## Small-flowered nutsedge in lowland rice

*Cyperus difformis* Myet-mon-hnyin-a-sein

### Prevention
- Prevention is particularly important as *C. difformis* is difficult to control. Seeds are the main means of spread.
- Clean tools and farm machinery after working in an infested area to prevent spread of weed seeds, especially important if the weed is not already present in the field.
- Flooding of rice fields to a depth of 4-6 inches strongly suppresses the growth of *C. difformis*. Flood for a minimum of one week prior to planting.

### Monitoring
- Erect, perennial sedge, up to 80 cm high, with smooth, triangular, slightly winged stems; numerous reddish fibrous roots; 3-4 basal leaves, smooth, flat and linear up to 25 cm long; tubular sheaths, united at base, often without leaf blades at the base; inflorescence consists of several dense, umbrella-like heads, 2-6 cm long, emerging from the tip of the stem, each topped by 3-8 purplish-brown flowerheads.
- Inspect fields weekly, in particular during and shortly after the wet season, and consider direct control if the weed is found.

### Direct Control
- Hand pulling and mechanical weeding in row-planted rice plants can provide effective control. It is necessary to remove large plants of the weed from the field as they will regrow if left.
- Use of chemical herbicides may lead to the development of herbicide resistance. Avoid repeated use of chemicals in the same resistance group.
- When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval.
- Apply Prettilachlor 30 % + Fenclorem 10 % safener (Softil 300 EC) (500cc/ac) 0-5 days after sowing.
- Apply Quinclorac 28 % + Bensulfuron-methyl 32 % (Yelao) (200-250g/ac) 7-12 days after sowing/10-15 days after transplanting (at the 3-4 leaf stage of the weed). Spread the powder evenly onto the saturated soil and raise the water level to 4-6 inches after 24 hours.
- Apply Propanil 36 % EC (Emperor 360 EC), 800-1000cc/ac; 7-12 days after sowing/10-15 days after transplanting.
- Thiobencarb 50 % w/w (Saturn 50 EC) applied at 1-2 litres/ac reported to be effective. Apply 5-8 days after sowing/3-7 days after transplanting.

### Restrictions
- Prettilachlor and Fenclorem: WHO Class U (unlikely to present acute hazard); Prettilachlor: WSSA resistance group 15.
- Quinclorac: WHO Class III (slightly hazardous), WSSA resistance group 26 // Bensulfuron-methyl: WHO Class U (unlikely to present acute hazard in normal use), WSSA resistance group 2.
- Propanil: WHO Class II (moderately hazardous), WSSA resistance group 7. Do not apply organophosphate insecticides one week before or after propanil.
- Thiobencarb: WHO Class II (moderately hazardous), WSSA resistance group 8.