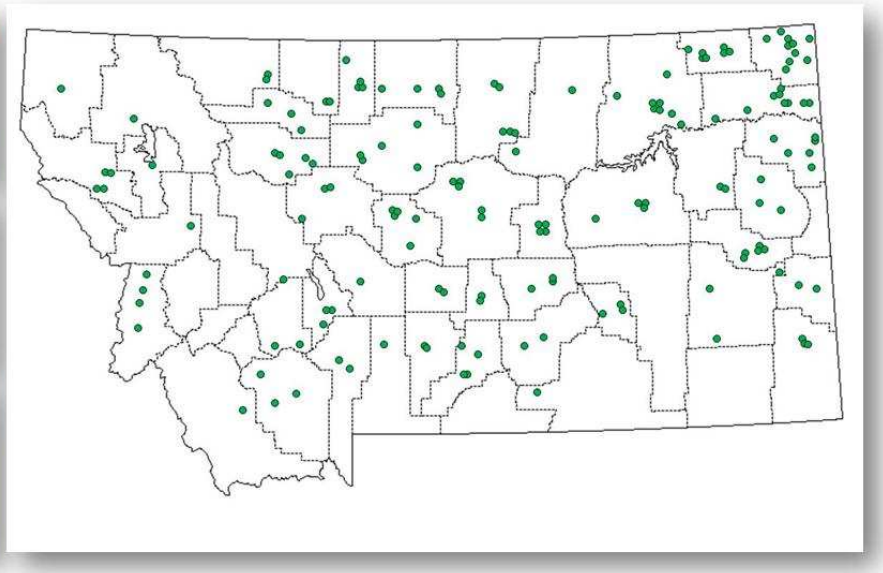
PHASE I

Assessment of Pollinator-Friendly Plantings on Montana Rangelands and Farms:
Statewide Questionnaire Findings Report



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POLLINATOR PARTNERSHIP

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Background

In November 2007, the Coevolution Institute applied for and received a USDA-NRCS Montana Conservation Innovation Grant entitled, "Assessment of Pollinator-Friendly Plantings on Montana Rangelands and Farms: Measuring Success of Outreach Program, Replicating Habitat and Increasing Best Practices."

Phase I, the beginning and exploratory phase of this project, involved two main objectives:

1. Assess the effectiveness of the pollinator-friendly conservation benefits point incentive for two Montana NRCS cost-share programs - Environmental Quality Incentives Program (EQIP) and the Wildlife Habitat Incentive Program (WHIP).

2. Evaluate the educational success of USDA-NRCS booklet, "Montana Native Plants for Pollinator-Friendly Plantings" written in 2005 and distributed in February 2006.

To meet these two objectives, a questionnaire was drafted and mailed to all of the 2005, 2006, and 2007 Montana EQIP/WHIP applicants (approximately 600 people); at the outset knowing that roughly 20% of these projects involved a pollinator habitat planting component. This state-wide survey was aimed to better understand producer attitudes and education regarding pollinators, NRCS cost-share programs, and their personal experiences with planting pollinator-friendly habitat.

Mailing the Survey Packets

Knowing that many people are loath to receiving surveys in the mail from an unknown source, several measures were taken to increase the likelihood of receiving a productive response:

- The survey materials were sent in a 6" x 10" Priority Mail cardboard envelope
- A cover letter was included in the survey packet explaining the purpose and importance of the project and why they were chosen to be a respondent
- There was a chance to win one of three $100 gift certificates to Ace Hardware if they returned the questionnaire with their "raffle ticket"
- The questionnaire was only one page – front and back
- The booklet "Montana Native Plants for Pollinator-Friendly Plantings" was included as part of their survey packet to refresh their memories and also to distribute the information
- A self-addressed stamped envelope was included

The questionnaire and cover letter are included in Appendix 1 of this report.

Survey Statistics

- 588 survey packets were mailed March 20-24, 2008
- 45 people received a follow-up phone call or phone message
- 142 questionnaires were completed and sent back
- 19 questionnaires were filled out over the phone
- A total of 161 questionnaires were completed - a 27% response rate

This project was funded by a Conservation Innovation Grant received from the Natural Resources Conservation Service (Grant #65-0325-07-039) and by the Coevolution Institute.

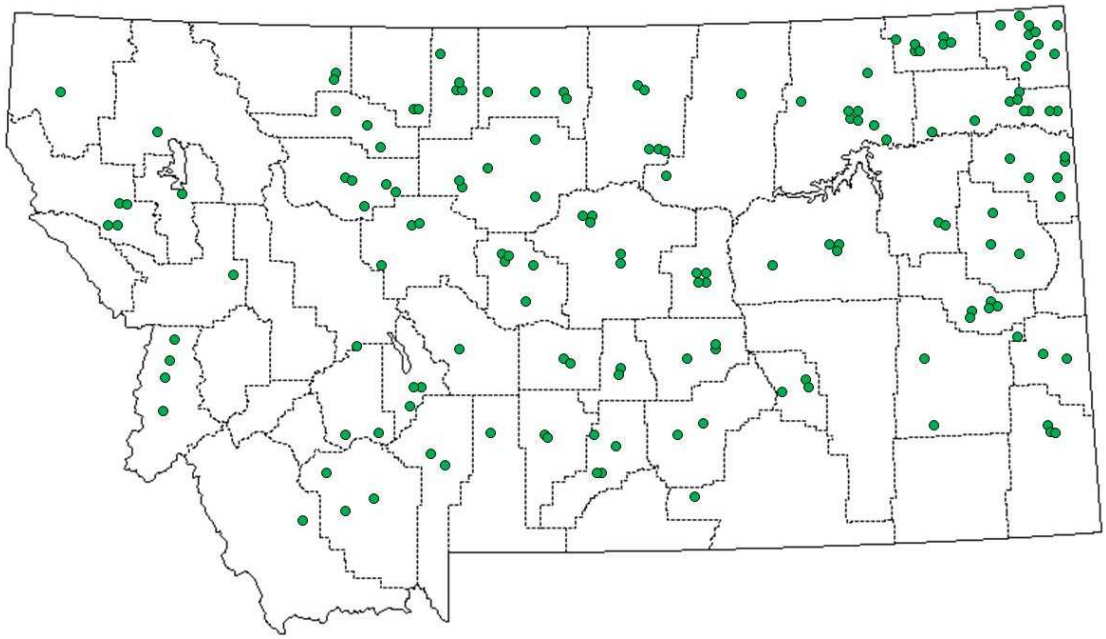
The remainder of this Phase I findings report analyzes each survey question response and discusses the possible rationale and implication of this feedback.

Author's Note: This questionnaire was drafted, distributed, and interpreted by an independent non-profit, the Pollinator Partnership. Though funding came partially through the NRCS, it did not guide nor influence the results of this project. The interpretations and comments in this document are *not* those of the NRCS and are solely the responsibility of the author and the Pollinator Partnership.

Question 1: In what city is your operation located.

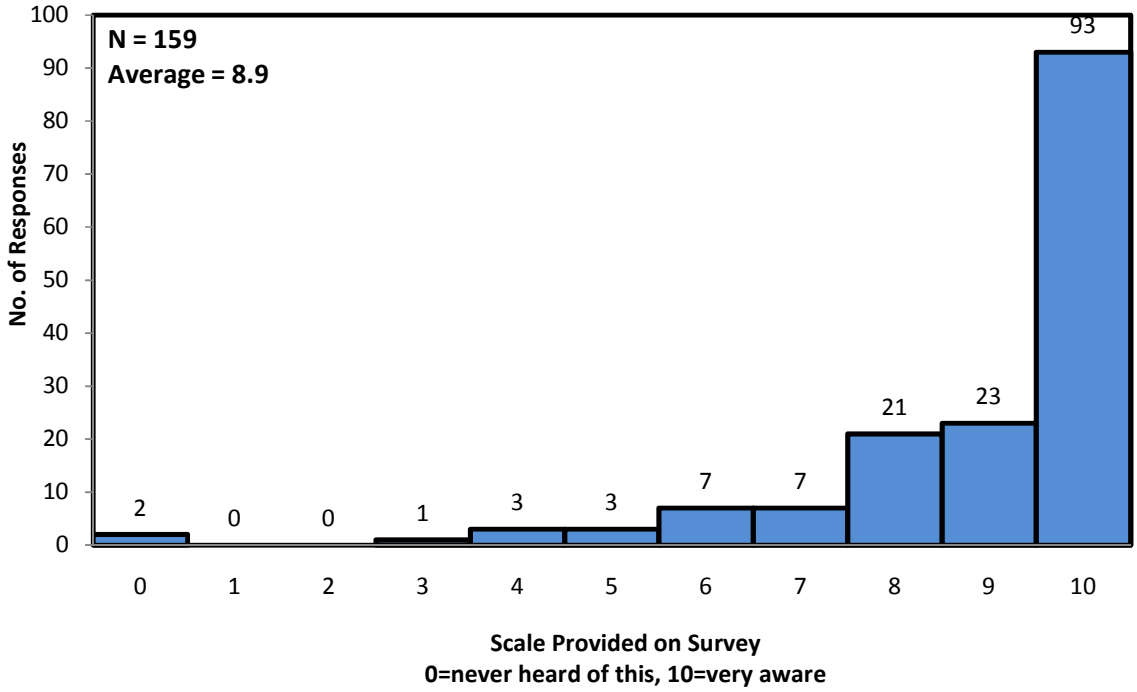
Below is a map depicting the location of survey responses, as well as an alphabetical listing of the individual cities (some locations had multiple survey responses indicated by the number in parenthesis).

**Note: Five survey respondents left this question blank.



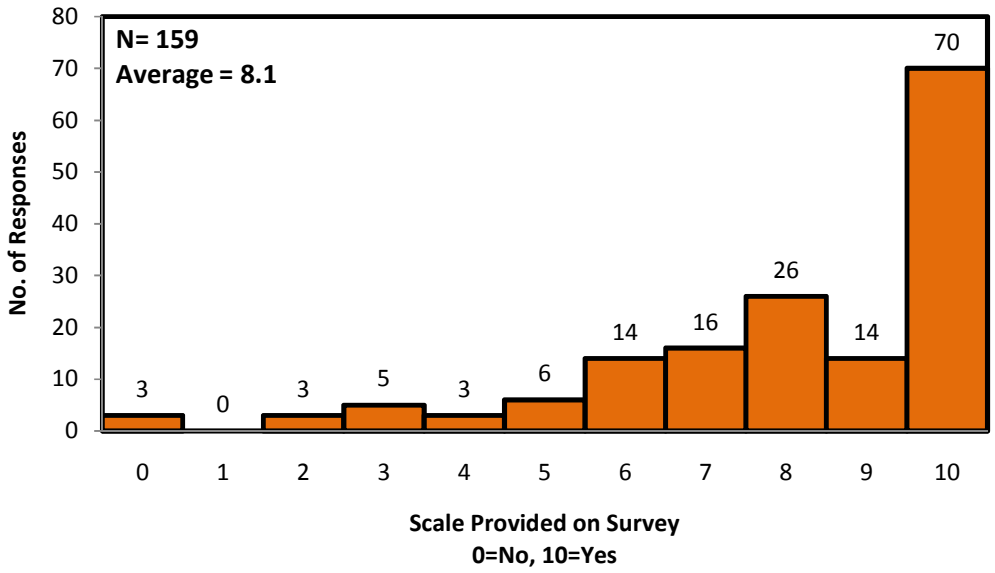
Absarokee (2)
Alder
Antelope
Bainville (2)
Baker
Belgrade
Big Sandy
Big Timber (2)
Bighorn
Billings
Bloomfield
Bozeman
Brady
Cardwell
Carter (2)
Cascade
Chester (2)
Dutton
Ekalaka (3)
Ennis
Fairfield
Fairview (2)
Fallon (3)
Fergus County
Fort Benton
Frazer
Froid (3)
Galata (2)
Geraldine
Geyser (3)
Glasgow (4)
Glendive
Great Falls (2)
Hamilton
Harlowton (2)
Havre (2)
Hays (2)
Helena
Higham
Hinsdale
Hot Springs (2)
Huntley
Inverness
Ismay
Jordan (3)
Judith Basin Co.
Kila
Kremlin
Lambert
Landusky
Larslan
Lewistown
Liberty County
Lindsay
Lodge Pole
Malta
Medicine Lake
Miles City
Musselshell (2)
Nashua
Peerless (3)
Plains (2)
Plentywood (3)
Plevna
Polson
Poplar
Power
Pryor
Raymond
Redstone
Reed Point
Reserve
Richland
Richland County
Roundup
Ryegate (2)
Sand Springs
Sanders (2)
Scobey (3)
Sidney
Stanford
Stevensville
Terry (2)
Three Forks
Toston (2)
Twin Bridges
Valier
Victor
Volborg
Westby
White Sulphur Springs
Whitehall
Whitlash
Wibaux
Winifred (3)
Winnett (4)
Wolf Point
Woodworth

Question 2: Are you aware of the importance of bees and other pollinators in the health and reproduction of flowering plants?



Comments -There was no difference in how this question was answered between producers who had participated in the pollinator-friendly program, and those who did not; therefore this chart represents all survey respondents. The average response to this question supports my general impression that most Montana producers understand the important role of pollinators for a healthy ecosystem. In fact, three respondents mentioned that they have beehives on their property (and the actual numbers of producers with beehives is likely much higher).

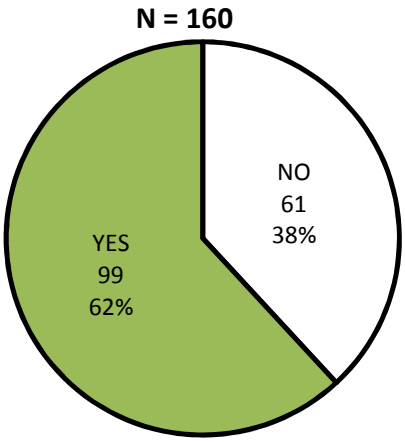
Question 3: Do you feel having bees and other pollinators on your land helps you get better crop yields or other benefits?



Comments – The variation in response to this question is most likely dependent on the main cash crop of the operation. Many producers grow alfalfa, which is dependent on insect pollination to produce a good seed crop; even forage alfalfa growers would see an increase in stand health and long-term productivity with help from pollinators. A more obvious example of direct benefit from pollinators is the cherry trees grown in northwest Montana. However, much of Montana agriculture consists of wheat, barley, and other grasses or grains; crops that do not rely upon insect pollination for production (see Appendix 2 for specific information on the crops, pulses, and oilseeds grown in Montana). For many Montana farmers, increased production would be a side-effect from the benefits of a native shrub or forb planting: species diversity, less erosion, less susceptible to insect and weed pest infestations, increase in beneficial insects, etc. This information needs to be effectively passed along to Montana producers, especially those who do not feel that pollinator plantings will increase their bottom line.

From the phone surveys, most people were unsure about the answer to this question. Either they would say, "I don't know" or "Well, I suppose they're beneficial, but I couldn't tell you why." From these interactions, it seems that producers could benefit from more specific information regarding pollination mechanics. Most people know that it has to do with blooming flowers, but are not aware of the biology behind how it can actually improve crop health and production.

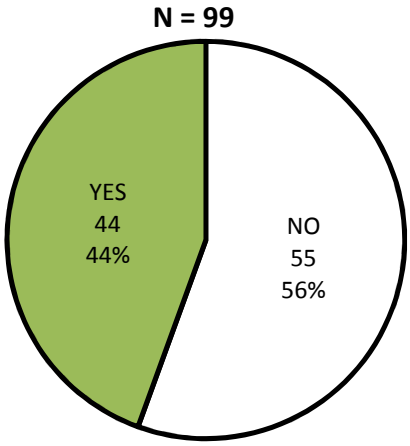
Question 4: Are you aware of the EQIP incentive that provides extra conservation benefits points for producers who implement certain practices?



Comments - This aspect of the survey was very interesting. From many of the phone conversations and comments on the written surveys, it became clear that in general, the NRCS EQIP and WHIP program details are unclear to the producers. The complexity of the system can be confusing and overwhelming and many of the applicants simply "go through the motions" without understanding the details, especially relating to conservation benefits points.

The benefits points system in general is dependant upon: local, regional, state, and national conservation issues. The number of points gained for implementing certain conservation issues changes with: shifting importance, year, current events, funding sources, allocation of funding, and special initiatives. It is impossible to keep track of as a producer (and even as an agency employee), and it is not surprising that the whole process remains a mystery.

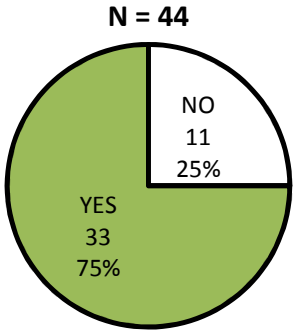
Question 5: If so, are you aware of the Pollinator-Friendly Practices component of the conservation benefits points?



Comments – Of those producers that knew about conservation benefits points, less than half knew of the pollinator-friendly planting component. In order for this program to be effective, producers need to be aware of the potential for cost-sharing. The information brochure "Montana Native Plants for Pollinator-Friendly Plantings" is distributed to NRCS field offices by the Public Affairs division. This booklet is a great reference for producers looking for native species to plant, because it includes bloom periods and parameters for growth as well as a short explanation about the NRCS cost-share. Perhaps better distribution of this booklet could help more producers to become aware of the cost-share potential.

Though the booklet can help pique interest and knowledge in the cost-share, the actual eligibility to receive the benefits points is associated with Biology Technical Note MT -20. Though similar, the booklet and the Tech Note are not exact matches with recommended species (see Appendix 3 for a list of the native plant differences). The booklet does not mention any non-native species, grass seed mixes, or tree wind breaks, which are acceptable in the EQIP/WHIP programs and actually gain almost the same amount of points and cost-share opportunities. The Tech Note also categorizes plants into early, mid, and late bloom. In the future, perhaps the booklet can be revised to be more robust and consistent with the Tech Note so that it may serve as the exact protocol and minimize confusion.

Question 6: If yes, did you participate in planting native plants for the Pollinator-Friendly Program?



Comments - This response is the highlight of the survey. Exactly 75% of people who knew about the Pollinator-Friendly benefits points participated in the program. From this it can be assumed that if more people know about the pollinator-friendly program, more people will participate. Due to the confusion of the EQIP/WHIP application process, three respondents did not know about the points, but are receiving a cost-share for their plantings, and are therefore participating in the program. A few other respondents were also unsure of their program status, especially those who planted grass mixes that included native flowers; the booklet does not mention specific grass seed mixes.

Twenty-four **additional** people responded on the survey that they were not aware of the program, but are implementing plantings on their own. Some of these respondents mentioned that they would do this on their own regardless; others wrote that they may be interested in participating in the cost-share in the future. It would be good to continue to follow-up with some of these respondents and ask what role (if any) the booklet played in deciding what species to plant.

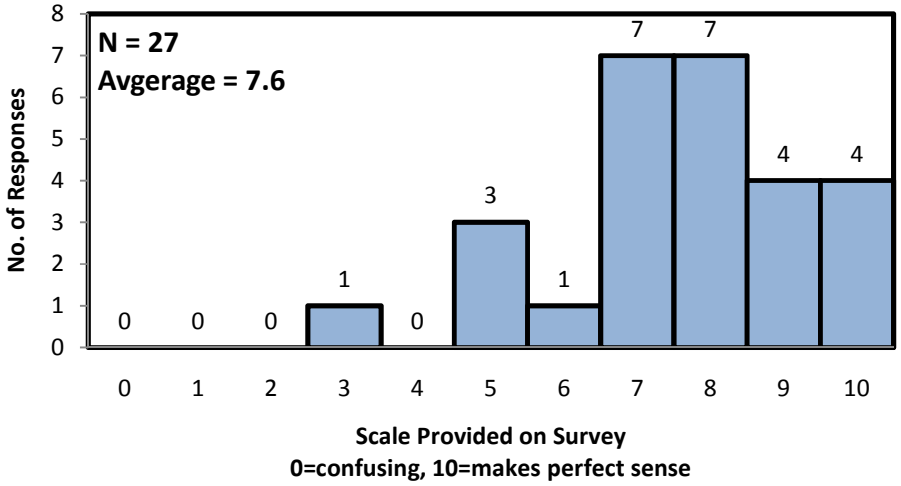
I spoke with Jane and Roger Banner from Hamilton, MT who discovered the booklet at a Teller Wildlife Refuge event. They used suggestions from the booklet to plant some of their shrubs, and said that it was very helpful. In contrast, I spoke with Kelle Simac from Winifred, MT who is implementing plantings in addition to his EQIP project and had never seen the booklet before. His plantings consist of Russian Olive, Caragana, and Juniper, all recommended to him by the NRCS. In order for the pollinator-friendly program to become more popular, the NRCS should encourage native plantings when possible and be consistent with their suggestions in the Tech Note and/or Pollinator-Friendly Planting booklet, even for those not receiving benefits points.

It appears that the act of mailing the survey and booklet was helpful in spreading the word about the potential for cost-sharing and the ecological benefits of planting shelter belts and pollinator-friendly seed mixes. In hind-sight, an additional question on the survey would have been: Have you seen this booklet before? Where did you get it/Where did you see it? This would have helped to better gauge the effectiveness of the booklet itself and to answer our own questions of: Is it being distributed? How? Is it having an effect on the number of pollinator-friendly plantings? An answer to these questions can help the Pollinator Partnership move forward with literature for other regions.

I was in touch with Erik Suffridge, the program specialist for the Bozeman NRCS, to ask him these exact questions. Unfortunately, he explained that the software program being used to categorize EQIP/WHIP applicants lumps all the producers planting pollinator habitat with those just doing a range planting. In this case it will be impossible to find out if the number of producers planting pollinator habitat has increased in the past two years since the booklet has been distributed.

The remaining survey questions were answered by the 32 respondents who participated in the Pollinator-Friendly plantings program. Not all questions were answered by all respondents; they may not have known the answer, or the question was not applicable. The phone surveys and follow-up phone conversations provided much of the insight into the answers to the following questions.

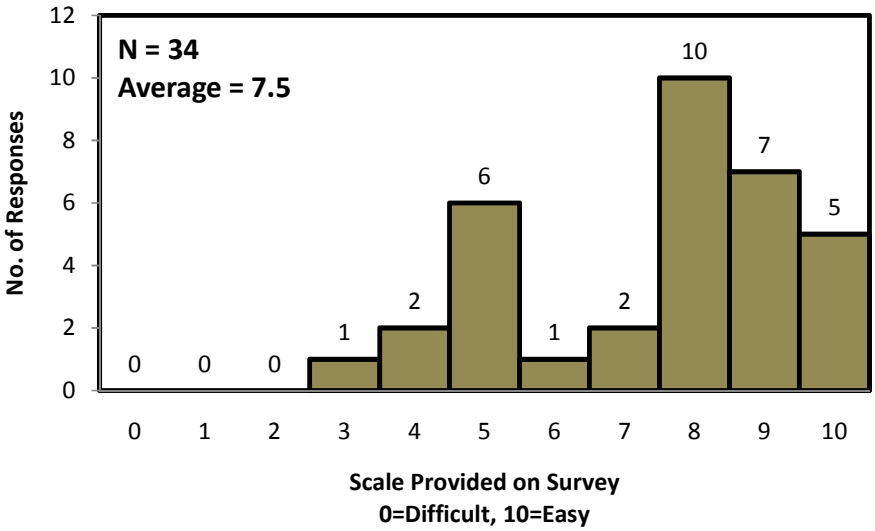
Question 7: How helpful was the booklet "MT Native Plants for Pollinator-Friendly Plantings?" Was it easy to understand, containing enough information for you to implement the practices?



Comments –From all of my phone conversations with producers who had employed pollinator plantings, only two people actually used the booklet in deciding what to plant. Another ten producers I spoke with said that their local NRCS agent helped them pick out what to plant, or gave them a suggested seed mix. It is very encouraging that producers are receiving so much help with this process. The downside is that many producers I spoke with had never seen this booklet before, or they had, but couldn't remember much about it. My assumption is that most of the respondents to this question saw the booklet for the first time through this survey mailing. I followed-up with the wife of the producer who had rated the book a "3" to ask specifically why the book was confusing. The couple was confused in general as to whether or not they were in the program and had actually never seen the booklet before. We need to ask ourselves: Is the goal of this booklet to educate the general public about the benefits of planting pollinator habitat and to encourage the planting of native plants? Or: Is this booklet designed for the EQIP/WHIP applicant to encourage a planting? This survey has only reached the EQIP/WHIP producers, many of whom were planning a seeding or shelterbelt planting before they ever saw the booklet.

This again comes back to the exact protocol of the plantings as referenced in Biology Technical Note MT-20. The booklet, although descriptive and informative, does not replicate the Tech Note that the NRCS uses to determine compliance for the conservation practice. The EQIP/WHIP program requirements are specific enough that it is easier for the NRCS agent to tell producers what to plant or give them a list of from which to choose.

Question 8: What was your experience finding the Montana native seeds or plants for this program?

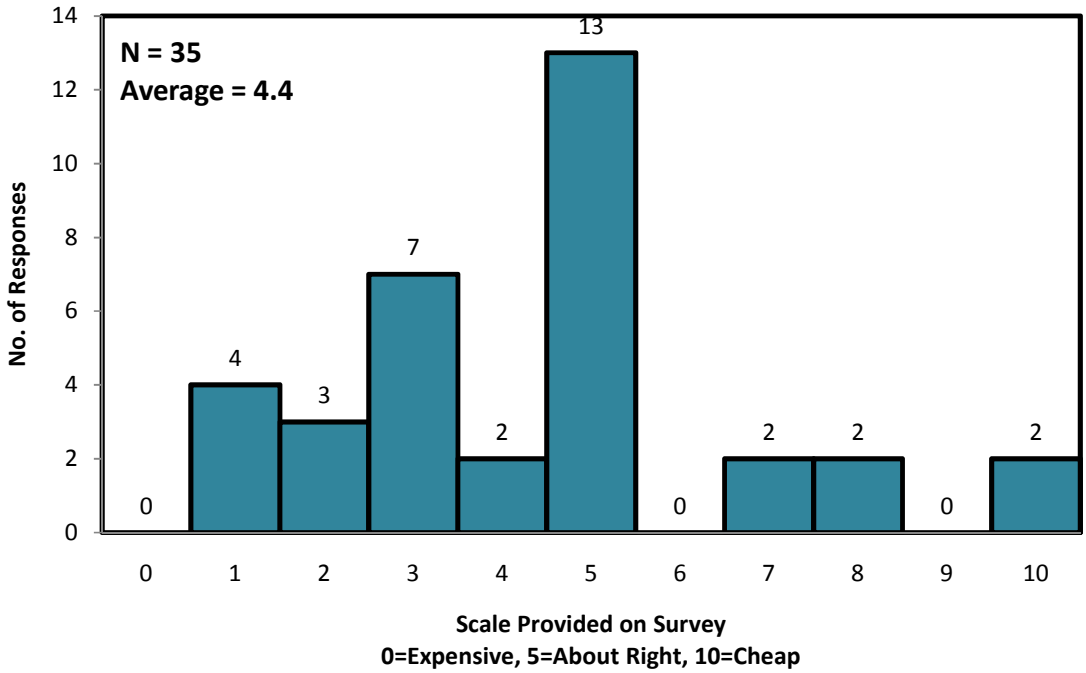


Comments - Some respondents are not in the program, but had insight into the process of finding seed and seedlings. Many producers received assistance from their local NRCS office in finding a seed source, making it an easy process. In general, most local area nurseries carry the native and introduced seeds and seedlings. The plants that were difficult to find, according to two different producers, were: winterfat and rabbitbrush. Winterfat is not listed in the booklet or Tech Note, but it is a native flowering shrub that has very high nutritional value for forage. The producer could not find a local native variety and had to order the plants from New Mexico. Rabbitbrush on the other hand is listed in both the Tech Note and Booklet and it is important to find a nursery that would be a reliable resource for this plant.

Below is a list of nurseries that respondents to the survey indicated as good sources for native and introduced plants as well as a helpful website listing all of the nurseries across Montana:

Local nurseries and elevators
Wagner's in Whitehall
Missoula Farmer's market (natives)
Lynch Creek Nursery in Plains
Circle S Seeds near Three Forks
Pawnee Butte Seeds in Greeley, Colorado
State Nursery in Missoula (Montana Conservation Seedling Nursery, for conservation projects only)
http://www.gardenguides.com/resources/nurseries/nurseries-state.asp?state=MT

Question 9: What did you think about the cost of these seeds/plants?

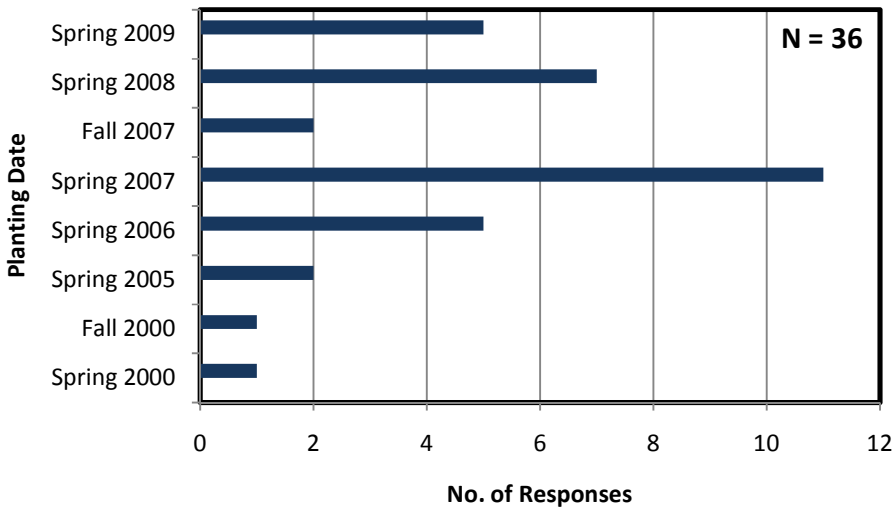


Comments - This question again was answered by some producers who are not in the program, but still have insight into the cost of seeds. Though the average gives the impression that the cost of seeds and plants is "about right," there is variation both towards the cheap and expensive ends. This can be explained by the amount of cost-share assistance for EQIP/WHIP plantings and also by which species are purchased. The cost-share amount is decided as a percentage of market seed/seedling prices. The NRCS will typically pay 75% of the cost, slightly more for natives. However, according to Rob Bray in Bainville, the NRCS maximum allowable prices are only updated annually based on the previous year's pricing, thus the cost-share lags behind current seed prices. The price of seed/plants can be seen as expensive or cheap depending on what year the plants were purchased and how the cost compares to the NRCS maximum allowable rates.

As a general rule, native seeds and plants are much more expensive than introduced species. The cost-share would certainly be a huge benefit to producers wishing to do a native seeding/planting, who otherwise would be paying for the whole project out-of-pocket. The variation in cheap and expensive impressions may have been due to the type of planting employed by the producer. A good example comes from a producer who planted 250 Caragana trees as a shelter belt. The cost was $35 for 50 3-year old seedlings. In another case, a producer planted half a section (320 acres) to grass pasture mix. The cost for alfalfa/flax/native forb mix was $100/acre, $36/acre for native grasses, and $24/acre for pubescent wheat grass.

Another observation from phone conversations was that many producers were unaware of the cost of seed mixes/ seedlings, especially natives. In this case, many of the producers said that since they didn't know what to expect for the cost, it seemed "about right."

Question 10: When did you plant these native plants?



Comments - Again, some producers not involved in this program responded to this question. Spring is the most common time to plant and seed. The moisture during the spring and summer helps establish the plants and they can become accustomed to the new environment before the first frost. However, these plants are susceptible to summer insect and wildlife pests (grasshoppers and deer, for example) that may inhibit growth and vigor and in some cases may lead to plant mortality. Planting in the Fall would avoid these possibilities, but the plant would need to be hardy enough to make it through the winter.

From the survey, the most popular times to plant are April-June in the Spring, and September in the Fall.

Question 11: Did you see any benefit/change to your operation by participating in the Pollinator-Friendly Practices Program?

Ten respondents indicated that they had only recently planted and that it was too early to tell results. Most others planted only 2-3 years ago. Therefore, many of these respondents fell in the "not sure" category:

	YES	NO	NOT SURE	Total Responses
I saw higher crop yields	6	5	13	24
My home garden produced more	4	7	10	21
I noticed less soil erosion	9	5	10	24
I observed more beneficial insects/wildlife/birds	13	2	10	25
I observed more insect/wildlife/bird pests	4	10	9	23
I observed more invasive plants	2	13	8	23

Summary of Question 11 results:

- **25% of respondents saw higher crop yields**. Keep in mind that many producers' cash crop is grass, grain, or forage alfalfa and they may not see a direct/immediate increase in crop production from pollinator plantings.

- **19% of respondents said their home garden produced more**. Some respondents indicated that they do not have a home garden and therefore answered "no" to this question.

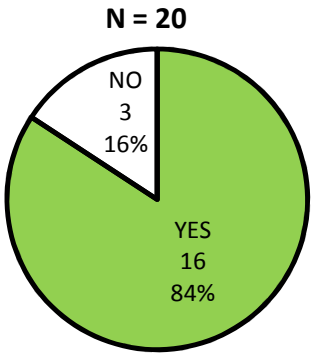
- **38% noticed less soil erosion.** Even for respondents who have only recently planted, many indicated that they saw an immediate decrease in soil erosion.

- **52% observed more beneficial insects/wildlife/birds.** Notice that only two respondents answered "no" to this question, the remainders were either "yes" or "not sure." This is an incredibly positive result for this program. Eleven respondents indicated what types of beneficial wildlife they were observing: bees, butterflies, grouse, pheasant, deer, other wildlife and insects, and birds: robins, blue jay, goldfinch, hummingbirds.

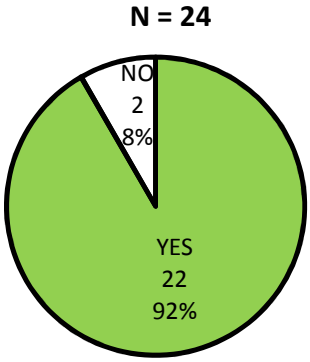
- **17% observed more insect/wildlife/bird pests.** These pests were most likely drawn in by the new planting as a source of food and were "pests" because of their negative impacts on the plants themselves. Four responses were given for specific pests observed: rabbits, grasshoppers, mule and whitetail deer. Notice that deer are in both the beneficial and pest categories. They are beneficial as wildlife, but are certainly pests as browsers of the new plantings.

- **9% observed more invasive species.** These species may have come from the disturbed ground during planting or from the seed mix /seedlings themselves. There was only one response indicating which invasives were noticed: Canada thistle, dandelion, and knapweed.

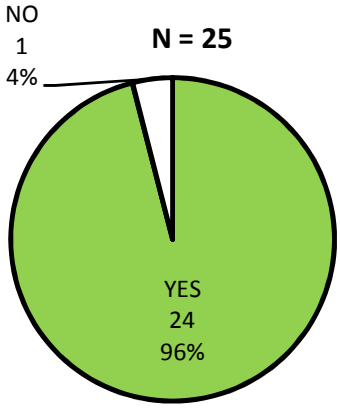
Question 12: Did you feel that your experience with pollinator-friendly practices was a success for your operation?



Question 15: Would you sign up for this program again?



Question 16: Would you recommend this program to others?



Comments – The respondents of questions 12, 15, and 16 who answered "no" also indicated that it was too early to tell if their program was successful, and therefore were unsure of whether or not they would sign up again or recommend it to others.

Following are the short answers (from phone and paper surveys) correlating to Question 12, asking about the planting impact on the producer's operation:

Positive Results

1. Increased: biodiversity, early successional stage, soil fertility, insect mass and subterranean bio-culture, song and gamebird populations.
2. Don't know yet.
3. We cash lease 2/3 of the farm so it's difficult to gauge the impact on the operation
4. Hope to see in coming years, first year they are just getting started.
5. It is a bit early to judge. I expect positive results.
6. Aesthetic or intrinsic value, more birds, beneficial effects which are not necessarily readily observed or measurable.
7. More grouse.
8. Too early to tell. Would expand the project on his own anyway. Shelter belts are great for wildlife and cattle.
9. Peas produced more in home garden. Sweet corn ¾ miles away also produced more.
10. Hoping to see positive results, but it's too early to tell at this point.
11. Too early in process to see dividends.
12. Will plant in Spring 2009. Is hoping for pheasant habitat.
13. Good feeling about trying. Concerned about bee populations.
14. I will see more beneficial changes in the future. The first year you don't have many budding plants.
15. Should add nitrogen to soil and protein to crop.
16. Wind protection.
17. Should improve pheasant habitat. Neighbors have pheasants, but they don't.
18. Concerned with declining bee populations, wants to be involved.
19. Ground Cover. More bees.

Negative Results

1. Native seeds are very expensive.
2. Don't know yet.
3. Had to mow to control weeds, not really a negative, just a fact of life when trying to get something new established without the weeds taking over.
4. Planted sanfoin, but native plants crowded out. Never took.
5. Some noxious weeds thrived.
6. Grasshoppers ate trees clear down to ground and had to replace 50 of them. Also, the hot weather was hard on the trees and their survivability. Soil clay got tough and hard without rain, would have had an easier time planting when soil was more moist.

Negative Results, Continued

7. Expense – maximum allowable on cost bumped the cost of the grass seed up (for native plantings) and ended up being more expensive out of pocket.
8. Recommended seed mix was a bit expensive.
9. Water. Need a soaker hose, irrigation, or need to be planted right near the creek.
10. Cost.
11. Death/Survival rate. It's an expensive and time consuming experiment.
12. Flax and Coneflower need a lot of water to survive
13. Gophers went in newly dug holes and ate the roots.
14. Need a good snowpack to insulate the roots for winter.
15. Shrub height is too short, need taller trees to effectively block the wind.

Additional Comments

1. Planted chokecherry in 2007, plan on planting shrubs in Spring 2008
2. NRCS Agent was helpful in finding seed
3. Neighboring farmers did not seem to like the idea
4. The benefits will be in the years to come. The plants are just getting established.
5. I planted on a very dry year and lost many trees. The ones that made it will definitely benefit bees and wildlife later.
6. Did not notice soil erosion lessening, but it was a new planting and was seeded in heavy ground anyway.
7. Had a great NRCS agent help with what to plant.
8. Just signed up last year, not enough time to notice any effects.
9. Haven't been in program long enough to see impacts.
10. Winterfat was difficult to find as a local cultivar, didn't end up finding one and had to buy it out of NM.
11. Need either electric fence or permanent barbed wire immediately put up, otherwise deer or cattle will graze plants down.
12. Would like to do more if I could find seed or plants.

What could make this program better?

1. Better attitudes from production farmers
2. Seed with better practices.
3. More info about the suitability and survivability of plants at given locations, availability of plant material.
4. A better year, more rain.
5. Make it rain.
6. Seed source information.

Following are some of the highlights of quotations producers wrote on their survey that did not relate to a specific question:

"We have planted chokecherries, Hansen Hedge Roses, and Lilac, not realizing it could be part of EQIP. Our EQIP shelter belts haven't been planted yet, we will keep this in mind."
- Ekalaka, MT

"I raised honey bees for 6 years; 1980-1986. Still have some equipment and want to do it again."
- Plains, MT

"We weren't aware of the pollinator-friendly thing, but we've planted (list follows) because of: wildlife food (especially birds), pollination, ground cover, bird shelter – and it's been clearly beneficial. Plum, currant, chokecherry (some wild and established already), serviceberry, snowberry, rose . . .
- Bloomfield, MT

"We have planted many of the plants listed in your booklet"
- Hamilton, MT

"As we have a nursery (as well as a ranch) we do this anyway. We use many of the plants in one nursery – they are for sale in our nursery and we used on our landscape jobs. No specific planned plantings, but we would like a plan. We would like to discuss this with you. Looks like a great program."
- Big Timber, MT

"Pollinators: I have planted 10 species of trees/shrubs, 6 species forbs, 15 species native and introduced grasses on 1300 acres of CRP and/or WHIP. If you would like to, please come and visit the sites (near Circle, MT)
-Circle, MT

"I'm not really in this program, but I plant numerous berry-producing native shrubs through the EQIP program (this is my third year). I also have 24 beehives on my property in the summer."
-Kila, MT

Did not know of this program, are planting anyway, and may be interested in the future. Is planting caragana, Russian olive, and juniper. Is also planting 300 acres to alfalfa grass mix (most of which was an old CRP mix). Incentive to do this is that there are pheasants everywhere on the neighbor's place, but not on theirs. Enjoys seeing more young people doing more of these programs.
-Winifred, MT

Question 16: Would you be willing to have us (The Pollinator Partnership, an independent non-profit) visit with you to discuss your experience, see your pollinator-friendly plantings, count pollinators and take some photographs?

Out of a total of 32 responses, 21 people circled "yes," they would like a field visit. I contacted a number of these producers (some in the program, some who planted anyway) to gain a further understanding of their operation and their experiences with the plantings. I am looking forward to making the field visits; I think it will help in understanding the difficulties of the planting process, which plants establish easiest, and some of the limitations involved.

It would be beneficial to try to coordinate a field visit with one or more of the producers while shelter belt planting/pasture seeding is taking place. It will make a good impression to get a little dirt on my jeans while helping out, and will also be a hands-on opportunity to understand the process involved to get plants in the ground. There are three producers I have spoken with that will be planting in late May/ early June of this year.

I have also spoken with some conservation-minded people who are not part of the EQIP/WHIP cost-share programs, but who have planted many of the plants in the booklet. It would be great to get the perspective of producers who are not part of the cost-share and who did not have excessive assistance from the NRCS in choosing plant species. It would be especially beneficial to visit a producer who used the booklet as a reference for the plantings.

Findings Report: Summary of Positive Outcomes

1. The average Montana producer considered him/herself "very aware" of the importance of bees and other pollinators in the health and reproduction of flowering plants. On a scale of 0 (never heard if this) to 10 (very aware), the average MT producer is rated 8.9.

2. Only 45% of producers who knew about conservation benefits points knew about the pollinator-friendly component. However, 75% of those who knew about the pollinator-friendly benefits points participated in the program.

3. Recent Plantings: Many respondents to the survey have only recently planted and the benefits/ challenges will be seen in the years to come. Thus far, the important highlights are:
   - 38% of respondents noticed less soil erosion.
   - 52% observed more beneficial insects/wildlife/birds, while only 17% noticed more pests.

Findings Report: Questions/Discussion Topics

1. Producers need more specific information regarding the mechanics of pollination, and the economic side benefits from planting pollinator habitat near grain and grass crops. Does this information go into a separate publication, or into the booklet?

2. Montana Native Plants for Pollinator-Friendly Plantings Booklet:
   - Who is the main target audience - EQIP/WHIP applicant, ag. community, general reference?
   - Distribution – How? To whom? Does NRCS endorse and encourage the use of this booklet?
   - Consistency with Tech Note MT-20: early-mid-late bloom, non-natives, tree species, and pasture mixes.
   - Have more people committed to planting as part of their EQIP/WHIP projects since the booklet has been published?
   - Need to add trees and windbreak species. What natives would be recommended?
   - Should there be a revision of this booklet?

3. EQIP/WHIP Program:
   - Cost-share allowances – are they appropriate for current seed/seedling prices?
   - How can the system be simplified to encourage more producers to apply or participate in incentive programs?
   - Specifically, if a pasture is planted with a seed/forb mix, can it be grazed or harvested during the growing season as long as ½ acre is saved back each year? Will this still allow for the cost-share and conservation benefits points?

4. What is the NRCS stance on planting Russian Olives as pollinator habitat/windbreak?

5. How does NRCS feel about planting pollinator habitat by streams for a consistent water source?

6. Does NRCS have literature to distribute to producers regarding how to manage specific challenges of pollinator habitat plantings: gophers, deer, available water, mortality, fencing ideas, etc . ?

Appendix

Appendix 1.
Pages 20-22
Survey Packet Cover Letter and Questionnaire

Appendix 2.
Pages 25-28
Planted acres and production for Row Crops, Pulses, and Oilseeds in Montana, 2005-2007.

Appendix 3.
Page 29
Comparison of Biology Technical Note No. MT-20 (Rev. 3) and Montana Native Plants for Pollinator Friendly Plantings.

APPENDIX 1. Survey Packet Cover Letter and Questionnaire

THE POLLINATOR PARTNERSHIP™

March, 2008

Dear Producer,

In 2005 or 2006 you applied for EQIP/WHIP funding from the NRCS. One of the questions on the application involved your interest in participating in pollinator-friendly practices for extra conservation benefits points. Were you interested? Did you participate in the program by planting native trees, shrubs and forbs? What impact did this have, positive or negative, on your operation? We want to know!

This survey is being conducted by an independent non-profit, The Pollinator Partnership (www.pollinator.org). Your responses are strictly confidential even if you supply your name and will in no way influence your eligibility for NRCS programs in the future.

Our goal is to help improve ranching and farming programs in Montana and we need your valuable feedback regarding pollinator-friendly practices. Please help by filling out and returning this survey by April 10, 2008; it should take no more than 10 minutes. Call (406) 209-0244 or email info@pollinator.org if you have any questions.

As a thank you (because we very much appreciate your time!), you will be entered into a drawing for a chance to win one of three $100 gift certificates to Ace Hardware. Simply fill out, detach, and return the bottom portion of this page with your survey.

Thanks for all that you do for Montana ranching and agriculture.

Sincerely,

Rebecca Baril
The Pollinator Partnership

ACE The helpful place.

Here's your chance to WIN a $100 gift certificate to ACE HARDWARE! Simply fill this out, detach, and return with your completed survey.

Name:_____

Address:_____

Phone Number: _____

Montana Pollinator-Friendly Plantings QUESTIONNAIRE

Optional, but helpful: Name:_____ Phone:_____

1. In what city is your operation located? _____

2. Are you aware of the importance of bees and other pollinators in the health and reproduction of flowering plants?

10	9	8	7	6	5	4	3	2	1	0
Very aware										Never heard of this

3. Do you feel having bees and other pollinators on your land helps you get better crop yields or other benefits?

10	9	8	7	6	5	4	3	2	1	0
Yes										No

4. Are you aware of the EQIP incentive that provides extra conservation benefits points for producers who implement certain practices? YES NO

5. If so, are you aware of the Pollinator-Friendly Practices component of the conservation benefits points? YES NO

6. If yes, did you participate in planting native plants for the Pollinator-Friendly Program? YES NO

IF **NO**, STOP AND MAIL THIS IN. IF **YES**, PLEASE CONTINUE

7. How helpful was the booklet "MT Native Plants for Pollinator-Friendly Plantings"? Was it easy to understand, containing enough information for you to implement the practices?

10	9	8	7	6	5	4	3	2	1	0
It made perfect sense										I was confused

8. What was your experience finding the Montana native seeds or plants for this program?

10	9	8	7	6	5	4	3	2	1	0
It was easy										It was difficult

9. What did you think about the cost of these seeds/plants?

10	9	8	7	6	5	4	3	2	1	0
Cheap					About Right					Expensive

10. When did you plant these native plants? Month_____ Year_____

11. Did you see any benefit/change to your operation by participating in the Pollinator-Friendly Practices Program? Please answer the following by circling the best answer:

turn over, please….

I saw higher crop yields. YES NO NOT SURE

My home garden produced more. YES NO NOT SURE

I noticed less soil erosion. YES NO NOT SURE

I observed more **beneficial** insects/wildlife/birds. YES NO NOT SURE

If yes, which ones?_____

I observed more insect/wildlife/bird **pests**. YES NO NOT SURE

If yes, which ones?_____

I observed more **invasive** plants. YES NO NOT SURE

If yes, which ones?_____

12. Did you feel that your experience with pollinator-friendly practices was a success for your operation? YES NO

Positive Results:

Negative Results:

Any Additional Comments:

13. What could make this program better?

14. Would you sign up for this program again? YES NO

15. Would you recommend it to others? YES NO

16. Would you be willing to have us (The Pollinator Partnership, an independent non-profit) visit with you to discuss your experience, see your pollinator-friendly plantings, count pollinators and take some photographs?

YES NO

If yes, please provide contact information on the front of this survey.

Thank You!!

APPENDIX 2.

Planted acres and production for Row Crops, Pulses, and Oilseeds in Montana, 2005-2007.
Source: USDA National Agricultural Statistics Service - http://www.nass.usda.gov

2007 Annual Crop Summary

Crop	Montana							US Production (000) Bu
	Year	Planted (000) Acres	Harvested (000) Acres	Yield Bu / Acre	Production (000) Bu	Season Avg. Price Dollars 1/	Value of Production (000) 1/	
Winter Wheat	2005	2,150	2,100	**45.0	94,500	$3.51	$331,695	1,499,129
	2006	1,950	1,920	43.0	82,560	$4.49	**$370,694	1,298,081
	2007	2,240	2,190	38.0	83,220	$7.30	$607,506	1,515,989
	2008	2,700	--	--	--	--	--	--
Durum Wheat	2004	570	545	**33.0	17,985	$3.86	**$69,422	89,893
	2005	590	585	28.0	16,380	$3.45	$56,511	101,105
	2006	400	395	17.0	6,715	$4.61	$30,956	53,475
	2007	480	475	24.0	11,400	$9.75	$111,150	71,686
Other Spring Wheat	2004	3,000	2,850	31.0	88,350	$3.69	$326,012	568,918
	2005	2,600	2,550	32.0	81,600	$3.80	$310,080	504,456
	2006	2,950	2,900	22.0	63,800	**$4.58	$292,204	460,480
	2007	2,450	2,400	23.0	55,200	$7.60	$419,520	479,047
All Wheat	2004	5,470	5,025	34.5	173,165	$3.61	$623,324	2,158,245
	2005	5,340	5,235	36.8	192,480	$3.63	$698,286	2,104,690
	2006	5,300	5,215	29.4	153,075	$4.54	$693,854	1,812,036
	2007	5,170	5,065	29.6	149,820	$7.60	$1,138,176	2,066,722
Barley	2004	1,000	830	**59.0	48,970	$2.85	$139,565	279,743
	2005	900	700	56.0	39,200	$2.92	$114,464	211,896
	2006	770	620	50.0	31,000	$3.00	$93,000	180,165
	2007	900	720	44.0	31,680	$4.25	$134,640	211,825
Oats	2004	105	40	60.0	2,400	$1.70	$4,080	115,695
	2005	90	35	53.0	1,855	$1.63	$3,024	114,878
	2006	70	*24	46.0	*1,104	$2.22	$2,451	93,638
	2007	75	35	52.0	1,820	$2.55	$4,641	91,599
Corn for Grain 2/	2004	70	15	143.0	2,145	$2.42	$5,191	11,807,086
	2005	65	17	**148.0	2,516	$2.54	$6,391	11,114,082
	2006	65	18	146.0	2,628	$3.93	$10,328	10,534,868
	2007	84	38	145.0	5,510	$4.75	$26,173	13,073,893

		(000) Acres	(000) Acres	Tons	(000) Tons		(000)	(000) Tons
Corn for Silage	2004	--	51	22.0	1,122	--	--	107,293
	2005	--	46	**24.0	1,104	--	--	106,486
	2006	--	45	22.0	990	--	--	105,129
	2007	--	44	23.0	1,012	--	--	106,328
Sugar Beets	2004	53.7	52.1	21.7	1,131	$40.80	$46,145	30,021
	2005	53.9	49.9	22.9	1,143	$45.30	$51,778	27,433
	2006	53.6	48.5	**27.0	1,310	$41.60	$54,496	34,064
	2007	47.5	47.0	24.7	1,161	--	--	31,912
Alfalfa Hay 3/	2004	--	1,400	2.30	3,220	$77.00	$247,940	75,481
	2005	--	**1,750	2.20	3,850	$71.00	$273,350	76,149
	2006	--	1,550	2.10	3,255	$78.00	$253,890	72,006
	2007	--	1,650	2.30	3,795	$75.50	$286,523	72,575
Other Hay 3/	2004	--	1,100	1.40	1,540	$70.00	$107,800	82,766
	2005	--	1,250	1.60	**2,000	$68.00	**$136,000	74,868
	2006	--	710	1.50	1,065	$81.00	$86,265	70,330
	2007	--	900	1.50	1,350	$79.00	$106,650	77,729
All Hay 3/	2004	--	2,500	1.90	4,760	$76.00	$355,740	158,247
	2005	--	**3,000	1.95	**5,850	$71.00	$409,350	151,017
	2006	--	2,260	1.91	4,320	$78.00	$340,155	142,336
	2007	--	2,550	2.02	5,145	$76.00	$393,173	150,304
Sweet Cherries 4/5/	2004	--	--	--	2,360	$2,010.00	**$4,473	283,100
	2005	--	--	*1.66	1,230	**$3,530.00	$4,165	250,830
	2006	--	--	3.20	2,400	$1,850.00	$1,071	294,160
	2007	--	--	**3.47	2,430	$1,520.00	$3,278	323,670
		(000) Acres	(000) Acres	Cwt	(000) Cwt		(000)	(000) Cwt
Fall Potatoes	2004	10.7	10.6	335	**3,551	$7.50	$26,633	410,253
	2005	10.7	10.6	325	3,445	$9.15	$31,522	382,743
	2006	10.6	10.5	**335	3,518	$9.00	**$31,662	398,921
	2007	11.3	11.2	330	**3,696	$10.40	$38,438	409,082

1/ Season average price and value of production for 2007 are not yet available. 2/ Planted for all purposes. 3/ Price of baled hay. 4/ Total production. 5/ Value of utilized production –Not Available *Record Low **Record High

2007 Annual Pulse Crop Summary

Crop	Montana							US Production (000) Cwt
	Year	Planted (000) Acres	Harvested (000) Acres	Yield Cwt / Acre	Production (000) Cwt	Season Avg. Price Dollars 1/	Value of Production (000) 1/	
All Dry Beans	2004	13.0	12.7	22.4	285	**$28.70	$8,180	17,788
	2005	18.0	14.1	20.0	282	$18.60	$5,245	26,772
	2006	19.5	18.6	16.4	305	$20.50	$6,253	24,247
	2007	18.3	16.6	16.7	278	$24.20	$6,728	25,371
Pinto Beans	2004	10.8	10.6	23.8	252	--	--	7,814
	2005	12.0	10.0	23.9	239	--	--	12,601
	2006	10.7	10.5	22.3	234	--	--	9,618
	2007	8.5	8.4	22.8	192			11,631
Garbanzo Beans	2004	*2.2	*2.1	15.7	33	--	--	593
	2005	6.0	4.1	10.5	43	--	--	1,061
	2006	8.8	8.1	8.8	71	--	--	1,539
	2007	9.8	8.2	10.5	86	--	--	1,511
Lentils	2004	78.0	72.0	**14.0	1,008	$15.10	$15,221	4,182
	2005	**150.0	**146.0	12.8	**1,869	*$9.54	**$17,830	5,163
	2006	142.0	134.0	*6.0	804	$10.80	$8,683	3,244
	2007	87.0	85.0	9.9	842	$17.10	$14,398	3,408
Dry Peas	2004	68.0	63.0	**20.1	1,266	$5.91	$7,482	11,419
	2005	135.0	122.0	18.0	2,196	$4.80	$10,541	14,003
	2006	210.0	191.0	10.8	2,063	$6.64	**$13,698	13,203
	2007	**235.0	**217.0	17.0	**3,689	$9.50	$35,046	15,903
Austrian Winter Peas	2004	14.0	11.0	9.0	99	$10.10	$1,000	291
	2005	25.0	**13.0	**12.2	**159	$8.67	**$1,379	307
	2006	**32.0	12.0	9.2	110	*$7.93	$872	259
	2007	20.0	4.0	*6.5	26	$11.40	$296	127

1/ Season average price and value of production for 2007 are not yet available. –Not Available
*Record Low **Record High

2007 Annual Oilseed Summary

Crop	Montana							US Production (000) Bu
	Year	Planted (000) Acres	Harvested Acres (000)	Yield Bu / Acre	Production (000) Bu	Season Avg. Price Dollars 1/	Value of Production (000) 1/	
Flaxseed	2004	20.0	19.0	**18.0	342	**$7.94	$2,715	10,368
	2005	55.0	54.0	17.0	918	$6.20	$5,692	19,695
	2006	35.0	33.0	9.0	297	$6.13	$1,821	11,019
	2007	21.0	20.0	9.0	180	$13.10	$2,358	
		(000) Acres	(000) Acres	Lbs / Acre	(000) Lbs		(000)	(000) Lbs
Canola	2004	15.0	15.0	**1,590	23,850	--	--	1,339,530
	2005	17.0	16.5	1,290	21,285	*9.00	**1,916	1,580,985
	2006	10.0	9.8	1,120	10,976	**11.70	*1,284	1,394,332
	2007	*8.0	*7.7	1,310	*10,087	$16.20	$1,634	
Mustard Seed	2004	11.5	11.4	700	7,980	--	--	56,290
	2005	11.5	10.8	580	6,264	--	--	35,114
	2006	7.0	6.9	570	3,933	--	--	28,220
	2007	15.0	13.0	510	6,630	--	--	
Safflower	2004	33.5	31.0	*680	*21,080	--	--	191,365
	2005	*30.0	29.0	**890	25,810	$14.00	$3,613	218,995
	2006	39.0	37.0	750	27,750	$13.50	$3,746	196,955
	2007	38.0	36.5	830	30,295	$16.50	$4,999	
Sunflower	2004	5.0	4.5	975	4,388	--	--	2,049,613
	2005	6.8	6.4	1,150	**7,360	--	--	4,018,355
	2006	3.6	3.5	**1,278	4,474	--	--	2,143,613
	2007	2.6	2.5	1,186	2,965	--	--	2,888,555

1/ Season average price and value of production for 2007 are not yet available. –Not Available
*Record Low **Record High

APPENDIX 3.

Comparison of Native Plant Lists from Biology Technical Note No. MT-20 (Rev. 3) and Montana Native Plants for Pollinator-Friendly Plantings.

Native Plant Common Name	Tech Note	MT Booklet
Aster, Hairy Golden		x
Aster, Smooth		x
Beebalm, Wild		x
Blanket flower, (Indian)	x	x
Chokecherry	x	x
Cinqefoil, Shrubby	x	
Columbine, Colorado		x
Coneflower, Prairie	x	
Coneflower, Purple		x
Current, Golden	x	x
Dogwood, Redosier	x	x
Elderberry, Blue		x
Flax, Lewis	x	
Gayfeather, Dotted	x	x
Globemallow	x	
Hawthorn, Black	x	
Penstemon, Fuzzytongue		x
Penstemon, Rocky Mtn.	x	
Plum, American	x	x
Prairie Clover, Purple	x	
Prairie Clover, White	x	x
Rabbitbrush, Green	x	x
Rabbitbrush, Rubber	x	x
Rose, Wood's	x	x
Sagebrush, Big	x	
Sagewort, Cudweed	x	
Sagewort, Green	x	
Serviceberry	x	x
Snowberry, Common	x	x
Snowberry, Western	x	
Sumac, Skunkbrush	x	
Sunflower, Maximilian	x	
Sunflower, Perennial Prairie		x
Willow	x	
Yarrow, (White)	x	x