

# PRACTICAL FARMERS OF IOWA FIELD TRIAL RECORDING FORM, 2007

COOPERATOR NAME: \_\_\_\_\_ CROP: \_\_\_\_\_

PROJECT NAME: \_\_\_\_\_

DESCRIPTION: \_\_\_\_\_  
\_\_\_\_\_

TREATMENT #1: \_\_\_\_\_ TREATMENT #2: \_\_\_\_\_

TREATMENT #3: \_\_\_\_\_ TREATMENT #4: \_\_\_\_\_

PHYSICAL DESCRIPTION — COUNTY: \_\_\_\_\_

TOWNSHIP: \_\_\_\_\_ SECTION: \_\_\_\_\_

LOCATION WITHIN SECTION: \_\_\_\_\_

SOIL TYPE(S) REPRESENTED: \_\_\_\_\_

SOIL TEST — POTASH: \_\_\_\_\_ (UNITS): \_\_\_\_\_ PER \_\_\_\_\_ (e.g., pounds PER acre

P1 PHOSPHORUS: \_\_\_\_\_ (UNITS): \_\_\_\_\_ PER \_\_\_\_\_ or parts PER million)

SOIL pH: \_\_\_\_\_ BUFFER pH: \_\_\_\_\_ ORGANIC MATTER: \_\_\_\_\_

DATE OF LAST SOIL TEST: \_\_\_\_\_ TESTING LAB: \_\_\_\_\_

ROTATION, FIELD HISTORY: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PREVIOUS CROP: \_\_\_\_\_ YIELD OR STAND: \_\_\_\_\_

PREPLANT TILLAGE, EQUIPMENT SIZE: \_\_\_\_\_  
\_\_\_\_\_

## PLANTING

DATE: \_\_\_\_\_ ROW SPACING: \_\_\_\_\_

CONDITIONS: \_\_\_\_\_

POPULATION: \_\_\_\_\_ VARIETY: \_\_\_\_\_

SIZE OF PLANTER, KIND, AND MODIFICATIONS: \_\_\_\_\_  
\_\_\_\_\_

COMMENTS: \_\_\_\_\_

(GENERAL)

**BACKGROUND****INSPIRATION**

What led you to consider this trial in the first place? What questions were you asking?  
Why did you decide to design this trial the way you did?

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**LEARNING**

What did you learn from this trial? What difference will it make to your farming or life?  
What additional questions does it raise for you?

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**Recording Form Reminders**

- One trial per form
- Include all relevant operations
- Include all equipment sizes
- Include units (e.g., "lbs per acre")
- Include costs/economics
- Fill out precipitation record
- Include recent soil test

(see *Tips on Trials*)

## (FERTILITY TRIALS)

**PURCHASED FERTILIZER:** (RECORD UNIT PRICES AND COSTS/ACRE ON PAGE 24.)**PREPLANT FERTILIZER**

METHOD OF APPLICATION: \_\_\_\_\_

EQUIPMENT SIZE: \_\_\_\_\_

TREATMENT #1 ANALYSIS (NPK AS %): \_\_\_\_\_

LBS/ACRE OF \_\_\_\_\_

PRODUCT (e.g., 100 lbs/acre of 0-0-60): \_\_\_\_\_

ORNUTRIENT {LBS/ACRE OF NITROGEN, PHOSPHATE (P<sub>2</sub>O<sub>5</sub>)  
& POTASH (K<sub>2</sub>O) APPLIED}: \_\_\_\_\_

TREATMENT #2 ANALYSIS (NPK AS %): \_\_\_\_\_

LBS/ACRE OF \_\_\_\_\_

PRODUCT (e.g., 100 lbs/acre of 0-0-60): \_\_\_\_\_

ORNUTRIENT {LBS/ACRE OF NITROGEN, PHOSPHATE (P<sub>2</sub>O<sub>5</sub>)  
& POTASH (K<sub>2</sub>O) APPLIED}: \_\_\_\_\_

TREATMENT #3 ANALYSIS (NPK AS %): \_\_\_\_\_

LBS/ACRE OF \_\_\_\_\_

PRODUCT (e.g., 100 lbs/acre of 0-0-60): \_\_\_\_\_

ORNUTRIENT {LBS/ACRE OF NITROGEN, PHOSPHATE (P<sub>2</sub>O<sub>5</sub>)  
& POTASH (K<sub>2</sub>O) APPLIED}: \_\_\_\_\_**FERTILIZER AT PLANTING**

METHOD OF APPLICATION: \_\_\_\_\_

EQUIPMENT SIZE: \_\_\_\_\_

TREATMENT #1 ANALYSIS (NPK AS %): \_\_\_\_\_

LBS/ACRE OF \_\_\_\_\_

PRODUCT (e.g., 100 lbs/acre of 0-0-60): \_\_\_\_\_

ORNUTRIENT {LBS/ACRE OF NITROGEN, PHOSPHATE (P<sub>2</sub>O<sub>5</sub>)  
& POTASH (K<sub>2</sub>O) APPLIED}: \_\_\_\_\_

TREATMENT #2 ANALYSIS (NPK AS %): \_\_\_\_\_

LBS/ACRE OF \_\_\_\_\_

PRODUCT (e.g., 100 lbs/acre of 0-0-60): \_\_\_\_\_

ORNUTRIENT {LBS/ACRE OF NITROGEN, PHOSPHATE (P<sub>2</sub>O<sub>5</sub>)  
& POTASH (K<sub>2</sub>O) APPLIED}: \_\_\_\_\_

TREATMENT #3 ANALYSIS (NPK AS %): \_\_\_\_\_

LBS/ACRE OF \_\_\_\_\_

PRODUCT (e.g., 100 lbs/acre of 0-0-60): \_\_\_\_\_

ORNUTRIENT {LBS/ACRE OF NITROGEN, PHOSPHATE (P<sub>2</sub>O<sub>5</sub>)  
& POTASH (K<sub>2</sub>O) APPLIED}: \_\_\_\_\_

## (FERTILITY TRIALS)

**SIDEDRESSED FERTILIZER**

DATE(S) OF APPLICATION: \_\_\_\_\_

APPLICATION METHOD/EQUIPMENT: \_\_\_\_\_

TREATMENT #1 ANALYSIS (NPK AS %): \_\_\_\_\_

LBS/ACRE OF \_\_\_\_\_

PRODUCT (e.g., 100 lbs/acre of 0-0-60): \_\_\_\_\_

ORNUTRIENT {LBS/ACRE OF NITROGEN, PHOSPHATE (P<sub>2</sub>O<sub>5</sub>)  
& POTASH (K<sub>2</sub>O) APPLIED}: \_\_\_\_\_

TREATMENT #2 ANALYSIS (NPK AS %): \_\_\_\_\_

LBS/ACRE OF \_\_\_\_\_

PRODUCT (e.g., 100 lbs/acre of 0-0-60): \_\_\_\_\_

ORNUTRIENT {LBS/ACRE OF NITROGEN, PHOSPHATE (P<sub>2</sub>O<sub>5</sub>)  
& POTASH (K<sub>2</sub>O) APPLIED}: \_\_\_\_\_

TREATMENT #3 ANALYSIS (NPK AS %): \_\_\_\_\_

LBS/ACRE OF \_\_\_\_\_

PRODUCT (e.g., 100 lbs/acre of 0-0-60): \_\_\_\_\_

ORNUTRIENT {LBS/ACRE OF NITROGEN, PHOSPHATE (P<sub>2</sub>O<sub>5</sub>)  
& POTASH (K<sub>2</sub>O) APPLIED}: \_\_\_\_\_**MANURE APPLICATION – ANALYSIS:** \_\_\_\_\_

DESCRIPTION OF MANURE: \_\_\_\_\_

SPREADER DESCRIPTION, SPREAD WIDTH, MAX WEIGHT PER AXLE: \_\_\_\_\_

TREATMENT #1

APPLICATION METHOD: \_\_\_\_\_

TONS OR GAL/ACRE APPLIED: \_\_\_\_\_ (INCORPORATION?): \_\_\_\_\_

NUTRIENTS ( + N + P<sub>2</sub>O<sub>5</sub> + K<sub>2</sub>O) /ACRE: \_\_\_\_\_ DATE(S): \_\_\_\_\_

TREATMENT #2

APPLICATION METHOD: \_\_\_\_\_

TONS OR GAL/ACRE APPLIED: \_\_\_\_\_ (INCORPORATION?): \_\_\_\_\_

NUTRIENTS ( + N + P<sub>2</sub>O<sub>5</sub> + K<sub>2</sub>O) /ACRE: \_\_\_\_\_ DATE(S): \_\_\_\_\_

TREATMENT #3

APPLICATION METHOD: \_\_\_\_\_

TONS OR GAL/ACRE APPLIED: \_\_\_\_\_ (INCORPORATION?): \_\_\_\_\_

NUTRIENTS ( + N + P<sub>2</sub>O<sub>5</sub> + K<sub>2</sub>O) /ACRE: \_\_\_\_\_ DATE(S): \_\_\_\_\_

## (NITROGEN TRIALS)

## FIELD HISTORY OF MANURE APPLICATION

FIELD IDENTIFICATION: \_\_\_\_\_

YEAR	CROP	TIMING	RATE	TYPE/ANALYSIS	APPLICATION METHOD
2007					
2006					
2005					
2004					
2003					
EARLIER					

**TRIAL DESCRIPTION:**

**(COVER CROP TRIALS)**

TREATMENT #1: \_\_\_\_\_

TREATMENT #2: \_\_\_\_\_ TREATMENT #3: \_\_\_\_\_

TREATMENT #1 SEEDING DATE: \_\_\_\_\_

SEEDING METHOD, EQUIPMENT OR SPREAD WIDTH: \_\_\_\_\_

\_\_\_\_\_

ELIMINATION METHOD, EQUIPMENT SIZE: \_\_\_\_\_

LIST EACH SPECIES SEEDED, SEEDING RATES, AND COST OF SEED

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

TREATMENT #2 SEEDING DATE: \_\_\_\_\_

SEEDING METHOD, EQUIPMENT OR SPREAD WIDTH: \_\_\_\_\_

\_\_\_\_\_

ELIMINATION METHOD, EQUIPMENT SIZE: \_\_\_\_\_

LIST EACH SPECIES SEEDED, SEEDING RATES, AND COST OF SEED

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

TREATMENT #3 SEEDING DATE: \_\_\_\_\_

SEEDING METHOD, EQUIPMENT OR SPREAD WIDTH: \_\_\_\_\_

\_\_\_\_\_

ELIMINATION METHOD, EQUIPMENT SIZE: \_\_\_\_\_

LIST EACH SPECIES SEEDED, SEEDING RATES, AND COST OF SEED

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



**(WEED TRIALS)****ROTARY HOE** (Please specify for each treatment.)

TYPE: \_\_\_\_\_

WIDTH: \_\_\_\_\_ TRACTOR HP: \_\_\_\_\_

DATES — TREATMENT #1: \_\_\_\_\_

DATES — TREATMENT #2: \_\_\_\_\_

DATES — TREATMENT #3: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**CULTIVATION** (Including flame cultivation. Please specify for each treatment.)

TYPE(S) OF CULTIVATOR: \_\_\_\_\_

NUMBER OF ROWS: \_\_\_\_\_ AUTO GUIDANCE SYSTEM (YES/NO): \_\_\_\_\_

CULTIVISION MIRROR (YES/NO): \_\_\_\_\_ TRACTOR HP: \_\_\_\_\_

CULTIVATOR MODIFICATIONS/SETUP: \_\_\_\_\_

\_\_\_\_\_

HOW CLOSE TO THE ROW? \_\_\_\_\_

DATES — TREATMENT #1: \_\_\_\_\_

DATES — TREATMENT #2: \_\_\_\_\_

DATES — TREATMENT #3: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**(WEED TRIALS)****PREPLANT HERBICIDES** (Record unit prices and costs per acre on page 24.)

METHOD OF APPLICATION: \_\_\_\_\_

SPRAYER SIZE: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

TREATMENT #1 – DATES: \_\_\_\_\_

BRANDS &amp; FORMULATIONS, AMOUNTS/ACRE (INDICATE UNITS)

TREATMENT #2 – DATES: \_\_\_\_\_

BRANDS &amp; FORMULATIONS, AMOUNTS/ACRE (INDICATE UNITS)

TREATMENT #3 – DATES: \_\_\_\_\_

BRANDS &amp; FORMULATIONS, AMOUNTS/ACRE (INDICATE UNITS)

**HERBICIDES AT PLANTING** (Record unit prices and costs/acre on page 24.)

METHOD OF APPLICATION, EQUIPMENT SIZE: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

TREATMENT #1 – DATES: \_\_\_\_\_

BRANDS &amp; FORMULATIONS, AMOUNTS/ACRE (INDICATE UNITS)

TREATMENT #2 – DATES: \_\_\_\_\_

BRANDS &amp; FORMULATIONS, AMOUNTS/ACRE (INDICATE UNITS)

TREATMENT #3 – DATES: \_\_\_\_\_

BRANDS &amp; FORMULATIONS, AMOUNTS/ACRE (INDICATE UNITS)

**(WEED TRIALS)****POST EMERGENCE HERBICIDES** (Record unit prices and costs/acre on page 24.)

METHOD OF APPLICATION: \_\_\_\_\_

SPRAYER SIZE: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

TREATMENT #1 – DATES: \_\_\_\_\_

BRANDS & FORMULATIONS, AMOUNTS/ACRE (INDICATE UNITS)  
\_\_\_\_\_

TREATMENT #2 – DATES: \_\_\_\_\_

BRANDS & FORMULATIONS, AMOUNTS/ACRE (INDICATE UNITS)  
\_\_\_\_\_

TREATMENT #3 – DATES: \_\_\_\_\_

BRANDS & FORMULATIONS, AMOUNTS/ACRE (INDICATE UNITS)  
\_\_\_\_\_**ADDITIONAL PERSON-HOURS SPENT WALKING CROP FOR WEED CONTROL**  
(HRS/ACRE OR HRS/STRIP – *PLEASE INDICATE UNITS*)

TREATMENT #1: \_\_\_\_\_

TREATMENT #2: \_\_\_\_\_

TREATMENT #3: \_\_\_\_\_

(TILLAGE TRIALS)

TREATMENT #1 DESCRIPTION: \_\_\_\_\_

PREPLANT TILLAGE

(LIST OPERATIONS, DATES, SIZE OF IMPLEMENT, AND NUMBER OF PASSES)

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OTHER OPERATIONS THAT MAKE THIS TREATMENT UNIQUE

(LIST OPERATIONS, DATES, SIZE OF IMPLEMENT, AND NUMBER OF PASSES)

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TREATMENT #2 DESCRIPTION: \_\_\_\_\_

PREPLANT TILLAGE

(LIST OPERATIONS, DATES, SIZE OF IMPLEMENT, AND NUMBER OF PASSES)

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OTHER OPERATIONS THAT MAKE THIS TREATMENT UNIQUE

(LIST OPERATIONS, DATES, SIZE OF IMPLEMENT, AND NUMBER OF PASSES)

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TREATMENT #3 DESCRIPTION: \_\_\_\_\_

PREPLANT TILLAGE

(LIST OPERATIONS, DATES, SIZE OF IMPLEMENT, AND NUMBER OF PASSES)

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OTHER OPERATIONS THAT MAKE THIS TREATMENT UNIQUE

(LIST OPERATIONS, DATES, SIZE OF IMPLEMENT, AND NUMBER OF PASSES)

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**ISU VALUE-ADDED EXTENSION – PFI 2007 FLAX PROJECT**

1. PREVIOUS CROP 2006 \_\_\_\_\_ 2005 \_\_\_\_\_ 2004 \_\_\_\_\_

(If flax in 2007 follows more than one crop grown in 2006, please photocopy these pages and use one set for each field in which flax followed a different crop)

2. PREVIOUS NUTRIENT MANAGEMENT HISTORY (FERTILIZER OR MANURE APPLICATIONS – TYPE, RATE/ACRE, ANALYSIS):

2006 \_\_\_\_\_

2005 \_\_\_\_\_

PRIOR? \_\_\_\_\_

3: TILLAGE: FALL 2006 \_\_\_\_\_ SPRING 2007 \_\_\_\_\_

EQUIPMENT SIZE \_\_\_\_\_ EQUIPMENT SIZE \_\_\_\_\_

4. FINAL SEEDBED PREP: TYPE OF TILLAGE AND TIMING BEFORE PLANTING: \_\_\_\_\_

\_\_\_\_\_

EQUIPMENT SIZE(S) \_\_\_\_\_

5. FLAX VARIETY(IES) PLANTED \_\_\_\_\_ PLANTING DATE(S) \_\_\_\_\_

6. PLANTING RATE (LBS/A) \_\_\_\_\_ PLANTING DEPTH (IN.) \_\_\_\_\_

7. METHOD OF PLANTING (circle one):

DRILLED    BROADCAST    DOUBLE-DRILLED    (CROSS-WISE)

ADDITIONAL COMMENTS \_\_\_\_\_

8. TYPE OF DRILL/SEEDING EQUIPMENT: MAKE AND MODEL \_\_\_\_\_

\_\_\_\_\_

ROW SPACING \_\_\_\_\_ EQUIPMENT SIZE \_\_\_\_\_

9. PASS **FOLLOWING** DRILL OR BROADCAST SEEDING?    YES    or    NO

(please circle one)    DISC    HARROW    PACKER    OTHER

10. UNDERSEEDED? (circle one)    YES    OR    NO

11. CROP SPECIES UNDERSEEDED AND RATE PER ACRE (LB/A) \_\_\_\_\_

\_\_\_\_\_

12. HERBICIDE USED? PRODUCTS AND RATES \_\_\_\_\_

13. VISUAL ASSESSMENT OF WEED PRESSURE (RELATIVE TO YOUR WEED PRESSURE TYPICALLY EXPERIENCED WITH AN OAT CROP) (please circle one):

LIGHTER                  COMPARABLE                  HEAVIER                  MUCH HEAVIER

(FLAX)

14. MAJOR WEED SPECIES PRESENT \_\_\_\_\_

\_\_\_\_\_

15. CUTTING DATE: \_\_\_\_\_ CUTTING HEIGHT (IN.) \_\_\_\_\_

16. IMPLEMENT USED TO CUT CROP (circle one):  
WINDROWER    SICKLE BAR    DISC MOWER

OTHER \_\_\_\_\_

TYPE OF KNIVES USED (circle one): SMOOTH    TOP-SERRATED    BOTTOM-SERRATED

ANY SPECIAL ADJUSTMENTS TO THE IMPLEMENT? \_\_\_\_\_

\_\_\_\_\_

17. DATE(S) OF COMBINING: \_\_\_\_\_

18. MAKE, MODEL, AND HARVEST WIDTH OF COMBINE: \_\_\_\_\_

19. COMBINE SETTINGS:

• ADDED COVER PLATES UNDER CONCAVE? \_\_\_\_\_

• CYLINDER OR ROTOR SPEED: \_\_\_\_\_

• CONCAVE CLEARANCE: \_\_\_\_\_

• FAN SPEED: \_\_\_\_\_

• GROUND SPEED: \_\_\_\_\_

• ADDITIONAL CHANGES TO COMBINE SETTINGS: \_\_\_\_\_

\_\_\_\_\_

20. ACRES HARVESTED \_\_\_\_\_

21. TOTAL WEIGHT OF COMBINED CROP (LBS) \_\_\_\_\_

21. CLEANOUT % \_\_\_\_\_

22. MOISTURE % \_\_\_\_\_

23. TOTAL WEIGHT OF MARKETABLE FLAX (LBS) \_\_\_\_\_

24. OIL CONTENT (%) \_\_\_\_\_

25. COUNTY \_\_\_\_\_

26. PREDOMINANT SOIL TYPES \_\_\_\_\_

**QUALITY CORN FOR SUSTAINABLE FARMS BREEDING PROJECT****SEED INCREASE IN ISOLATION**

1. RECENT SOIL TEST RESULTS (ENTER ON PAGE 17).

2. LEGAL DESCRIPTION OF FIELD (TOWNSHIP, SECTION, ETC.)

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3. FERTILIZER AMENDMENTS (ENTER ON PAGE 3-4).

4. MANURE IN PREVIOUS YEARS (ENTER ON PAGE 5).

5. PLANTING DATE AND OTHER INFORMATION (ENTER ON PAGE 1).

6. VARIETY GROWN FOR SEED INCREASE:

- CUBA117:S1520 Syn Sc2  
 FS8B(T):N1802 Syn Sc2  
 AR01150:N04 Syn Sc2  
 FEMHP\_01  
 OTHER \_\_\_\_\_

7. FLOWERING DATE \_\_\_\_\_

8. WEED CONTROL OPERATIONS (PLEASE ENTER ON PAGES 8-10 AS "TREATMENT #1").

9. WEED SUPPRESSION:     EXCELLENT     GOOD     FAIR     POOR

10. HARVEST DATE \_\_\_\_\_

11. HARVEST GRAIN MOISTURE PERCENT \_\_\_\_\_

12. OTHER OBSERVATIONS \_\_\_\_\_

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(OTHER TRIALS)

TREATMENT #1: \_\_\_\_\_

PLEASE DESCRIBE IN DETAIL THE PRACTICE(S) UNIQUE TO THIS TREATMENT. INCLUDE, WHERE APPROPRIATE, DATES, INPUTS USED (WITH THEIR RATES, FORMULATIONS OR ANALYSIS, AND COST), OPERATIONS PERFORMED (WITH SIZE OF EQUIPMENT, NUMBER OF PASSES), AND ANY OTHER INFORMATION THAT APPLIES.

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TREATMENT #2: \_\_\_\_\_

PLEASE DESCRIBE IN DETAIL THE PRACTICE(S) UNIQUE TO THIS TREATMENT. INCLUDE, WHERE APPROPRIATE, DATES, INPUTS USED (WITH THEIR RATES, FORMULATIONS OR ANALYSIS, AND COST), OPERATIONS PERFORMED (WITH SIZE OF EQUIPMENT, NUMBER OF PASSES), AND ANY OTHER INFORMATION THAT APPLIES.

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TREATMENT #3: \_\_\_\_\_

PLEASE DESCRIBE IN DETAIL THE PRACTICE(S) UNIQUE TO THIS TREATMENT. INCLUDE, WHERE APPROPRIATE, DATES, INPUTS USED (WITH THEIR RATES, FORMULATIONS OR ANALYSIS, AND COST), OPERATIONS PERFORMED (WITH SIZE OF EQUIPMENT, NUMBER OF PASSES), AND ANY OTHER INFORMATION THAT APPLIES.

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(GENERAL)

SAMPLING DATES

SPRING SOIL NITRATE: \_\_\_\_\_ LEAF TISSUE: \_\_\_\_\_

STALK TISSUE: \_\_\_\_\_ FALL/SPRING SOIL: \_\_\_\_\_

COMBINE/PICKER SIZE: \_\_\_\_\_

ANY ADDITIONAL OPERATIONS AND TIME SPENT. PLEASE SPECIFY:

TREATMENT #1: \_\_\_\_\_

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TREATMENT #2: \_\_\_\_\_

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OTHER DIFFERENTIAL COSTS OF TREATMENTS: \_\_\_\_\_

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ADDITIONAL OBSERVATIONS: \_\_\_\_\_

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### COOPERATOR 2007 DATA RECORD A – TWO-TREATMENT TRIALS

YEAR _____	NAME _____		TREATMENT #1: _____													
CROP _____			TREATMENT #2: _____													
ROW WIDTH _____"	REP A		REP B		REP C		REP D		REP E		REP F		REP G		REP H	
PLOT WIDTH _____'																
ROWS HARVESTED PER PLOT _____																
PLOT #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TREATMENT I.D.																
LB WET GRAIN																
% MOISTURE																
STRIP LENGTH																
TEST WEIGHT																
ADJST. YIELD/ACRE																
LATE SOIL NITRATE																
STALK NITRATE																
TISSUE N																
TISSUE P																
TISSUE K																
OTHER																
% GROUND COVER																
BROADLEAF WEEDS PER _____?																
GRASS RATING																

## COOPERATOR 2007 DATA RECORD B – THREE-TREATMENT TRIALS

YEAR _____	NAME _____			TREATMENT #2: _____												
CROP _____	TREATMENT #1: _____						TREATMENT #3: _____									
ROW WIDTH _____"	REP A			REP B			REP C			REP D			REP E			etc...
PLOT WIDTH _____'																
ROWS HARVESTED PER PLOT _____																
PLOT #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TREATMENT I.D.																
LB WET GRAIN																
% MOISTURE																
STRIP LENGTH																
TEST WEIGHT																
ADJST. YIELD/ACRE																
LATE SOIL NITRATE																
STALK NITRATE																
TISSUE N																
TISSUE P																
TISSUE K																
OTHER																
% GROUND COVER																
BROADLEAF WEEDS PER _____?																
GRASS RATING																

## FORMULAS TO DETERMINE ADJUSTED YIELD

(100 - HARVEST MOISTURE)

**X**

LBS WET GRAIN HARVESTED

**X**

ONE OF THE BELOW:

110.46	107.91	101.46	89.77	100.72	188.85	125.90
SHELLED CORN 56 lb, 15.5%	TRITICALE, RYE 56 lb, 13.5%	Flax 56 lb, 8%	EAR CORN 56 lb, 13.5%	SOYBEANS 60lb, 13.5%	OATS 32 lb, 13.5%	BARLEY 48 lb, 13.5%
				WHEAT 60 lb, 13.5%		

**÷**

FIELD LENGTH IN FEET

**÷**

ROW WIDTH IN INCHES  
(OR SMALL GRAINS HARVEST WIDTH IN INCHES)

**÷**

NUMBER OF ROWS HARVESTED PER STRIP  
(OMIT FOR SMALL GRAINS)

**=**

BUSHEL OF 15.5% MOISTURE CORN/ACRE

*or*

BUSHEL OF 8% MOISTURE FLAX

*or*

BUSHEL OF 13% MOISTURE SOYBEANS, WHEAT OR TRITICALE/ACRE

*or*

BUSHEL OF 13% MOISTURE OATS

(OPTIONAL ADDITIONAL RECORDING SHEET)

PLOT #	TRT #1	PLOT #	TRT #2	DIFFERENCE (X) (use + & -)	$X - \bar{x}$	$(X - \bar{x})^2$
AVG.		AVG.		$\bar{x}$ (AVG. TREATMENT DIFFERENCE)	TOTAL (SUM OF SQUARES)	

NUMBER OF PAIRS: "n" = \_\_\_\_\_

DEGREES OF FREEDOM: "D.F." = (n-1) = \_\_\_\_\_

"t" VALUE FROM TABLE: "t" = \_\_\_\_\_

VARIANCE OF THE DIFF. = (SUM OF SQUARES) / "D.F." = \_\_\_\_\_

VARIANCE OF THE AVG. DIFF.  
= (VARIANCE OF THE DIFF.) / "n" = \_\_\_\_\_

STANDARD ERROR OF THE AVG. DIFF.  
= SQUARE ROOT OF: (VARIANCE OF THE AVG. DIFF.)  
= \_\_\_\_\_

LSD OF THE AVERAGE DIFFERENCE = "t" × (STANDARD ERROR OF THE AVG. DIFF.)  
= \_\_\_\_\_, COMPARE TO: ↓

AVERAGE TREATMENT DIFFERENCE ( $\bar{x}$ ): \_\_\_\_\_

## (OPTIONAL STATISTICAL INFORMATION SHEET)

STUDENT'S  $t$ -DISTRIBUTION CRITICAL POINTS

"2-TAILED" TEST OF DIFFERENCE (EITHER GREATER OR LESS)

Number of Pairs	Degrees of Freedom	$\alpha = .05$	$\alpha = .02$
1	N.A.	N.A.	N.A.
2	1	12.706	31.821
3	2	4.303	6.965
4	3	3.182	4.541
5	4	2.776	3.747
6	5	2.571	3.365
7	6	2.447	3.143
8	7	2.365	2.998
9	8	2.306	2.896
10	9	2.262	2.821
11	10	2.228	2.764
12	11	2.201	2.718
13	12	2.179	2.681
14	13	2.160	2.650
15	14	2.145	2.624

When  $\alpha = .05$ , the confidence level =  $(1.00 - .05)$ , or 95%.

When  $\alpha = .02$ , the confidence level =  $(1.00 - .02)$ , or 98%.

A "Student's  $t$ " table can be found in the back of most statistics textbooks. If the experimental question is: "Is practice 'A' simply *different* from practice 'B'?" then you want a "two-tailed"  $t$  table that divides the chance for error ( $\alpha$ ) between the lower and the upper tails of the "bell curve." We assume that the frequency distribution of all possible observations resembles a bell curve, with most observations clustering around a central value (that we estimate with the sample mean) and progressively fewer observations the farther we go from this peak of the bell curve. Most  $t$  tables are two-tailed and don't even bother to say so.





(ECONOMICS)

SEED TYPE(S)	RATE	UNITS	\$/UNIT	\$/ACRE
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

CHEMICALS	RATE	UNITS	\$/UNIT	\$/ACRE
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

FERTILIZERS	RATE	UNITS	\$/UNIT	\$/ACRE
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

MISCELLANEOUS, INTEREST, OTHER, AND LAND COSTS

ITEM NAME	COST/ACRE	ITEM NAME	COST/ACRE
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

NOTES

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



(FARMING SYSTEM DOCUMENTATION)

Systems Field Sheet					
Crop, Field Description & System: _____					
Cooperator: _____	Yield: _____ /acre (from page 17, 18)				
Field Size: _____	Fixed	Variable	Total	Custom	Labor
<b>Pre-plant Operations</b>					
<b>Preplant Total</b>					
<b>Planting &amp; Cultivation Operations</b>					
<b>Plant &amp; Cultivation Total</b>					
<b>Harvest Operations</b>					
Combine/pick					
Haul					
Dry					
Corn Shrink Loss					
Handle					
Shell/Grind					
Storage					
Hedge/P.L.					
Land					
<b>Harvest Total</b>					

