FLORIDA STAKEHOLDER ENGAGEMENT PROGRAM (STEP)

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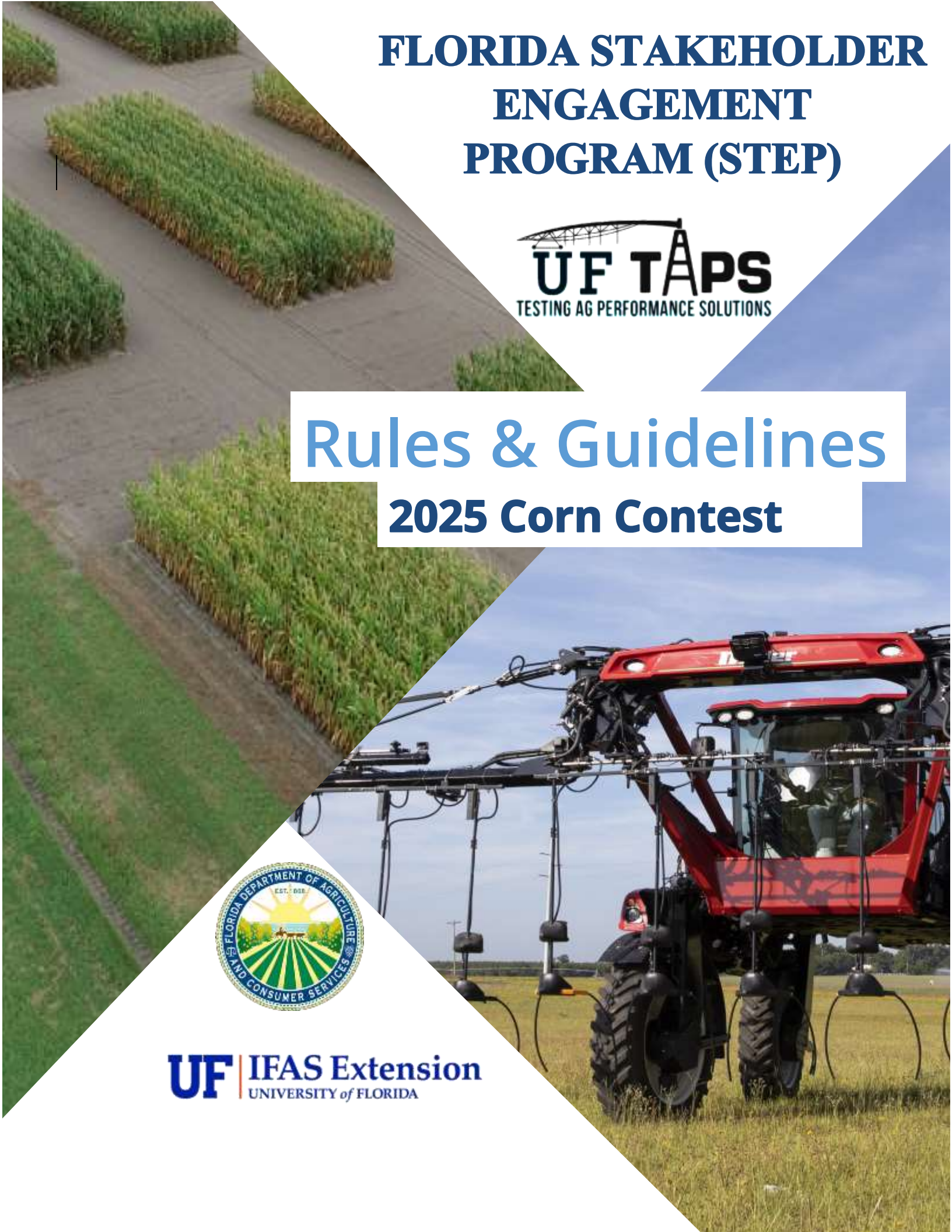
Rules & Guidelines

2025 Corn Contest



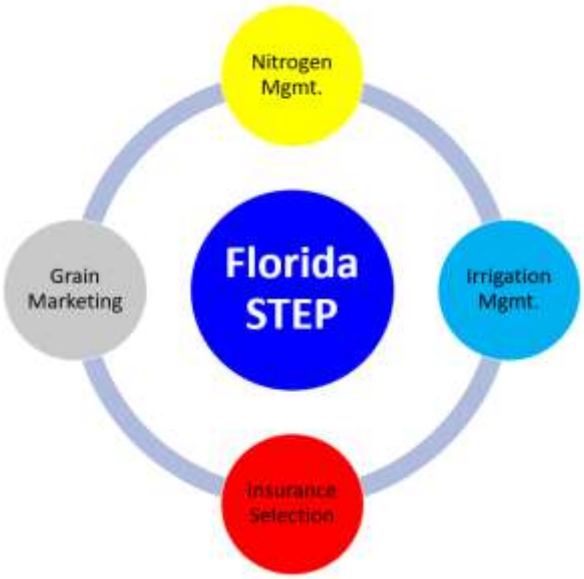
FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

UF | IFAS Extension
UNIVERSITY of FLORIDA

Florida Agricultural Stakeholder Engagement Program (STEP)
2025 Corn Contest

The **Florida Stakeholder Engagement Program (STEP)** promotes the adoption of science-based education and outreach on Best Management Practices (BMPs) through farm management competitions focused on input use efficiency and profitability. The program:

1. Fosters peer-to-peer interaction,
2. Creates a safe environment for action-oriented learning, and
3. Supports collaboration among all members of the agricultural community.



Approach: The competition will be held under the variable rate sprinkler for corn at the University of Florida, North Florida Research and Educational Center - Suwannee Valley (NFREC-SV). Each competing team will be assigned four randomized plots as part of a randomized complete block experimental design that provides statistical evaluation to determine the winners.

The project management team at NFREC-SV will manage all plots. Participants will have control over several production parameters including (i) Irrigation management, (ii) Nitrogen management, (iii) Insurance selection, and (iv) Grain marketing.

All other management decisions such as hybrid selection, seeding rate, pesticide use, and residue management, among others, will remain constant for all teams.

These decisions will be made in real time using a secure online submission form (https://step.ifas.ufl.edu/).

The teams will compete for two awards:

1. Most profitable, and
2. Most efficient

Top five winners were selected based on the combined index developed by normalizing the profitability and efficiency values. The overall competition winner will receive a cash price of $2000, runner-up will receive a cash price of $1500, third place winner will receive a cash price of $1250, fourth place winner will receive a cash price of $1000, fifth place winner will receive a cash price of $750, and sixth place winner will receive a cash price of $500.

Florida STEP Corn Contest 2025 Rules:

1. Hybrid Selection and Seeding Rate:

The 2025 STEP corn contest will offer one hybrid and seeding rate. All the plots will be planted using the Pioneer P2042VYHR hybrid at a seeding rate of 34000 seeds per acre.

2. Nitrogen Management:

All the plots will receive 13 gals/ac (~ 30-40 lb/ac of N) of startup fertilizer (23-9-0) at the time of planting. You can choose:

a. Conventional fertilizer program - In-season fertilizer applications of dry ammonium nitrate (30-0-0-7) and UAN 28% (28-0-0-5),
b. Controlled-Release Fertilizer (CRF) program:
    i. Harrell's CRF (43-0-0)
    ii. Pursell, CRF (44.5-0-0)
    iii. Florikan CRF (44-0-0)

i. Conventional fertilizer program

The in-season application can occur using three methods:

a) Broadcasting
b) Banding (dry side dressing)
c) Liquid side dressing

Prior to V8, dry application of ammonium nitrate in single or split applications can be applied by broadcasting or banding.

From V8 to Harvesting, liquid side dressing using the Miller Highboy "Y-drop" can be applied once each week on a fixed day (Thursday). Teams can choose the amount of UAN 28% (28-0-0-5) to apply (minimum of 24 lbs/ac N per application).

ii. Controlled Release Fertilizer Program:

For the CRF program, you can choose either CRF product option at a rate ranging from 150 to 300 lbs/ac of N. All the CRF applications will be applied at planting.

Table 1. Fertilizer application and material cost for 2025 STEP corn contest.

Fertilizer Material Type	Cost per lb of Nitrogen	Cost per Ton Delivered
Ammonium nitrate-sulfate blend 30-0-0-7	$0.74	$445
UAN 28% with sulfur 28-0-0-5	$0.59	$329
Harrell's CRF 43-0-0	$1.37	$1175
Pursell's CRF 44.5-0-0	$	$
Florikan CRF 44-0-0 90 B YLD	$1.24	$1089.04
Florikan CRF 43-0-0 180 B YLD	$1.53	$1317.04
Fertilizer Application Type	**Cost per Application**	
Broadcast application of dry fertilizer or CRF	$7.00/acre per application	
Side-dress application of dry fertilizer or CRF	$14.00/acre per application	
Liquid side-dress application of 28-0-0-5	$12.00/acre per application	

In case of a leaching rain event (determined by the project management team), an additional application of 30 lbs/ac will be allowed.

For nutrient management, soil samples, tissue samples, and drone imagery will be taken at regular intervals throughout the growing season and provided to the teams.

3. Irrigation Management:

The team will have three options for irrigation management: (a) Soil moisture-based irrigation scheduling, (b) Evapotranspiration-based irrigation scheduling, or (c) pre-determined calendar-based irrigation scheduling. One set of soil moisture sensors will be installed per team for soil moisture monitoring. You may choose one of the following types of soil moisture sensors:

a) BMP logic
b) AquaSpy

Irrigation Selection Criteria:

- Select the irrigation amount (depth) in 0.05-inch increments at least one day before the application. No irrigation will be applied on the weekends.
- From planting to harvest, the maximum irrigation depth per application is 0.5 inches.
- No irrigation will be applied if no selection is made.

Irrigation costs is listed in Table 2. The cost associated with irrigation technology such as the use of soil moisture sensor are not included in the analysis.

Table 2. Irrigation application cost for 2025 STEP corn contest

Irrigation Application	Cost per Application
Linear Irrigation	$11.00 per acre inch

4. Insurance Selection:

You must select crop insurance at the minimum (catastrophic) level or above. Crop insurance options include:

a. Revenue Protection
b. Yield Protection.

You can find more information about crop insurance on the USDA website or by contacting your local insurance agent. You may choose the following coverage levels: 50%, 55%, 60%, 65%, 70%, 75%, 80%, or 85%.

Insurance selections must be made by March 20th. If you do not choose a plan, Yield Protection at the 50% level will be the default. Once your insurance choice has been submitted, it cannot be changed for this year's contest.

Once your insurance choice has been submitted, it cannot be changed for this year's contest. Table 3 represent the insurance premiums per acre for yield protection and revenue protection insurance types for 2025 STEP corn contest.

Table 3. Insurance premium for 2025 STEP corn contest for yield protection and revenue protection insurance packages.

Yield Protection (YP)		Revenue Protection (RP)
Coverage Level	Premium Cost per Acre	Premium Cost per Acre
50%	$2.28	$3.09
55%	$3.18	$4.52
60%	$4.13	$6.22
65%	$6.15	$9.68
70%	$8.02	$12.98
75%	$11.69	$18.82
80%	$18.07	$28.56
85%	$28.46	$43.97

5. Marketing Selection:

Teams must make marketing selections for the simulated 1,000-acre farm. The total number of bushels marketed will be the average yield per acre harvested from your research plots times 1,000 acres. Simulated delivery of the harvested grain corn is assumed to take place on the actual research plot harvest date, which will be in August or early September.

No postharvest (storage) marketing is allowed for this competition.

Teams may choose flat-price or basis contracts (for August/September delivery), in 20,000-bushel increments, between the competition start date and July 30th. The local basis will be posted weekly on the STEP webpage (https://step.ifas.ufl.edu/). The flat contract price will be the basis for the week the contract is selected plus the closing Chicago Board of Trade (CBOT) September 2025 futures price on the date the contract is selected. Teams may select multiple contracts.

For each basis contract selected, you must complete the contract on the date you want to complete the contract (lock in the futures price). If a contract is not completed by July 30th, we will use the July 30th futures price to complete the contract. The closing futures price on the date you complete the contract, plus the amount of the basis on the date of contract initiation, will be used to calculate the contract price.

Any bushels not sold through contracts (total bushels harvested for the simulated 1,000-acre farm minus the number of bushels contracted) will be "sold" at the spot market price on the date of harvest. If more bushels are contracted than harvested, you will be charged the difference between the spot market price and highest contract price (if the spot market price is higher), plus a $0.20/bu handling fee, on the number of bushels over contracted.

AWARD CALCULATIONS

1. Most Profitable:

The "most profitable" award will go to the team with the highest simulated gross profit per acre. Gross profit per acre will be calculated as follows.

Gross profit per acre =

+ Yield (bu/acre) x [Average delivered price per bushel - $0.30/bu hauling cost]
+ Simulated insurance indemnity payment received ($/acre), if any
- Insurance premium paid ($/acre)
- Seed cost ($/thousand) x Amount of seed planted (thousands)
- Fertilizer material cost ($/lb) x Amount of fertilizer applied (lbs)
- Fertilizer application charge x number of applications
- Irrigation cost ($/acre-inch) x inches of water applied
- Fixed production costs per acre (the same fixed cost will be charged to each team)

Yield (bu/acre) will be calculated based on the average yield from each team's corn plots, at 15.5% moisture. The average delivered price per bushel will be determined by each team's marketing choices. Material and application costs for seed, fertilizer and irrigation will be determined by each team's management choices.

2. Most Efficient:

Efficiency is calculated based on the Water-Nitrogen Intensification Performance Index (WNIPI) which is an integrated index of water intensification performance index (WIPI) and nitrogen intensification performance index (NIPI) as:

$$WNIPI = \frac{\left[\frac{Y - Y_n}{Y_n}\right]}{\left[\frac{ET_n + I}{ET_n}\right] * \left[\frac{U_n + N}{U_n}\right]}$$

Where, Y = grain yield of the farm under evaluation; Yn = grain yield of the zero-input treatment; ET = crop evapotranspiration of the farm under evaluation; ETn = crop evapotranspiration of the zero-input treatment; Un = grain nitrogen uptake of the zero-input treatment; and N = fertilizer nitrogen applied by the farm under evaluation. Yield (bu/acre) will be calculated based on the average yield from each team's corn plots, at 15.5% moisture. ET is calculated using the water balance approach.