Getting the Growing Season Started!!!

Starting From Seed in the Garden....

It's that time to start cool season vegetable transplants like broccoli and cabbage. Most transplants are started four to six weeks before the expected outdoor planting date. Wait until April to start transplants of warm season vegetables like tomatoes and peppers.

Growing quality transplants is not always easy. To increase success, provide supplemental lighting, air movement and a warm soil. South-facing windows usually do not provide enough light to grow sturdy transplants. Provide additional light with fluorescent lamps, not incandescent bulbs. Fluorescents produce much less heat allowing bulbs to be placed two to four inches from plants to increase the amount of light received. Leave fluorescent lights on for 16 hours each day.

Transplants grow sturdier with movement. Wind takes care of this outdoors. Indoors, brush your hand over the tops of transplants twice day with about 10 strokes each time.

Starting in the Field...

Planting Considerations

Start with good seeds!

a. What makes good seed?

_____

_____

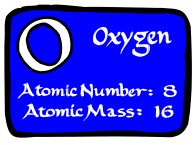
_____

_____

_____

Three basic environmental conditions required for seed germination....

_____



_____

_____

What does a planter do?

Open a _____ in the soil.

Control amount of seed placed in row. (Meter the seed.)

Drop seed in row.

Cover the seedbed.

_____ the seedbed.

Factors to consider when planting obtaining high yields….

Time of planting

Seeding _____

How deep for corn? _____ soybeans? _____

Soil Conditions

Soil _____

Weed, insect & _____ control

SEED BAG EXAMINATION

Look at an example seed bag and fill in the following:

Pure seed percentage – _____
Percentage inert matter – _____
Germination Percentage - _____

Calculate the percentage of PLS, or Pure Live Seed

% PLS = Pure Seed % x Germination % _____

To achieve a final corn population stand of 30,000 seeds/acre of corn, how many seeds/acre should you drop?

% PLS x (Desired Planting Population) = Actual Seeding Population

Selecting the right hybrid:

Maturity time – length of time it takes for plant to grow from the day it is planted until the seeds are mature (safe from frost)

Yield – examine crop performance tests to decide which ones to plant

_____ – ability of a plant to stand up on its own until harvest

ADDITIONAL RESOURCES

TABLE 3

Relationship between seeds planted, distance between seeds, and projected final stand.

Seeds planted (per acre)	Row spacing, inches (inches between seeds) 15	20	30	36	38	Plant population* (per acre)
24,000	17.4	13.1	8.7	7.3	6.9	20,400
26,000	16.1	12.1	8.0	6.7	6.3	22,100
28,000	14.9	11.2	7.5	6.2	5.9	23,800
30,000	13.9	10.5	7.0	5.8	5.5	25,500
32,000	13.1	9.8	6.5	5.4	5.2	27,200
34,000	12.3	9.2	6.1	5.1	4.9	28,900
36,000	11.9	8.7	5.8	4.8	4.6	30,600
38,000	11.0	8.3	5.5	4.6	4.3	32,300
40,000	10.5	7.8	5.2	4.4	4.1	34,000
42,000	10.0	7.5	5.0	4.1	3.9	35,700
44,000	9.5	7.1	4.8	4.0	3.8	37,400

* Assuming 15 percent mortality.

Source: Iowa State Extension

Method of estimating plant population.*

Row width (inches)	Length of row (in feet equal to 1/1000th acre)
15	34' 10"
20	26' 2"
30	17' 5"
36	14' 6"
38	13' 9"

* Count plants (not tillers) and multiply by 1,000 to estimate plants per acre.

Source: Iowa State Extension

Table 1. *Soybean plant density related to row spacing and average number of plants per foot of row.*

Plants per acre	Row spacing (inches) 30	20	15	10	7
	(Average number of plants per foot of row)				
75,000	4.3	2.9	2.2	1.5	1.0
100,000	5.8	3.6	2.9	2.0	1.4
125,000	7.2	4.8	3.6	2.4	1.7
150,000	8.6	5.7	4.3	2.9	2.0
175,000	10.1	6.7	5.1	3.3	2.3
200,000	11.5	7.7	5.7	3.8	2.7

Source: Iowa State Extension