



Furrow-Irrigated Rice Production

Ronnie Levy
LSU AgCenter Rice Specialist



Furrow-Irrigated Rice

- **Furrow-irrigated rice:** A production system where rice is grown on raised beds or between furrows under a season long absence of a permanent flood - Also known as row rice
- **Utilize beds from previous crop**
- **Southwest Louisiana: relatively shallow soil**
 - Clay fragipan approximately 6 to 18 inches below soil surface
 - Furrow-irrigated system more prevalent in Northeast LA

Furrow-Irrigated Rice

- **Frequent flushes required: typically every 5 days to 1 week** (Norsworthy et al. 2011)
- **Water use can be similar to that of conventional flooded systems** (Golden and Roach 2019)
- **Hybrid vs. Cultivar**
 - Blast resistance
 - More competitive
- **Nitrogen: Requires an additional 100 lbs of urea**
(Hardke et al. 2017)

Furrow-Irrigated Rice

Year	Total Rice Acreage	Furrow-Irrigated Acreage	Furrow-Irrigated Percent of Total
2017	391,071	1,400	0.36
2018	434,123	4,956	1.14
2019	409,577	15,415	3.76
2020	475,927	35,600	7.48
2021	411,690	19,832	4.82

Advantages of Furrow-Irrigated Rice

- **Allows to select crop near planting**
- **Allows rice to be grown on steeper grades**
- **Reduced tillage/levee construction**
- **Ground applications**
- **Increased harvest efficiency**



Photo: University of Arkansas Extension

Disadvantages of Furrow-irrigated Rice

- Increased weed control cost
- Lack of cultural weed control
- Difficulty managing large acreage
- Higher risk of blast and bill bug infestations
- Maturity delays
- ~10% yield reductions





Differences in Weed Control

Flood-irrigated Rice

Furrow-irrigated Rice

- Varieties
- Planting date
- Seeding rate
- Different weeds
- Irrigation timings
- Number of applications
- Canopy closure
- Disease and insects

Treatment List

Herbicide	Tradenname
saflufenacil	Sharpen
clomazone	Command/Vopak™ 3ME
pendimethalin	Prowl
imazethapyr	Newpath/Preface
halosulfuron + prosulfuron	Gambit
imazethapyr + quinclorac	Clearpath
quinclorac	Facet/Zurax™ L

Treatment List

Herbicide	Tradenname
imazamox	Beyond/Postscript
quinclorac + clomazone	Obey
florpyrauxifen-benzyl	Loyant
thiobencarb + propanil	RiceBeaux
fenoxaprop-p-ethyl + safener	Ricestar HT
quizalofop-P-ethyl	Provisia
quizalofop-P-ethyl + safener	Highcard

Treatment List

Herbicide	Tradename
florpyrauxifen-benzyl +penoxsulam	Novixid
Bispyribac-sodium	Regiment
imazethapyr	Newpath/Preface
clomazone + pendimethalin	RiceOne
propanil	Stam/Diverge™ EC/ Diverge™ Silk

Conclusion

- **Overlay residuals throughout the growing season, especially early**
- **Additional applications may be needed**
- **Command fb Clearpath fb Newpath + Regiment proved to be an effective broad spectrum program (Hardke et al. 2017)**
 - **Offers three modes of action**

Questions?

Ronnie Levy
LSU AgCenter Rice Specialist
rlevy@agcenter.lsu.edu
Office: (337)788-7531
Cell: (337)581-4390

