TEXAS A&M AGRILIFE EXTENSION

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Recent precipitation has provided much needed moisture to the area but did come at a cost. Streaks of hail accompanied some of the storms which damaged and in some cases destroyed crops in their path. Replant decisions are having to be made as quickly as possible as time to mature a subsequent crop is limited.

The growing point of sorghum remains at or near the soil surface and likely avoided catastrophic injury in most cases and should recover. Larger corn was at more risk since the growing point and hardened stalk below it were much more exposed. Damage evaluations should consider crop stage, stand loss, leaf area loss, growing point injury and stalk injury.

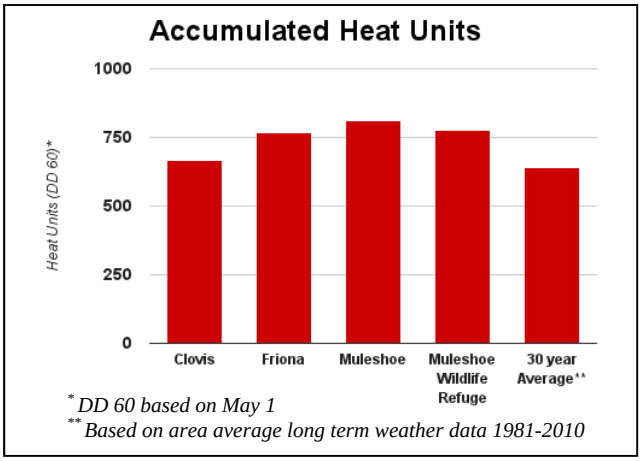
Hail damaged corn.

Like many other crop plants, corn does not need all of the leaf surface area that it produces. Corn fields may look ugly and ragged and still be capable of producing an almost normal corn crop. Even shredded and broken leaves are capable of some photosynthesis if they are still connected to the main plant. A strong healthy root system, good soil moisture, and favorable, sunny weather

Potential Dailey Water Use*

Crop	Inches/Day
Corn	.25-.45
Cotton	.20-.27
Sorghum	.17-.23

*Daily estimated crop water demands (inches of water per day) based on PET data from Halfway.



*DD 60 based on May 1
**Based on area average long term weather data 1981-2010

are most important to a rapid recovery. The growth stage of the corn plant and the percent defoliation are important. Hail that is received later in the growing season can be increasingly destructive. Damage tables constructed by University of Minnesota (Page 2) indicate the percent yield reduction observed with various percents of defoliation at defined growth stages. Notice that a near-50 percent leaf loss at the 10th leaf stage results in only a 6 percent yield reduction.

What about silage production? Leaves only compose 10-15% of total plant weight so yield losses due to actual physical leaf removal may not be has great as one might assume. Most damage will come from the inability of the plant to produce acceptable plant structure and ears. Research conducted by Penn State Extension suggest that corn silage yield losses due to hail are comparable to grain yield losses.

Corn stalk damaged by hail

http://nwpipm.blogspot.com/

IPM radio show on Fox Talk 950 AM Wednesdays from 1:00-2:30

https://twitter.com/NWPIPM

Stage of Growth	Percent Leaf Area Destroyed																		
	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
7 leaf							1	1	2	3	4	4	5	5	6	7	8	9	9
8 leaf							1	2	3	4	5	5	6	6	7	8	9	10	11
9 leaf				1	1	2	2	3	4	5	6	6	7	7	9	10	11	12	13
10 leaf				1	2	3	4	5	6	7	8	8	9	9	11	13	14	15	16
11 leaf			1	1	2	3	5	6	7	8	9	10	11	12	14	16	18	20	22
12 leaf			1	2	3	4	5	7	9	10	11	13	15	16	18	20	23	26	28
13 leaf		1	1	2	3	4	6	8	10	11	13	15	17	19	22	25	28	31	34
14 leaf		1	2	3	4	6	8	10	13	15	17	20	22	25	28	32	36	40	44
15 leaf	1	1	2	3	5	7	9	12	15	17	20	23	26	30	34	38	42	46	51
16 leaf	1	2	3	4	6	8	11	14	18	20	23	27	31	36	40	44	49	55	61
17 leaf	2	3	4	5	7	9	12	16	20	23	27	31	35	40	45	50	56	62	69
18-21 leaf	3	4	5	7	10	13	17	21	26	30	34	39	44	50	56	62	69	76	84
Tasseled	3	5	7	9	13	17	21	26	31	36	42	48	55	62	68	75	83	91	100
Silked	2	4	6	8	11	15	19	23	38	33	38	44	50	57	63	70	78	86	95
Silks Brown	2	4	6	8	11	14	18	22	26	31	36	41	47	53	58	64	71	79	88
Pre-Blister	2	3	5	7	10	13	16	20	24	28	32	37	43	49	54	60	66	73	81

After 4 to 5 days have lapsed since the hail storm, inspect the surviving plants. Some of these plants should be split open to see at what height and condition the growing point is found. If the growing tip is black or brown, the damage is severe and the plant may soon die. Undamaged growing points will be pushing new leaves, and corn will increase in height and leaf area. A "buggy whip" condition can occur when new leaf growth becomes tangled in dead or mangled leaves, normally most plants will break through given enough time. Each field will have to be carefully evaluated to get a best estimate of crop potential and risks associated with keeping the current crop vs. replanting.

Damaged growing point

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