yellow
<i>Coreopsis tinctoria</i>	Plains Coreopsis	A	Yellow/Maroon
<i>Delphinium ajacis</i>	Rocket Larkspur	A	White/Pink/Blue/Violet
<i>Echinacea purpurea</i>	Purple Coneflower	P	Purple
<i>Eschscholzia californica</i>	California Poppy	TP	Yellow/Orange
<i>Gaillardia pulchella</i>	Annual Gaillardia	A	Yellow/Red
<i>Gilia tricolor</i>	Bird's Eyes	A	Lavender/White
<i>Gypsophila elegans</i>	Baby's Breath	A	White
<i>Hesperis matronalis</i>	Dame's Rocket	P	Violet
<i>Ipomopsis rubra</i>	Gilia	B	White/Red/Coral
<i>Lavatera trimestris</i>	Tree Mallow	A	White/Pink/Violet
<i>Liatris spicata</i>	Gayfeather	P	Purple
<i>Linum grandiflorum rubrum</i>	Scarlet Flax	A	Scarlet
<i>Lobularia maritima</i>	Sweet Alyssum	TP	White
<i>Lupinus perennis</i>	Perennial Lupine	P	Blue
<i>Mirabilis jalapa</i>	Four-O'Clock	TP	Red/Pink/Yellow/White
<i>Nemophila menziesii</i>	Baby Blue-Eyes	A	Blue
<i>Papaver rhoeas</i>	Corn Poppy	A	White/Pink/Red
<i>Rudbeckia hirta</i>	Black-Eyed Susan	A/B/P	Yellow

8051 Southwest Mixture

(Below 7,000 ft.)



Arizona, southern California, southern Nevada, New Mexico.

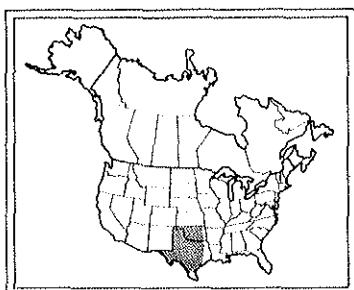
Price		Planting Rate:
Ounce	\$ 6.00	6 lbs./acre
Pound	\$48.00	Seeds/lb.: 478,000
4 pounds	\$33.00/lb.	Seeds/sq. ft.: 65
20 pounds	\$28.00/lb.	Min. PLS: 60

Scientific Name	Common Name	Type*	Color
<i>Achillea filipendulina</i>	Gold Yarrow	P	Gold
<i>Achillea millefolium</i>	White Yarrow	P	White
<i>Centaurea cyanus</i>	Cornflower	A	Blue
<i>Clarkia unguiculata</i>	Clarkia	A	Pink/Lavender
<i>Coreopsis tinctoria</i>	Plains Coreopsis	A	Yellow/Maroon
<i>Dimorphotheca aurantiaca</i>	African Daisy	A	White/Orange/Salmon
<i>Eschscholzia californica</i>	California Poppy	TP	Yellow/Orange
<i>Gaillardia pulchella</i>	Annual Gaillardia	A	Yellow/Red
<i>Gilia tricolor</i>	Bird's Eyes	A	Lavender/White
<i>Gypsophila elegans</i>	Baby's Breath	A	White
<i>Layia platyglossa</i>	Tidy-Tips	A	Yellow/White
<i>Linaria maroccana</i>	Spurred Snapdragon	A	Pink/Yellow/Violet
<i>Linum grandiflorum rubrum</i>	Scarlet Flax	A	Scarlet
<i>Linum perenne lewisii</i>	Blue Flax	P	Blue
<i>Lobularia maritima</i>	Sweet Alyssum	TP	White
<i>Machaeranthera tanacetifolia</i>	Prairie Aster	B	Violet
<i>Mirabilis jalapa</i>	Four-O'Clock	TP	Red/Pink/Yellow/White
<i>Nemophila maculata</i>	Five-Spot	A	White/Purple
<i>Nemophila menziesii</i>	Baby Blue-Eyes	A	Blue
<i>Papaver rhoeas</i>	Corn Poppy	A	White/Pink/Red
<i>Penstemon spp.</i>	Penstemon	P	Lavender/Blue/Purple
<i>Ratibida columnifera</i>	Prairie Coneflower	B/P	Yellow/Red

*A: Annual. B: Biennial. P: Perennial. TP: Tender perennial, grown as an annual in cold climates.

Regional Wildflower Mixtures, cont'd.

8052 Texas/Oklahoma Mixture



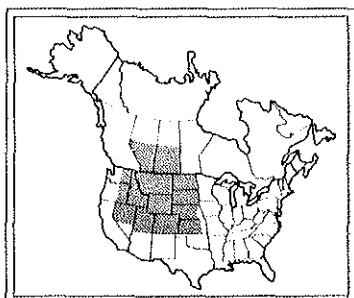
(For southern Texas, the Gulf Coast/
Caribbean Mixture may be appropriate.)

Price		Planting Rate:
Ounce	\$ 6.00	6 lbs./acre
Pound	\$48.00	Seeds/lb.: 430,000
4 pounds	\$33.00/lb.	Seeds/sq. ft.: 58
20 pounds	\$28.00/lb.	Min. PLS: 60

Scientific Name	Common Name	Type*	Color
<i>Achillea filipendulina</i>	Gold Yarrow	P	Gold
<i>Achillea millefolium</i>	White Yarrow	P	White
<i>Centaurea cyanus</i>	Cornflower	A	Blue
<i>Cheiranthus allionii/C. cheiri</i>	Wallflower	B/P	Orange/Pink/Red
<i>Chrysanthemum carinatum</i>	Painted Daisy	A	White/Yellow/Red/Purple
<i>Coreopsis lanceolata</i>	Lance-Leaved Coreopsis	P	Yellow
<i>Coreopsis tinctoria</i>	Plains Coreopsis	A	Yellow/Maroon
<i>Dianthus barbatus/D. deltoides</i>	Pinks	P	Pink/Red/White
<i>Dimorphotheca aurantiaca</i>	African Daisy	A	White/Orange/Salmon
<i>Echinacea purpurea</i>	Purple Coneflower	P	Purple
<i>Gaillardia aristata</i>	Perennial Gaillardia	P	Yellow/Red
<i>Gaillardia pulchella</i>	Annual Gaillardia	A	Yellow/Red
<i>Gypsophila elegans</i>	Baby's Breath	A	White
<i>Iberis umbellata</i>	Candytuft	A	White/Pink/Violet
<i>Linaria maroccana</i>	Spurred Snapdragon	A	Pink/Yellow/Violet
<i>Linum grandiflorum rubrum</i>	Scarlet Flax	A	Scarlet
<i>Linum perenne lewisii</i>	Blue Flax	P	Blue
<i>Lobularia maritima</i>	Sweet Alyssum	TP	White
<i>Lupinus texensis</i>	Texas Bluebonnet	A	Blue
<i>Mirabilis jalapa</i>	Four-O'Clock	TP	Red/Pink/Yellow/White
<i>Nemophila menziesii</i>	Baby Blue-Eyes	A	Blue
<i>Oenothera missouriensis</i>	Dwarf Evening Primrose	P	Yellow
<i>Papaver rhoeas</i>	Corn Poppy	A	White/Pink/Red
<i>Ratibida columnifera</i>	Prairie Coneflower	B/P	Yellow/Red
<i>Rudbeckia hirta</i>	Black-Eyed Susan	A/B/P	Yellow

8053 Western Mixture

(Below 7,000 ft.)



U.S.: Colorado, Idaho, western Kansas, Montana, western Nebraska, northern Nevada, North Dakota, eastern Oregon, South Dakota, Utah, eastern Washington, Wyoming. **Canada:** southern Alberta, southern Saskatchewan.

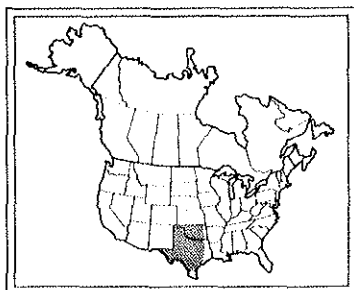
Price		Planting Rate:
Ounce	\$ 6.00	5 lbs./acre
Pound	\$48.00	Seeds/lb.: 573,000
4 pounds	\$33.00/lb.	Seeds/sq. ft.: 65
20 pounds	\$28.00/lb.	Min. PLS: 60

Scientific Name	Common Name	Type*	Color
<i>Achillea filipendulina</i>	Gold Yarrow	P	Gold
<i>Achillea millefolium</i>	White Yarrow	P	White
<i>Centaurea cyanus</i>	Cornflower	A	Blue
<i>Cerastium biebersteinii</i>	Snow-in-Summer	P	White
<i>Chrysanthemum carinatum</i>	Painted Daisy	A	Yellow/Red/Purple/White
<i>Clarkia unguiculata</i>	Clarkia	A	Pink/Lavender
<i>Coreopsis tinctoria</i>	Plains Coreopsis	A	Yellow/Maroon
<i>Dianthus barbatus/D. deltoides</i>	Pinks	P	Pink/Red/White
<i>Dimorphotheca aurantiaca</i>	African Daisy	A	White/Orange/Salmon
<i>Eschscholzia californica</i>	California Poppy	TP	Yellow/Orange
<i>Gaillardia aristata</i>	Perennial Gaillardia	P	Yellow/Red
<i>Gaillardia pulchella</i>	Annual Gaillardia	A	Yellow/Red
<i>Gypsophila elegans</i>	Baby's Breath	A	White
<i>Iberis umbellata</i>	Candytuft	A	White/Pink/Violet
<i>Linaria maroccana</i>	Spurred Snapdragon	A	Pink/Yellow/Violet
<i>Linum grandiflorum rubrum</i>	Scarlet Flax	A	Scarlet
<i>Linum perenne lewisii</i>	Blue Flax	P	Blue
<i>Lobularia maritima</i>	Sweet Alyssum	TP	White
<i>Lupinus perennis</i>	Perennial Lupine	P	Blue
<i>Machaeranthera tanacetifolia</i>	Prairie Aster	B	Violet
<i>Oenothera missouriensis</i>	Dwarf Evening Primrose	P	Yellow
<i>Papaver rhoeas</i>	Corn Poppy	A	White/Pink/Red
<i>Penstemon strictus</i>	Penstemon	P	Blue
<i>Ratibida columnifera</i>	Prairie Coneflower	B/P	Yellow/Red

*A: Annual. B: Biennial. P: Perennial. TP: Tender perennial, grown as an annual in cold climates.

Regional Wildflower Mixtures, cont'd.

8052 Texas/Oklahoma Mixture



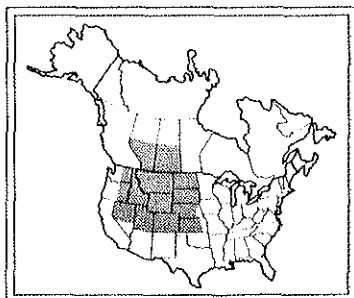
(For southern Texas, the Gulf Coast/
Caribbean Mixture may be appropriate.)

Price		Planting Rate:	
Ounce	\$ 6.00	6 lbs./acre	
Pound	\$48.00	Seeds/lb.: 430,000	
4 pounds	\$33.00/lb.	Seeds/sq. ft.: 58	
20 pounds	\$28.00/lb.	Min. PLS: 60	

Scientific Name	Common Name	Type*	Color
<i>Achillea filipendulina</i>	Gold Yarrow	P	Gold
<i>Achillea millefolium</i>	White Yarrow	P	White
<i>Centaurea cyanus</i>	Cornflower	A	Blue
<i>Cheiranthus allionii/C. cheiri</i>	Wallflower	B/P	Orange/Pink/Red
<i>Chrysanthemum carinatum</i>	Painted Daisy	A	White/Yellow/Red/Purple
<i>Coreopsis lanceolata</i>	Lance-Leaved Coreopsis	P	Yellow
<i>Coreopsis tinctoria</i>	Plains Coreopsis	A	Yellow/Maroon
<i>Dianthus barbatus/D. deltoides</i>	Pinks	P	Pink/Red/White
<i>Dimorphotheca aurantiaca</i>	African Daisy	A	White/Orange/Salmon
<i>Echinacea purpurea</i>	Purple Coneflower	P	Purple
<i>Gaillardia aristata</i>	Perennial Gaillardia	P	Yellow/Red
<i>Gaillardia pulchella</i>	Annual Gaillardia	A	Yellow/Red
<i>Gypsophila elegans</i>	Baby's Breath	A	White
<i>Iberis umbellata</i>	Candytuft	A	White/Pink/Violet
<i>Linaria maroccana</i>	Spurred Snapdragon	A	Pink/Yellow/Violet
<i>Linum grandiflorum rubrum</i>	Scarlet Flax	A	Scarlet
<i>Linum perenne lewisii</i>	Blue Flax	P	Blue
<i>Lobularia maritima</i>	Sweet Alyssum	TP	White
<i>Lupinus texensis</i>	Texas Bluebonnet	A	Blue
<i>Mirabilis jalapa</i>	Four-O'Clock	TP	Red/Pink/Yellow/White
<i>Nemophila menziesii</i>	Baby Blue-Eyes	A	Blue
<i>Oenothera missouriensis</i>	Dwarf Evening Primrose	P	Yellow
<i>Papaver rhoeas</i>	Corn Poppy	A	White/Pink/Red
<i>Ratibida columnifera</i>	Prairie Coneflower	B/P	Yellow/Red
<i>Rudbeckia hirta</i>	Black-Eyed Susan	A/B/P	Yellow

8053 Western Mixture

(Below 7,000 ft.)



U.S.: Colorado, Idaho, western Kansas, Montana, western Nebraska, northern Nevada, North Dakota, eastern Oregon, South Dakota, Utah, eastern Washington, Wyoming. **Canada:** southern Alberta, southern Saskatchewan.

Price		Planting Rate:	
Ounce	\$ 6.00	5 lbs./acre	
Pound	\$48.00	Seeds/lb.: 573,000	
4 pounds	\$33.00/lb.	Seeds/sq. ft.: 65	
20 pounds	\$28.00/lb.	Min. PLS: 60	

Scientific Name	Common Name	Type*	Color
<i>Achillea filipendulina</i>	Gold Yarrow	P	Gold
<i>Achillea millefolium</i>	White Yarrow	P	White
<i>Centaurea cyanus</i>	Cornflower	A	Blue
<i>Cerastium biebersteinii</i>	Snow-in-Summer	P	White
<i>Chrysanthemum carinatum</i>	Painted Daisy	A	Yellow/Red/Purple/White
<i>Clarkia unguiculata</i>	Clarkia	A	Pink/Lavender
<i>Coreopsis tinctoria</i>	Plains Coreopsis	A	Yellow/Maroon
<i>Dianthus barbatus/D. deltoides</i>	Pinks	P	Pink/Red/White
<i>Dimorphotheca aurantiaca</i>	African Daisy	A	White/Orange/Salmon
<i>Eschscholzia californica</i>	California Poppy	TP	Yellow/Orange
<i>Gaillardia aristata</i>	Perennial Gaillardia	P	Yellow/Red
<i>Gaillardia pulchella</i>	Annual Gaillardia	A	Yellow/Red
<i>Gypsophila elegans</i>	Baby's Breath	A	White
<i>Iberis umbellata</i>	Candytuft	A	White/Pink/Violet
<i>Linaria maroccana</i>	Spurred Snapdragon	A	Pink/Yellow/Violet
<i>Linum grandiflorum rubrum</i>	Scarlet Flax	A	Scarlet
<i>Linum perenne lewisii</i>	Blue Flax	P	Blue
<i>Lobularia maritima</i>	Sweet Alyssum	TP	White
<i>Lupinus perennis</i>	Perennial Lupine	P	Blue
<i>Machaeranthera lanacetifolia</i>	Prairie Aster	B	Violet
<i>Oenothera missouriensis</i>	Dwarf Evening Primrose	P	Yellow
<i>Papaver rhoeas</i>	Corn Poppy	A	White/Pink/Red
<i>Penstemon strictus</i>	Penstemon	P	Blue
<i>Ratibida columnifera</i>	Prairie Coneflower	B/P	Yellow/Red

*A: Annual. B: Biennial. P: Perennial. TP: Tender perennial, grown as an annual in cold climates.

8081 Gulf Coast/ Caribbean Mixture

(Includes southern Texas and southern Florida)



Price

Ounce	\$ 6.00
Pound	\$48.00
4 pounds	\$33.00/lb.
20 pounds	\$28.00/lb.

Planting Rate:

6 lbs./acre
Seeds/lb.: 438,000
Seeds/sq. ft.: 60
Min. PLS: 60

Scientific Name	Common Name	Type*	Color
<i>Asparagus densiflorus sprengeri</i>	Asparagus sprengeri	TP	White
<i>Centaurea cyanus</i>	Cornflower	A	Blue
<i>Cheiranthus allionii/C. cheiri</i>	Wallflower	B/P	Orange/Pink/Red
<i>Coreopsis lanceolata</i>	Lance-Leaved Coreopsis	P	Yellow
<i>Cosmos bipinnatus</i>	Cosmos	A	White/Pink/Crimson
<i>Dimorphotheca aurantiaca</i>	African Daisy	A	White/Orange/Salmon
<i>Gaillardia pumchella (photo)</i>	Annual Gaillardia	A	Yellow/Red
<i>Gypsophila elegans</i>	Baby's Breath	A	White
<i>Liatris spicata</i>	Gayfeather	P	Purple
<i>Linaria maroccana</i>	Spurred Snapdragon	A	Pink/Yellow/Violet
<i>Linum grandiflorum rubrum</i>	Scarlet Flax	A	Scarlet
<i>Linum perenne lewisii</i>	Blue Flax	P	Blue
<i>Lobularia maritima</i>	Sweet Alyssum	TP	White
<i>Mirabilis jalapa</i>	Four-O'Clock	TP	Red/Pink/Yellow/White
<i>Rudbeckia hirta</i>	Black-Eyed Susan	A/B/P	Yellow
<i>Silene armeria</i>	Catchfly	A/B	Pink
<i>Thunbergia alata</i>	Black-Eyed Susan Vine	TP	Yellow-Orange

*A: Annual. B: Biennial. P: Perennial. TP: Tender perennial, grown as an annual in cold climates.

Grasses for Use with Wildflowers

For most areas of the United States and Canada, we recommend planting equal parts Chewings and Sheep Fescue at the rate of 20-25 pounds per acre (total). For the southeastern states of Alabama, Florida, Georgia, Louisiana, Mississippi and South Carolina and for Hawaii, Tall Fescue is preferable at the same planting rate.

Mixing Fee: We charge a flat fee to mix grass seed species together or to mix grass seed with Applewood wildflower seed, based on the weight of grass seed to be mixed.

Code	Scientific Name	Common Name	Type ¹	Cultural Requirements ²	Max. Ht. (in.)	Seeds/Lb.	Min. Germ.	Price/Lb. (Includes Freight) ³		
								1-24 Lbs.	25 Lbs.	100 Lbs.
• 8090	<i>Festuca arundinacea</i>	Tall Fescue	P	P/Sun-Dry/Moist	40	230,000	80	\$ 1.60	\$ 1.50	\$ 1.40
• 8091	<i>Festuca ovina</i>	Sheep Fescue	P	Sun/Shade-Dry/Moist	16	680,000	80	1.60	1.50	1.40
• 8092	<i>Festuca rubra commutata</i>	Chewings Fescue	P	Sun/Shade-Dry/Moist	16	600,000	80	1.60	1.50	1.40
8093	Mixing Fee							10.00*	15.00*	20.00*

• New species, 1985

1 P: Perennial.

2 P/Sun: Full or partial sun. Sun/Shade: Sun or shade. Dry/Moist: Dry or moist. Dry: 10-30 inches rainfall per year or sandy, well-drained soil. Moist: Over 30 inches rainfall per year or regular irrigation.

3 Prices are in U.S. dollars.

* Flat (total) fee, not price/lb.

Wildflowers: Individual Species

Code	Scientific Name	Common Name	Type ¹	Cultural Requirements ²	Max. Ht. (in.)	Color	Bloom Period ³	Seeds/Lb.	Min. Germ.	Price/Lb. ⁴
7028A	<i>Achillea filipendulina</i>	Gold Yarrow	P	Sun-Dry/Moist	60	Gold	S	3,200,000	50	\$157
8042	<i>Achillea millefolium</i>	White Yarrow	P	Sun-Dry/Moist	36	White	S	3,200,000	50	34
7028B	<i>Achillea millefolium rubrum</i>	Red Yarrow	P	Sun-Dry/Moist	24	Red	S	3,200,000	50	200
8037	<i>Anagallis arvensis</i>	Pimpernel	A	P/Sun-Moist/Dry	10	Scarlet/Pink/Salmon/Blue	S	544,000	60	54
5054	<i>Aquilegia vulgaris</i>	Columbine	P	Sun/Shade-Moist	36	Yellow/Red/Violet/Blue	Sp-S	365,000	50	200
5055A	<i>Aquilegia vulgaris</i>	Dwarf Columbine	P	P/Shade-Moist	18	Red/Violet/Blue	Sp-S	368,000	50	82
8077	<i>Arabis alpina</i> , <i>A. caucasica</i>	Rockcress	P	P/Sun-Dry	16	White	Sp-S	2,400,000	60	106
6078	<i>Asparagus densiflorus sprengeri</i>	Asparagus sprengeri	TP	P/Sun-Moist	24	White	—	11,200	55	50
8054	<i>Aster novae-angliae</i>	New England Aster	P	P/Sun-Dry/Moist	72	Violet	F	1,216,000	40	79*
8055	<i>Campanula carpatica</i>	Tussock Bellflower	P	Sun/Shade-Dry/Moist	12	Lavender-Blue	S	4,528,000	50	78
8063	<i>Campanula rotundifolia</i>	Scotch Harebell	P	Sun/Shade-Dry/Moist	12	Lavender-Blue	S	4,528,000	50	280
5060A	<i>Castilleja spp.</i>	Indian Paintbrush	P	P/Sun-Dry/Moist	24	Scarlet	S-F	4,000,000	50	300
8026	<i>Centaurea cyanus</i>	Cornflower	A	P/Sun-Dry	30	Blue	S	96,000	60	12
8026A	<i>Centaurea cyanus</i> (dwarf)	Dwarf Cornflower	A	P/Sun-Dry	12	Blue	S	96,000	60	13
8078	<i>Cerastium biebersteinii</i>	Snow-in-Summer	P	P/Sun-Dry/Moist	12	White	Sp-S	1,300,000	65	137
8041	<i>Cheiranthus allionii</i>	Wallflower	B/P	P/Sun-Dry/Moist	18	Orange	Sp	340,000	65	14
• 8094	<i>Cheiranthus cheiri</i>	Wallflower	B/P	P/Sun-Dry/Moist	24	Orange/Pink/Red	Sp	304,000	65	13
8059	<i>Chrysanthemum carinatum</i>	Painted Daisy	A	P/Sun-Dry/Moist	36	White/Yellow/Red/Purple	S-F	159,000	40	25
8027	<i>Chrysanthemum leucanthemum</i>	Ox-Eye Daisy	P	P/Sun-Moist	24	White	S	400,000	65	34
8027A	<i>Chrysanthemum leucanthemum</i> (dwarf)	Dwarf Ox-Eye Daisy	P	P/Sun-Moist	16	White	S	400,000	65	117
8021	<i>Cichorium intybus</i>	Chicory	P	P/Sun-Dry	60	Blue	S-F	425,000	65	13
8060	<i>Clarkia unguiculata</i>	Clarkia	A	Sun-Dry/Moist	30	Pink/Lavender	Sp-S	1,580,000	65	22
8058	<i>Collinsia heterophylla</i>	Chinese Houses	A	P/Sun-Dry	24	White/Violet	Sp-S	408,000	50	25
8024	<i>Coreopsis lanceolata</i>	Lance-Lvd. Coreopsis	P	P/Sun-Dry/Moist	24	Yellow	S-F	221,000	40	38
8024A	<i>Coreopsis lanceolata</i> (dwarf)	Dwarf Lance-Lvd. Coreopsis	P	P/Sun-Dry/Moist	16	Yellow	S-F	221,000	40	80
8025	<i>Coreopsis tinctoria</i>	Plains Coreopsis	A	P/Sun-Dry	24	Yellow/Maroon	S-F	1,400,000	65	30
8025A	<i>Coreopsis tinctoria</i> (dwarf)	Dwarf Plains Coreopsis	A	P/Sun-Dry	18	Yellow/Maroon	S-F	1,400,000	65	50
8068	<i>Cosmos bipinnatus</i>	Cosmos	A	P/Sun-Dry	60	White/Pink/Crimson	S-F	80,000	65	25
8034	<i>Delphinium ajacis</i>	Rocket Larkspur	A	P/Sun-Moist	24	White/Pink/Blue/Violet	S	150,000	60	26
8076	<i>Dianthus barbatus</i>	Sweet William Pinks	P	Sun-Dry/Moist	18	White/Pink/Red	S	420,000	70	24
8075	<i>Dianthus deltoides</i>	Maiden Pinks	P	Sun-Dry/Moist	18	Pink	S	2,480,000	60	116
5051	<i>Dicentra eximia</i>	Bleeding Heart	P	P/Shade-Moist	24	Pink	Sp	208,000	50	250
8062	<i>Digitalis purpurea</i>	Foxglove	B/P	P/Shade-Moist	48	Purple/Cream	S	4,490,000	60	40
8069	<i>Dimorphotheca aurantiaca</i>	African Daisy	A	Sun-Dry	12	Orange/Salmon/White	S-F	225,000	55	51
8023	<i>Echinacea purpurea</i>	Purple Coneflower	P	P/Shade-Dry/Moist	36	Purple	S	117,000	60	61
5056	<i>Erigeron speciosus</i>	Fleabane Daisy	P	P/Sun-Dry/Moist	24	Violet	Sp-S	1,600,000	60	367
5065	<i>Eschscholzia californica</i>	California Poppy	TP	Sun-Moist/Dry	18	Yellow/Orange	Sp-S	290,000	60	27
8030	<i>Gaillardia aristata</i>	Perennial Gaillardia	P	Sun-Dry	24	Yellow/Red	S	132,000	45	52
8031	<i>Gaillardia pulchella</i>	Annual Gaillardia	A	Sun-Dry	24	Yellow/Red	S	153,000	45	55
8056	<i>Gilia tricolor</i>	Bird's Eyes	A	Sun-Dry	12	Lavender/White	Sp	1,100,000	65	24
8018	<i>Gypsophila elegans</i>	Baby's Breath	A	P/Sun-Dry	18	White	S	174,000	70	9
• 7016A	<i>Gypsophila paniculata</i>	Perennial Baby's Breath	P	Sun-Dry/Moist	36	White	S	512,000	70	25
8040	<i>Helianthus annuus</i>	Sunflower	A	Sun-Dry	72	Yellow	S	58,000	65	12
8028	<i>Hesperis matronalis</i>	Dame's Rocket	P	P/Shade-Moist	36	Violet	Sp-S	296,000	65	18
8057	<i>Iberis umbellata</i>	Candytuft	A	P/Sun-Dry/Moist	16	White/Pink/Violet	S	103,000	65	15
8033	<i>Ipomopsis rubra</i>	Gilia	B	P/Sun-Dry/Moist	72	Red/White/Coral	S	341,000	65	79
• 8098	<i>Lathyrus latifolius</i>	Perennial Sweet Pea	P	P/Sun-Dry/Moist	—	Rose/Pink	S	9,000	75	14
8064	<i>Lavatera trimestris</i>	Tree Mallow	A	Sun-Moist	36	White/Pink/Violet	S-F	68,000	50	10
8066	<i>Layia platyglossa</i>	Tidy-Tips	A	P/Sun-Dry	12	Yellow/White	S	323,000	50	133
8032	<i>Liatris spicata</i>	Gayfeather	P	P/Sun-Moist	48	Purple	S-F	136,000	50	65
8065	<i>Linaria maroccana</i>	Spurred Snapdragon	A	P/Sun-Dry	16	Pink/Yellow/Violet	Sp-S	680,000	65	40
8029	<i>Linum grandiflorum rubrum</i>	Scarlet Flax	A	P/Sun-Dry/Moist	18	Scarlet	S	122,000	60	21
5070	<i>Linum perenne lewisii</i>	Blue Flax	P	Sun-Dry/Moist	24	Blue	Sp-S	293,000	60	20
8015	<i>Lobularia maritima</i>	Sweet Alyssum	TP	P/Sun-Dry/Moist	12	White	Sp-F	1,250,000	60	19
• 8099	<i>Lotus corniculatus</i>	Bird's-Foot Trefoil	P	Sun-Moist	24	Yellow	S	418,000	50	8
8073	<i>Lupinus perennis</i>	Perennial Lupine	P	Sun-Dry/Moist	24	Blue	Sp-S	22,000	65	35
5062	<i>Lupinus texensis</i>	Texas Bluebonnet	A	P/Sun-Dry/Moist	12	Blue	Sp-S	14,000	65	13
8074	<i>Lychnis chalcedonica</i>	Maltese Cross	P	Sun-Dry	24	Scarlet/Rose/Salmon	S-F	225,000	70	30

Code	Scientific Name	Common Name	Type ¹	Cultural Requirements ²	Max. Ht. (In.)	Color	Bloom Period ³	Seeds/Lb.	Min. Germ.	Price/Lb. ⁴
8016	<i>Machaeranthera tanacetifolia</i>	Prairie Aster	B	P/Sun-Dry	18	Violet	S-F	496,000	60	\$ 80
5063A	<i>Mimulus</i> spp.	Monkeyflower	A/P	P/Shade-Moist	18	Cream/Yellow/Red	Sp-S	8,800,000	50	133
8071	<i>Mirabilis jalapa</i>	Four-O'Clock	TP	Sun-Dry/Moist	36	Red/Pink/Yellow/White	S-F	8,000	60	13
5071A	<i>Myosotis sylvatica</i>	Forget-Me-Not	A/B	P/Shade-Moist	18	Blue	Sp-S	800,000	50	102
8061	<i>Nemophila maculata</i>	Five-Spot	A	P/Shade-Moist	6	White/Purple	Sp-S	82,000	60	23
8017	<i>Nemophila menziesii</i>	Baby Blue-Eyes	A	P/Shade-Moist	12	Blue	Sp-S	260,000	70	18
• 8100	<i>Oenothera hookeri</i>	Tall Evening Primrose	B/P	Sun-Dry/Moist	60	Yellow	S	4,000,000	50	20
8039	<i>Oenothera missouriensis</i>	Dwarf Evening Primrose	P	P/Sun-Dry	12	Yellow	S	80,000	50	96
• 8095	<i>Papaver nudicaule</i>	Iceland Poppy	P	Sun-Dry/Moist	15	Yellow/Orange/White	Sp-S	3,200,000	60	136
8038	<i>Papaver rhoeas</i>	Corn Poppy	A	P/Sun-Dry	24	White/Pink/Red	S	3,200,000	60	28
8036	<i>Penstemon strictus</i>	Penstemon	P	P/Sun-Dry	24	Blue	S	592,000	60	51
8035A	<i>Penstemon</i> spp.	Penstemon	P	P/Sun-Dry	48	Purple/Lavender/Blue	S	500,000	60	45
• 8096	<i>Phacelia campanularia</i>	California Bluebell	A	Sun-Dry	15	Blue	Sp-S	856,000	65	50
• 8097	<i>Phlox drummondii</i>	Annual Phlox	A	Sun-Dry	18	Rose/White/Pink/Red/Purple	S-F	234,000	55	87
8022	<i>Ratibida columnifera</i>	Prairie Coneflower	B/P	P/Sun-Dry	24	Yellow/Red	S	1,230,000	50	75
8019	<i>Rudbeckia hirta</i>	Black-Eyed Susan	A/B/P	P/Sun-Moist	24	Yellow	S	980,000	60	58
• 8101	<i>Sanguisorba minor</i>	Small Burnet	P	P/Sun-Dry	18	Green	Sp-S	73,000	50	19
8020	<i>Silene armeria</i>	Catchfly	A/B	P/Sun-Dry	16	Pink	S	4,480,000	50	44
8020A	<i>Silene armeria</i> (dwarf)	Dwarf Catchfly	A/B	P/Sun-Dry	8	Pink	S	4,480,000	50	179
6079	<i>Thunbergia alata</i>	Black-Eyed Susan Vine	TP	Sun-Moist	—	Yellow-Orange	Sp-F	17,600	60	110
6037	<i>Thymus serpyllum</i>	Wild Thyme	P	P/Sun-Dry	3	Crimson	S	3,580,000	50	283
5061	<i>Viola cornuta</i>	Johnny Jump-Up	P	P/Sun-Moist	6	Purple/Yellow/Blue	Sp-F	640,000	55	306

• New species, 1985

1 **A:** Annual. **B:** Biennial. **P:** Perennial. **TP:** Tender perennial, grown as an annual in cold climates.

2 **P/Sun:** Full or partial sun. **P/Shade:** Partial sun or shade. **Sun/Shade:** Sun or shade. **Dry:** 10-30 inches rainfall per year or sandy, well-drained soil. **Moist:** Over 30 inches rainfall per year or regular irrigation.

3 **Sp:** Spring. **S:** Summer. **F:** Fall.

4 Prices are in U.S. dollars. For ounce prices, see Applewood Seed Co. mail-order catalog or request quote.

* Price per ounce.

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Send your order in by mail or phone us at (303) 431-6283. Sorry, we do not accept collect phone calls for orders from this catalog.

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Applewood Seed Co.

5380 Vivian Street
Arvada, CO 80002 USA
303/431-6283
Telex: 289246



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THE PUEBLO CONSERVANCY DISTRICT

BOARD OF DIRECTORS
P. KELLY
K. FARLEY
G. SANDSTROM

111 EAST FIFTH STREET
544-6823
PUEBLO, COLORADO

MAILING ADDRESS:
P. O. BOX 234
PUEBLO, COLO. 81002

January 2, 1985

William T. McMartin, President
Lawn Seeders, Inc.
2202 Norman Lane
Pueblo, CO 81005

Dear Mr. McMartin:

The Board met on December 26, at which time they reviewed your letter/proposal of December 14, 1984.

The Board, too, are disappointed that the experiment of wild-flower seeding did not have more growth than it apparently did. The Board wants to wait until Spring 1985, and have you observe along with them, any growth as a result of the seeding program in 1984. At that time, the Board wants to consider a program of re-seeding that perhaps another group (City or Service Club, etc.) would be staffed to provide proper irrigation and other duties to better follow recommendation for a proper stand of flowers.

For now, the District wishes to postpone indefinitely, any further "experimentation" and will ask for your proposal of "what to do" when the time is ready for the actual beautification project along the River to begin.

Thank you for your concern and willingness to re-seed immediately, and we'll keep in touch.

Very truly yours,

THE PUEBLO CONSERVANCY DISTRICT

By:

Raymond F. Koester
Raymond F. Koester,
Engineer/Administrator

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THE PUEBLO CONSERVANCY DISTRICT

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PUEBLO, COLO. 81002

January 2, 1984⁵

Lee Simpson
St. Charles Mesa Water Association
1397 So. Aspen
Pueblo, CO 81006

Dear Lee,

The Board of Directors of this District, at their December 26th meeting, continued to make progress with the Santa Fe Avenue Dam project, and want to bring you up to date on that progress at this time.

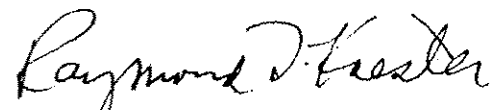
The District signed a contract with McLaughlin Water Engineers, 2420 Alcott St., Denver, CO 80211, to do the design and prepare working drawings for construction of the Dam, Boat Chute, Pedestrian Bridge and Irrigation Diversion Structure. McLaughlin has been instructed to get in touch with you regarding your Diversion Structure design, and the Board hereby recommends that you contact McLaughlin regarding the concept and design, so that plans come out and construction takes place, building you what you want, etc. You may want to contact KLH Engineering to pass the information along, that way, KLH will know (and the Board) what your input is, and McLaughlin's comments and reaction to that information could be shared with KLH and the Board too.

It would appear that construction will begin in August 1985, and if water levels are low, your Diversion Structure will be built, possibly, in October.

The Board appreciates your commitment of funding for this urgently needed project and will keep you informed as significant progress is made.

Very truly yours,

THE PUEBLO CONSERVANCY DISTRICT

By: 

Raymond F. Koester
Engineer/ Administrator

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