



## Early Season Gardening

*Message from Reed Findlay Extension Educator*

We have had a lot of snow this year and people are ready for spring. There are many things we can do to get out early and garden a few weeks ahead of schedule. The most critical factors in early gardening is the soil temperature and the species of vegetable we plan on growing.

I will start with soil temperature. Vegetable seeds need a certain temperature to germinate. If you plant too early into cold soil the seed will rot before it germinates. Each species of vegetable has its own optimum germination temperature.

### **Here are the optimum soil temperatures for germination of various crops:**

**35°F-** lettuce, onion, parsnips, spinach;

**40°F-** beet, cabbage, carrot, cauliflower, greens, kale, collards, kohlrabi, leeks, parsley, peas, radish, chard, celery, turnip;

**50°F-** corn, tomatoes, onion, grain;

**60°F-** beans, cucumbers, squash, pumpkin, potatoes, eggplant, melons, cantaloupe, okra, peppers.

We can modify the soil temperature and get started early. The most expensive way I have ever seen to do this is by using an actual heater. The gardener who did this had tomatoes prior to anyone. Due to the cost and danger, he used an electric heater, I don't recommend this. But here are other ways. Just simply burying a band (ball) of manure directly

below early seeded crops can significantly increase temperatures due to the heat of decomposition. Just make sure the seed is not in direct contact with the manure band.

The use of raised beds can also raise the soil temperature. Raised beds expose more of the soil surface to solar radiation. If properly constructed they can be oriented to face the south and gather more sun. Raised beds also drain excess moisture out of the soil. One again they must be constructed properly for drainage. Water takes a long time to heat up, and soils that are better drained (have less moisture) will heat up more rapidly. For these reasons raised beds usually have higher soil temperatures than a typical garden. Due to the higher soil temperature in a raised bed you will be able to plant vegetables earlier.

Now for some thoughts on vegetable species. Planting cold tolerant crops such as cabbage, lettuce, peas in the raised bed will get you started even faster. moderately tolerant crops such as beets, carrots, radish, and turnips can also be used. If you want to get started early don't choose beans, corn, or tomatoes. For cold sensitive crops, such as: cucumber, melon, pepper, eggplant, and squash; you will just have to wait until spring really comes. There is just no getting started early with these vegetables

The Bannock County Extension Office has several Extension Educators available for your needs. Please contact us if you have any questions or concerns with Agriculture, Horticulture, Family Consumer Sciences and 4-H. We look forward to hearing from you and hope you have a great spring.

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## Alfalfa Seeding Rates

Establishing a good stand of alfalfa has always been costly. We usually recover these high costs over the four or so years the stand is in production, but recently the costs have risen dramatically. This is due in part to the increased cost of high technology seed such as roundup ready and low lignin alfalfa. These technologies can drive up the price of seed more than seven dollars per pound. Because of this increased cost we need to look at seeding rates to determine if we can lower the rate and reduce costs without sacrificing the stand.

I just looked up alfalfa seeding rates from my manuals from college. Now that was 25 years ago, but back then my professors were recommending anywhere from 10 to up to 20 lbs. pure live seed per acre. This month as I have looked into the research and talked to our forage specialists there is a consensus that they see no advantage in seeding rates above 8 lbs./acre. Most specialist feel that there are no yield, forage quality, weed suppression, or even stand benefits from higher seeding rates.

This is important information and can lower standard seeding costs by twenty dollars per acre in some cases. There is a catch in all this good news. When you plant, you must be extra careful and do it correctly. First, you must prepare a good seedbed. As you walk across the field you should not be able to see all of your foot print. If you can see your foot print you will need to harrow and roller the field again. Another great seedbed test is to take a basketball into the field. You should be able to bounce the basketball if the seedbed is firm enough. You must also use a drill that is in good repair and has been correctly adjusted to deliver the correct pounds of seed evenly across the drill width. You must also ensure that you are seeding to the correct depth (around  $\frac{1}{4}$  inch), and that there is adequate moisture for proper radical development once germination has started. The older recommendation of 12 lbs/acre will provide some insurance if you have limited control of seedbed, seeding depth, or moisture.

Now a word on broadcast seeding. If you are using the new technology seed then I would not recommend broadcast seeding. Broadcast seeding recommendations are generally about 20 lbs/acre. The high cost of the seed precludes using less precise types of seeding techniques. The addition of low lignin alfalfa to the GMO seeds is even more expensive per pound, and also precludes broadcast seeding. Research has shown that we can reduce seeding rates by fifteen to twenty percent compared to historical seeding rates when planting Roundup Ready alfalfa. If you usually plant fifteen pounds of seed per acre, with Roundup Ready alfalfa you might get away with seeding just twelve pounds per acre and save on establishment costs.

## Messages from the UI Forage School

Last month we held our UI forage schools in Rexburg, Blackfoot, and Preston. The IHFA also held their conference in Burly. We had many great speakers and covered a lot of ground. Be sure not to miss the schools next year. One of the most interesting topics we learned about was low lignin alfalfa varieties and the amount of work and research that went into their development. If you are growing dairy quality hay you may need to look into planting a few acres of low lignin alfalfa. At the schools, I gave the economic outlook for the upcoming year. Prices have come up from their lows last winter, but nationally we still have a lot of hay stocks to use up. The strong dollar continues to weaken our export markets, and volatile milk prices are still affecting hay prices. In addition, large stock of corn and other substitutes for alfalfa could keep hay prices lower than expected.